SKILL ACQUISITION AND UTILISATION OF MILLINERY ART BY HIGHER NATIONAL DIPLOMA FASHION DESIGN INTERNSHIP STUDENTS IN GHANA.

FAUSTINA EMEFA AGORDAH (MRS).

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A THESIS SUBMITTED IN THE FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY IN FASHION DESIGN AND MARKETING IN KENYATTA UNIVERSITY SCHOOL OF LAW, ARTS AND SOCIAL SCIENCES

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university or any other award.

Signature…… Date……

Faustina Emefa Agordah

Registration ID: H87F/27546/2018

This thesis has been submitted for review with our approval as University Supervisors

Signature…… Date……

Dr. Isika, Juliet Kaindi

Department of Fashion Design and Marketing

Kenyatta University

Signature…… Date……

Dr. Kisato, Jacqueline

Department of Fashion Design and Marketing

Kenyatta University

DEDICATION

This work is dedicated to the God Almighty for his grace and mercy.

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LIST OF ABBREVIATIONS AND ACRONYMS

ATU	Accra Technical University
B.C.E.	Before the Christian Era
CBT/CBL	Competency-Based Training/Competency-Based Learning
CIPP	Context, Input, Process and Product
COTVET	Council for Technical and Vocational Education and Training
GTEC	Ghana Tertiary Education Commission
HND	Higher National Diploma
HTU	Ho Technical University
IRB	Institutional Review Board of University of Cape Coast
KsTU	Kumasi Technical University
NABPTEX	National Board for Professional and Technical Examination
TaTU	Tamale Technical University
TLM	Teaching Learning Material
TTU	Takoradi Technical University
TUs	Technical Universities
UNESCO	United Nations Educational, Science and Cultural Organization

DEFINITIONS OF TERMS

Millinery Art/Art of Millinery:	This refers to creative skills in designing and producing head-dresses: - hats, fascinators, hair-bands and brooches for women.
Blocking:	This refers to the process of draping materials on forms/shapes using steam or hot water.
Brim Block:	This is carved or cast; in wood, iron, or Styrofoam into the shape of the widest part of a hat
Brim:	This refers to the widest part of a hat
Buckram:	This is a coarse plain-woven cellulosic fibre (hemp or linen) with size or glue used in millinery as a foundation fabric.
Crinoline:	This is a stiff fabric made from cotton or horsehair woven strips which are either pleated or plain, used in millinery art
Crown Block:	This is carved or cast; wood, iron, or Styrofoam into the shape of the part of a hat that is worn or fitted on the head.
Crown:	This refers to the part of the hat that is worn or fitted on the head
Decorative Fabric Manipulation:	This refers to the ability to twist, stitch, press and arrange fashion fabric for aesthetic effect for finishing millinery articles.
Fascinators:	This refers to head-dresses that do not have a crown that is fitted on the head but rather, have elastic, plastic or metal hair band or combs for wearing on the head. They are normally in different shapes.

Head Blocks: This collective name refers to carved or cast; Wooden, Iron and Styrofoam into head shapes and designs to fit the head which is used for draping fabric to create three-dimensional shapes in millinery work.

Sinamay: This refers to a woven cellulosic fibre used in making millinery products

OPERATIONAL DEFINITION OF TERMS

Use of instructional resources:	These include instructional resources provided by lecturers, students and what is available in the institutions.
Utilisation of millinery skills:	Ability to use skills acquired in millinery to produce, head brooches, fascinators, and hats.

ABSTRACT

Millinery art has an enormous contribution to the performance of Fashion Design graduates in the fashion industry. Competency-based training in Ghanaian Technical Universities demands a special focus on the various courses of study to determine the effectiveness of the skills acquired. The objectives of the study were to identify the interest of HND Fashion Design students in millinery art; to identify the adequacy of curriculum content used to train students in millinery art and to evaluate the instructional resources used in skills transfer in the millinery art across the Technical Universities; to establish whether millinery art skills acquired by HND Fashion Design students are used during internship. The study hypotheses determined the significant relationship between millinery art skill acquisition of HND Fashion Design students and curriculum content, content proficiency, instructional strategies and resources and to develop a virtual academic instructional content on gaps identified in the study. Multi-stage sampling and systematic random sampling techniques were used to select five Technical Universities and students in the five regions of Ghana. Census and Purposive sampling techniques were used to select lecturers. That is 31 lecturers who teach millinery accessories and 28 industry supervisors of the students. Proportion random and stratified sampling was used to select 249 students from a population of 662. The study adopted a cross-sectional descriptive survey to collect qualitative and quantitative data with a response rate of 88.6% for Lecturers, 90.3% for industry supervisors and 100% for HND Fashion Design students. Descriptive statistics were used to generate groups and summarize data in tables, percentages, pie charts and bar graphs. Themes were generated and used to group qualitative data and analysed descriptively to complement quantitative findings in the study. Curriculum content in millinery is not abreast with current trends and 75% of the lecturers indicated they do not have enough skills in millinery. The institutions have limited resources for teaching and learning millinery art skills. The study revealed most of the HND Fashion Design students, 57% did not use millinery art skills during internship. One-way multiple analysis of variance was used to determine the instructional strategies used across the Fashion Design departments in millinery art skills acquisition and curriculum content and millinery art skills acquired by the HND Fashion Design students. MANOVA analyses on hypotheses one and two were tested at $p < 0.05$ alpha index and were rejected due to statistically significant differences between instructional strategies used across the technical universities as well as curriculum content and millinery art skills acquired. Multiple linear regression was used to determine the moderating effect of curriculum content, instructional strategies/resources used for millinery skills acquisition process and millinery skills acquired. Curriculum content and millinery skills acquired was accepted at $R^2 = .301$, (5, 243) =17.391, $p = .535 > 0.05$ with weak correlation of 30.1%. Instructional strategies and millinery skills acquired, $R^2 = .031$, F (4, 244) =3.644, $p < 0.05$, $R^2 = .043$ was rejected with very weak correlation of 4.3%, and instructional resources used and millinery skills acquired, $R^2 = 508$, F (20, 228) =11.794, $p < 0.05$ was rejected with moderately average correlation of 50.8%. Additionally, a video documentary was developed on the skills gaps found in the study. The study recommends that the Fashion Design departments of the TUs should review the millinery accessory curriculum using the CIPP model. They must also invest in instructional resources to enhance skills acquisition in millinery art in the Fashion Design of the Technical Universities.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The culture of beauty even though an individual affair, is highly influenced by tradition, environment, status and personal taste or preference. Fashion accessories are important as clothing since they offer the opportunity to express one's values, beliefs, attitudes, and assumptions (De Carvalho, 2020). Through the effective use of accessories, one can create a pleasant style wave from head to toe. Accessories can be grouped into two, those that are worn and those that are carried. Some examples of worn accessories are earrings, gloves, hats, fascinators, hair bands, footwear etc. Those that are carried are bags, clutches, fans, parasols and many others (Ribeiro et al., 2012).

Millinery accessory is the art of making hats and head-dresses and this art is as old as dressmaking (Donnanno, 2019). It is the accessory design and creative aspect of fashion design education or training. Dressing the head has been with us throughout the ages and styles of dressing the head can be traced to the specific time they were used. In Africa, this period dates to 3000 B.C.E. based on artefacts found in Egypt and North Africa (Tia, 2016). The millinery products at that time were mainly a protective covering of the head from harsh weather. The art of millinery became an integrated course in technical institutions/universities across Ghana in 1963 and studied in the Fashion Departments (Ministry of Education, 1993).

Fashion Design and Technology is a skill-oriented course of study in the technical universities in Ghana which produce graduates to feed the fashion industry.

However, the performance of the graduates in the industry largely depends on the level and quality of skills they acquired during their training/education (Nilson, 2010). The acquisition of high-level skills cannot be achieved if curriculum content is shallow, facilitators of the programme are not proficient, and equipment is obsolete and unavailable instructional materials (Ayonmike, 2014). In addition, the instructional techniques applied to the training of the students determine their ability to use the skills to perform in the industry. Further, leveraging technological tools such as videos for training has not been incorporated into training to enhance skill acquisition. This situation makes it difficult for learners to specifically follow-well-structured documented instructions to practise the millinery art skills after the traditional classroom experience (Vishwaroop 2022; Auta & Giwa 2020)

Williams and Laing (2013) state that limited research has been conducted on the art of millinery although it is being taught in the formal sector. Even though the art of millinery has been largely overlooked by previous researchers in fashion, it has a strong connection to the head, face, and clothing. Fashion experts predicted that accessories will be more important since consumers will be interested in quality clothes and not clothes that have short fashion life (Marjorie & Baker 2013). This implies that the consumer will prefer quality clothes in smaller quantities and rather have a range of accessories that could easily make basic clothes versatile. This call for effective skill acquisition in the art of millinery art grants learners' effective skill usage to enhance performance in the fashion industry.

Whereas the focus on skills acquisition is not new, evidence exists in Africa that there is blind experiments, scripted instruction by teachers, and rote learning by students, these are not helping in meeting the industrial needs of the school (Darvas & Palmer 2014; Chepchumba & Cheruiyot, 2018). It is argued that African countries lack high-skilled workers in the apparel industry (Dandira et al., 2017). In Fashion Design, there is a gap between theoretical and practical teaching, implying that skills acquired in the classroom are not meeting the demands of the world of work (Isika et al., 2016).

There are many reports highlighting that Ghana, like many African countries, has unemployment challenges due to skill gaps and mismatches between school and industry. Foster and Ampong (2012) argue that there is a mismatch between the school curriculum in patternmaking and the procedure by which industry members in the Ghanaian garment manufacturing industry acquired patterns. Although the Fashion Design and Technology programme in Technical Universities is skill-based, various scholars state that the skill levels in garment construction, textile technology, millinery, and accessories as well as design and illustration of Fashion Design graduates are barely above average (Wovenu 2017 & Agordah 2016). Obinim and Pongo (2018) support this finding and state that the skills of the graduates are not aligned with industrial needs.

The limited research in the art of millinery accessory in Fashion Design and Technology programmes makes it difficult to identify the skills acquisition and usage gaps. This has led to challenges in identifying causal effects and how to support skills acquisition and utilisation of the art of millinery. Consequently,

students' performance during the internship in the fashion industry cannot be enhanced. This difficulty has subsequent influence on students' performance in the fashion industry after graduation. This study aims at filling the research gap and also bring to light possible challenges facing students' skill acquisition in the art of millinery.

1.2 Statement of the Problem

The literature on Fashion Design in Ghana reveals a lack of emphasis on millinery art skills. Studies by Wovenu (2017), Agordah (2016), and Foster & Ampong (2012) highlighted the limited empirical research in fashion design and clothing, leading to outdated and insufficient curriculum content. The challenge of limited study impacts the skills of instructors and also affects student's interest in acquiring millinery art skills. Further, the learners' interest and their ability to transfer the millinery art skills during their practical intern work has not been exhaustively studied.

In relation to curriculum content, scholars have pointed out that there is a correlation between curriculum content and skill acquisition but these aspects have not been clearly understood with regard to millinery art curriculum. The gap in literature in relation to fashion design students interest in millinery art, the skills acquisition process, instructor competency, instructional resources and utilisation of millinery art skills during internship in the fashion industry. As indicated by Ayonmike (2014) such gaps in literature have implications for the availability of instructional resources by relying on obsolete learning inputs due to a lack of new trends. Research shows that trainers lack the competency to train students in millinery art skill (Wovenu, 2017). Although institutions provide

resources for practical classes, it is not clear whether millinery resources are available, adequate and utilised in training the students (Agordah, 2015).

These issues potentially hinder the skill acquisition process in the art of millinery in Technical Universities and its usage in the fashion industry. Despite a focus on competency-based training, it is evident that the skills acquired by students do not meet the needs of the industry (Ananga et al., 2016). The gap between graduates' skills and industry needs must be addressed by evaluating the school curriculum and comparing it to industry needs. Millinery skills support fashion design graduates by enhancing the elegance and completeness of their products, giving them a competitive edge in the fashion industry. Hence, this study investigates the acquisition of millinery art skills in fashion design education in the Technical Universities.

The possible gaps in the review of the curriculum content concerning student performance during industrial internship in the fashion industry in millinery art have not been studied extensively to identify challenges and industry needs. A study by Wovenu (2017) indicated that fashion design graduates are not working in the fashion industry because their skill level in the art of millinery is below average.

Considering the finding of Wovenu (2017) and the need for effective skill acquisition and usage to enhance student performance in the fashion industry, there is a necessity for a comprehensive investigation into the possible challenges

in skill acquisition in the art of millinery in Technical Universities and its usage in the fashion industry. It is clear that the process of skill acquisition and usage of millinery art at the Technical Universities in Ghana is not well understood by learners, and a correlation with fashion industry needs has not been extensively studied by scholars.

1.3 Purpose of the Study

The purpose of this research was to examine skill acquisition and use of millinery art skills by Higher National Diploma Fashion Design students during an internship in the fashion industry, in Ghana.

1.4 Objectives of the study

The objectives of the study were to:

i. Identify the HND Fashion Design students' interest in millinery art at the Ghanaian Technical Universities.
ii. Examine the Fashion Design curriculum used to train HND Fashion Design students' in millinery art skills acquisition in the Ghanaian Technical Universities.
iii. Examine the instructional resources/strategies used in skills transfer in the millinery art across the Technical Universities in Ghana.
iv. Establish whether millinery art skills acquired by the HND Fashion Design students is used during the internship in the fashion industry.
v. Determine the significant relationship between millinery curriculum content, instructor content proficiency, instructional strategies/resources and millinery skill acquired by the HND Fashion Design students.
vi. Develop a virtual academic instructional content on blocking/draping, fabric manipulation and assembling of headdresses.

1.5 Hypotheses

H_{01}: There is no significant relationship between the instructional strategies of the lecturers in the various institutions and the skills acquired by the Fashion Design students

H_{02}: There is no significant relationship between millinery curriculum content used in training the HND Fashion Design students and millinery art skills acquired by the students at the Technical Universities.

H_{03}: There is no significant relationship between millinery curriculum content, instructional strategies/resources used and the millinery art skills acquired by the HND Fashion Design students in constructing millinery products.

1.6 Significance of the Study

The findings of the study will bring to light the interest level of HND Fashion Design students in the art of millinery and how it affects the skill acquisition process. The findings will also reveal possible curriculum implementation lapses that need to be checked for effective training in Fashion Design at Ghanaian Technical Universities. The findings will also help Ghana Tertiary Commission to support the operationalization of Competency-Based Training/Learning (CBT/L) to be more successful.

The results of this study on skill acquisition and usage of the art of millinery will provide knowledge on how curriculum content support skill acquisition in the art of millinery in the Fashion Design departments. The study will also help to fill art skill acquisition gaps in the millinery art with curriculum content, millinery content proficiency level of lectures and instructional resources for the

implementation of the Fashion Design programme in the Technical Universities in Ghana.

The findings will also reveal how the millinery art skills acquired enhance millinery skills usage on the performance of the HND Fashion Design students' during the internship in the fashion industry. In addition, the study will help in identifying the strengths, weaknesses, and relevance of the art of millinery skills in the fashion industry.

The video content that is developed on the skill gaps identified in the findings of this study will benefit lecturers, students and graduates of the HND fashion design programme to update their skills in the art of millinery. Based on the findings of this study practical workshop will be organized for lecturers who teach millinery accessories in the Fashion Design departments at Technical University to enhance their skills to facilitate effective teaching and learning of the art of millinery.

Additionally, the study will fill the research gap in millinery art in Ghana. More so, based on the findings practical workshops and seminars will be organized in collaboration with professional milliners in the fashion industry on new trends and skills in the millinery art. This would help the lecturers of millinery accessories to interact with industry members for current skill needs and ideas in the fashion industry in Ghana.

The knowledge to be generated from this research is likely to spur interest in millinery art in general and other Fashion Design related areas as new insights emerge and other gaps in research become apparent. As this research is primarily focused on millinery skills acquisition and usage in the fashion industry by Fashion Design students at Technical Universities in Ghana.

1.7 Delimitation of the Study

The focus of the study is on skill acquisition and usage of millinery art accessories by HND Fashion Design students during an internship in the fashion industry. It will be limited to the Technical Universities offering the Fashion Design and Technology programme. The focus will be interrogating skills acquisition and utilisation of the art in millinery by examining curriculum content, learning processes and resources that support students' skill acquisition and utilisation by the HND students during the internship in the fashion industry.

1.8 Limitations of the Study

This study will be limited to assessing skill acquisition and usage of a component course, the art of millinery accessory of the Fashion Design and Technology programme hence the results cannot be fully applied to the general Fashion Design and Technology programme being implemented in Ghanaian Technical Universities.

1.9 Assumptions

The study made the following assumptions.

i. The curriculum content for training the HND Fashion Design students and skills acquired in the art of millinery in the Technical Universities are similar.

ii. It is assumed that instructional strategies and resources used in training students in millinery art skills in the Fashion Design departments of the Technical Universities are similar.

1.10 Theoretical Framework

This study was grounded on three theories, the Human Capital theory of Becker 1962 cited by Raimi and Dada (2014) in their assessment of the TVET programme in Nigeria. The Context; Input; Process and Product (CIPP) theoretical framework of Stufflebeam 1971 cited by Agordah (2015) was used in assessing the fashion design and Technology programme at Takoradi Technical university. Darma (2019) also employed CIPP theory in assessing the mechanical engineering programme in Nigeria. This study is grounded in the CIPP theoretical framework and career development theory by Lent, Brown & Hackett (1994). Based on these theories a conceptual framework is developed to guide the study.

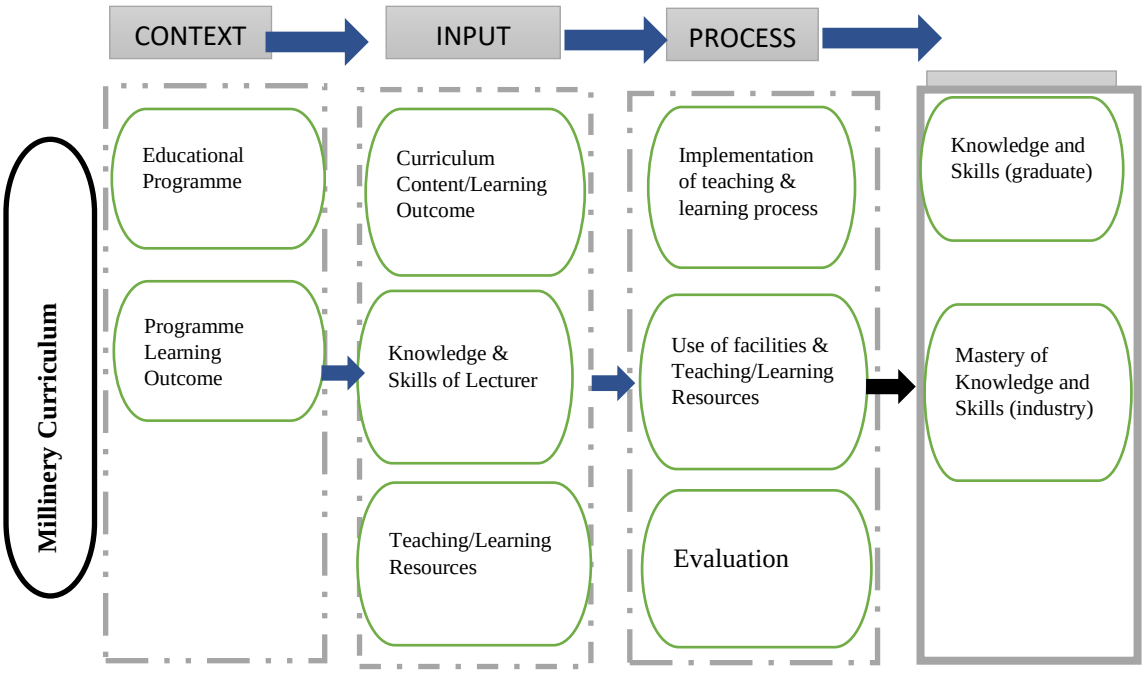


Figure 1.1: CIPP Model (Stufflebeam 1971)

The human capital theory examines the relationship between education, economic growth and social well-being, the theory explains that what is spent on education and job training is a capital investment that is supposed to yield economic and social returns that benefits the individual and society at large.

The objectives of technical universities; are to educate/train the learners to acquire specific skills to be self-employed or be employed by industry (Ministry of Education, 2014). However, Marginson (2017) critiques the human capital theory stating it is limited because it failed the test of realism as it did not state the method through which education can be applied to improve human capital. To complement this deficiency in the human capital theory the CIPP model of Stufflebeam 1971 is considered in examining the parts in the school system to enhance effective skill acquisition in the art of millinery.

The CIPP model of assessment theory approach looks at the educational product from a context, input, process, and product framework. It considers the development of skills (product) a factor of the educational policy context, the inputs (educational resources, availability of teachers etc) and the process (methodology/strategies employed in curriculum implementation). This complements the human capital theory as it views education as a process that must end in a product - improved manpower with the necessary skills for effective performance in the world of work.

Furthermore, giving a critical look at the career development theory by Lent, Brown and Hackett (1994), that states, people have the edge (personal interest)

to acquire and perform the skill they believe they can perform (independent variable). Their belief motivates them to achieve positive outcomes in the usage (dependent) of the skills in their performance and their involvement sustains them as they practice. In this study, personal interest and fundamental skills are the independent variables, the dependent variable is the ability to use the skills acquired through the influence of the moderating variables curriculum content, instructor competency and instructional resources to make brooches, fascinators, and hats to accessorise garments.

1.11 Conceptual Framework

The conceptual framework was adapted from the Stufflebeam Context, Input, Process and Product theoretical model of 1971 and the Career Development and Performance theory of (Lent, Brown & Hackett 1994). The adaptation of the above theories is necessary because Stufflebeam centres its CIPP model on the objectives for establishing schools and outlined the process through which the school system can achieve a positive result. Lent et al (1994) career acquisition and performance theory stated that the school is the foundation for career training/education that leads to skill acquisition and utilisation.

This study views the school as a system based on context (objectives), input (resources), process (mode of instruction) and product (expected outcome). To achieve the expected outcome of the school learners must have personal interest and fundamental skills (independent) in their courses of study. This will then be influenced by the school environment based on the curriculum content, instructor competency in the millinery art and instructional resources (moderating variable) to achieve the expected outcome (dependent). The millinery art skills acquired

and utilised in the production of quality brooches, fascinators, and hats to accessorized garments for economic gains which is the main objective of technical/vocational training (human capital development). Figure 1.2 illustrates the relationship between the variables.

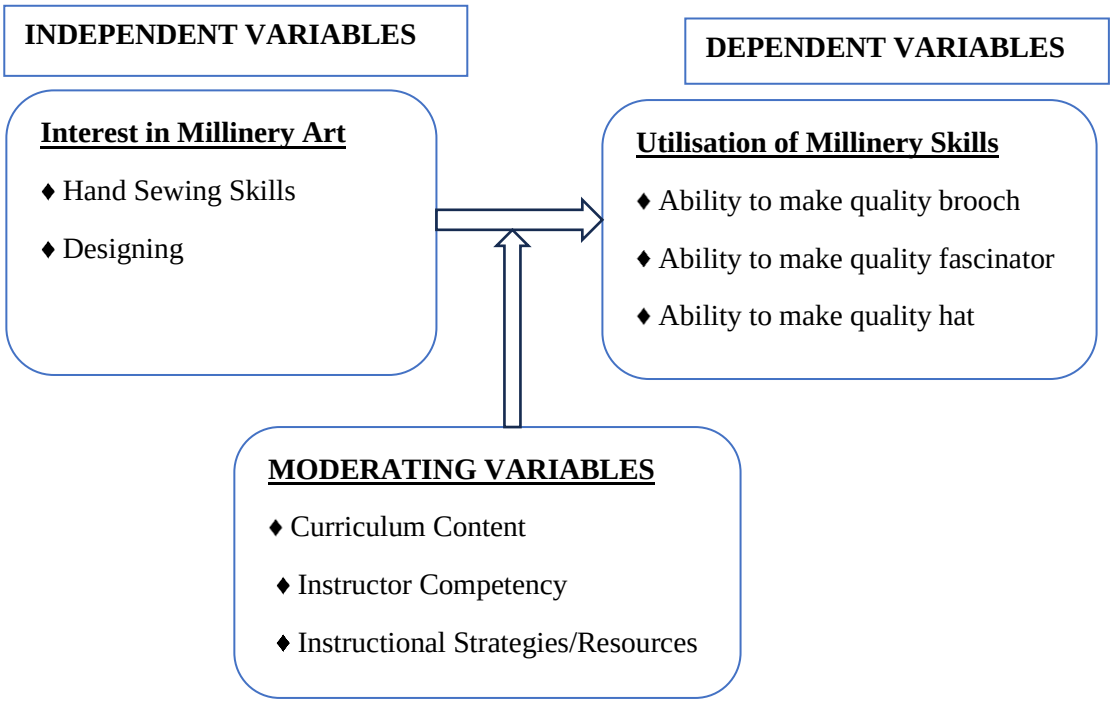


Figure 1.2: Conceptual Framework on Students' Skills Acquisition and Utilisation of Millinery Art in the Fashion Industry

Source: Adapted from Stufflebeam 1971 and Lent, Brown & Hackett, 1994

CHAPTER TWO: LITERATURE REVIEW

2.1 Overview of Millinery Art

In the past, hats and other forms of headdresses were considered a must for every woman in the western world. During the 1960s, a woman who did not wear a hat was seen to be inappropriately dressed or considered to be someone from a very low status or a poor family background, (Potter, 2016 & Mitchell, 2010). At that time wearing a hat by both men and women was a social status symbol. The hats were worn for social calls, lunches, church, and all activities.

This promotes elegance in dressing which always defines the wearer whenever millinery products are used to accessorize garments. Variety in millinery art products is observed in different periods; these define the evolvement of fashion in those periods. However, in Africa, as stated by Tia (2016) hat making started in 3000 B. C. E. and was mainly used for protection from the harsh weather along with typical traditional headdresses.

According to McDowell (1992) the art of millinery was in existence in the western world since 1890 and was practised alongside dressmaking. Millinery products such as hats, bonnets and other forms of headdresses were made by tradeswomen. The training period in millinery at that time was three to four years. The training in feminine headdresses became very popular between 1900-1920, (Mark, 2011). During that time millinery products were very elaborate, some of which were, wide free-standing hats, made from foundation wires, covered with a net, and finished magnificently with velvet, silk flowers, feathers, and shirred ornaments (Cumming et at., 2010).

Interestingly some of these ancient designs are still found today on high-profile celebrity shows (with slight differences), where hat-loving celebrities announce themselves at such programs. However, milliners at the time also used flat patterns to produce berets sectional hats, and turbans while cloche, toques and brimmed hats were blocked using foundational fabrics such as buckram and fusible, and covered with fashion fabrics (Reynolds, 2003).

In the late 1920s, the demand for millinery products was so high that the milliners had to change from almost entirely manual production to the use of machines. This led to a change in hat design features in women's dresses and accessories. Hats that were made in workrooms of small shops with unique thread and needle techniques were no more because machine technology had taken over (Gamber 1998). The foundations of women's hats, the wire and buckram frames which were being made manually could then be bought ready-made, along with finished hats in the departmental stores (Cowless, 2011). This sudden change in the fashion accessory industry in millinery affected the production of custom-made headdresses.

Custom-made headdresses and clothes are classy, with unique features which are normally considered based on the status of the wearer, figure type, type of material used and workmanship (McQuerry, 2019). This made the art of millinery a unique skill that needs to be acquired alongside garment design and construction. Accessorizing one’s clothing shows the difference between a fashion designer and a garment producer.

Due to this uniqueness of millinery art, it is essential for young designers in fashion institutions to acquire millinery art skills and use them to accessorize their clothing designs to enhance their production to exhibit the difference between them and the traditional dressmakers (Fowler, 2019). As stated by Coleman (2021) contemporary fashion has taken over the fashion industry in Africa and special events are flooded with sophisticated female headdresses. Its time millinery art skills are well taught to avoid flooding our market with used headdresses. This study will investigate skill acquisition and utilisation of millinery art by HND fashion design students in technical universities to enhance their performance in the fashion industry.

Plate 2.1. Hats & Fascinators

Hats

Fascinators

Plate 1.1: Hats & Fascinators

Source: Agordah, 2021

2.2 Millinery Art in Africa

The significance of millinery products to dress cannot be over-emphasized. In the past, traditional straw hats were the early hats and headpieces made in Africa. The straw (grass) hats were normally woven and were mainly used for protection from the weather, the straw was also woven as a basket for harvesting. Africa had the first millinery company in 1935 in Johannesburg South Africa with the brand name Simon and Mary (Moss, 2020).

Along with the established hat-making company was a traditional headpiece of the Zulus which is called the Zulu hat which was woven from grass and finished with beads. The Zulu hat or isicholo which is normally finished with beads has a distinct colour pattern that normally signifies status in society and religion. It was mainly produced for women during traditional, religious, and cultural ceremonies such as marriage (Kota, 2020).

Isicholo (Zulu hat)

Plate 1.2: Zulu Hats

Source: Kota (2020)

This hat was introduced between the late 19th and early 20th century to replace the traditional sewing and weaving of the bride's hair into a cone shape during the marriage (Smith, 2017). However, due to the cultural values attached to the Zulu hats and their non-verbal communication of unspoken traditional values, it is cherished by both young and old, married, and unmarried. Sometimes the Zulu hats are used at functions which are not traditional or cultural. Interested people are still receiving training in the art of making the Zulu or isicholo hat to make a living (Pacific Lutheran University, 2020). This emphasised the important of millinery art skill to the fashion design students.

Other forms of hats in Africa are karakul, bargashia, fez, taqiyah, tupi, pakol hats which are all brimless and handmade (Fez 2022; Karakul 2022; Pakol 2022). In the 20th century, the Berbers of Morocco and the countries of the Sahara Desert introduced the functional style of hat, which had a strong influence on the Islamic religion.

Fez Bargashia

Plate 1.3: Fez and Bargashia

Source: Fez 2022; Karakul 2022

According to Borsalino (2022) and Badsha (2019) in West Africa, the traditional kufi which is a brimless cap, made from kente, mud cloth or knitted with yarns was used by men. The men normally accessorized their dress with the kufi to symbolize their status, religious group, and family patriarchs. The Fulanis immigrant who was cattle herders in West Africa also introduced the Fulani straw hat which is normally finished with cotton fabrics and has a wide flat brim.

Kente Kufi

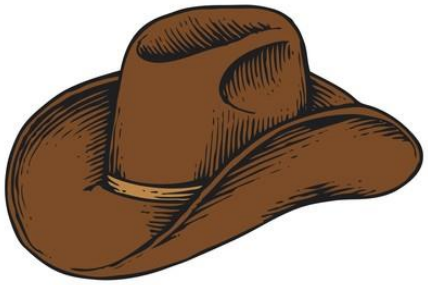
Knitted Kufi

Plate 1.4: Kente Kufi and Knitted Kufi

Source: Borsalino 2022; Badsha 2019

However African hat designs were influenced by our colonial masters. This brought about hat designs such as fedoras, bowlers, port pie, trilby, cowboy, flat caps, baseball caps and sun hats (Badsha, 2019; Pork pie, 2022 & Thomas-Odia, 2022).

Fedora hat



Cowboy

Plate 1.5: Fedora hat and Cowboy hat

Source: Pork pie 2022; Thomas-Odia 2022

The contact with our colonial masters also influence the elite family of women who turn to abandon the traditional style of wrapping the head to wearing hats at the time to distinguish themselves (Eicher, 2020 & Bowler, 2022).

Cloche

Upturn Cloche

Plate 1.6: Cloche

Bowler

Trilby

Plate 1.7: Bowler and Trilby

Source: Eicher, 2020; Bowler 2022

In Ghana alongside the contemporary designs, the traditional Bolgatanga or Bolga hat which is still being used and well-priced for summer activities worldwide is a handcrafted artwork of the Fra Fra tribe in northern Ghana where young ones are still being trained to acquire the art (Blueprint Africa, 2020). The *Bolga* hats are produced from elephant grass fibres which are braided rhythmically to give them a distinctive, functional shape and design.

Bolga Hats

Plate 1.8: Bogla Hats

Source: Blueprint Africa 2020

Today through the evolution of fashion and the taste of elegance in dressing as well as the influence of our colonial masters, contemporary millinery art has taken over the fashion industry and is being learnt in the fashion design departments of the Technical Universities in Ghana. Some of the headdresses found in the Ghana fashion industry are made from sinamay, crinoline, paper mats, felt, parasisal straw and local prints (Ankara). This calls for the need to investigate the skill acquisition and utilisation of millinery art skills for the effective performance of HND fashion students in the fashion industry.

2.3 Interest in Acquiring Millinery Art Skills

Interest is imperative in every career development. The United Nations Educational Scientific and Organization (UNESCO, 2002) asserts that career awareness starts when an individual is aware of his/her interest, values, abilities, and personality. The individual will find sources of information that will make him/her aware of possible occupations and professions in the cluster of the study that leads him/her to acquire the skills of their interest. Students who can identify their interests can put in, all the effort through consistent practice to acquire the necessary skills to achieve the best result in the area (Gyansah & Guantai, 2018).

Such students are always motivated to persevere as their interest sustains them in their practice to achieve excellent results in their performance. Research states that factors that influence skill acquisition can be put into two main categories: intrinsic and extrinsic factors. Intrinsic factors are personality, interest, self-concept, attitude, and cultural identity while extrinsic factors include social contacts, role models, fundamental skills, and resources such as finances, globalization, and ethnic background (Nyamwunge, 2016).

Individuals' skills aptitudes and strengths (talents) influence them to develop their interests which they develop a passion for, as they practice (Gretchen, 2014). In developing their interests, they can acquire skills and possess all the capabilities and expertise that grant them better career prospects than others with limited areas of expertise (Kapur, 2018). However, Fizer (2013) opined that only a few learners follow their passion in most career-focus studies, and most of them are mostly motivated by how much they will earn. Consequently, this study will

explore Fashion Design and Technology students' interest level in acquiring and utilizing the art of millinery skills in the fashion industry.

2.3.1 Fundamental Skills in Millinery Art

The creative character of every fashion designer is the ability to acquire high-level skills in garment design and construction. A good presentation of a garment is achieved if it is well accessorized for specific use and purpose. Skills in designing and constructing a complete garment with the needed accessories fascinate customers since it saves them a lot of time looking for accessories to fit the garment as well as indicating a clear difference between a dressmaker and a fashion designer (McQuerry, 2019). According to Rodriguez (2020) casual wear that is well constructed can be made sophisticated and elegant with effective styling with accessories.

The ability to style one's clothing line to send a specific non-verbal message is very essential in the fashion industry and one way to achieve that is by designing and constructing accessories such as hats, hairbands and fascinators to accent garments. This is because a single garment can be made versatile through the effective use of accessories such as millinery products. Globalization has made the performance of fashion industries more complex, as designers need to be innovative to meet the demands of the industry (Chavan, 2018). One method through which designers can attract more customers is using the needle and thread technique (Lynnette, 2020). This is because fashion models are looking for unique features which are easily achieved by hand sewing.

One major unique feature of the designer is the ability to work permanent, inconspicuous stitches on the product using thread and needle (Guarda, 2019). The milliner's ability to leave a unique fingerprint on their product through excellent hand-stitching skills is essential. The ability of trainees in millinery to hand stitch excellently facilitates effective skill acquisition (Lomax & Skinner 2017). This is because most hats are hand stitched and the ability to finish millinery products neatly and securely is paramount. Therefore, this study will investigate three fundamental skills variables thus designing, styling and hand-sewing skills of the HND Fashion Design students and how they influence their skill acquisition and utilisation of the art of millinery in their performance during an internship in the fashion industry.

2.4 Curriculum Content in Millinery Art

The school plays a major role in developing the human capital need of every nation. In achieving this, a plan of study is developed to facilitate skill transfer processes. According to Ayua (2017) curriculum content is a plan of action that is implemented by the school to achieve expected outcomes. This is because the curriculum content of every school is based on the specific needs of society (Baah-Boateng, 2013). Changes in society cannot occur without the activities of the school where the curriculum play a major role that cannot be ignored.

Skills acquired in the school, grant graduate employment in the industry that provides the needs of society, hence, contribute to the growth of the economy. In helping the institutions to deliver on their mandate, a curriculum is developed to outline what to learn (content), the training experiences (how to learn) and the expected outcome (product) (Aziz et al 2016; Matshe & Mahiagu, 2014).

A comprehensive curriculum is crucial to effective skill acquisition since it spells out the minimum, maximum training duration, and expected outcome in terms of behavioural changes in specific skills (Odey & Opoh 2015). That is the only way individual learners can acquire and practice relevant skills in their chosen careers. The quality of a society is subject to the curriculum being implemented in our schools. Millinery curriculum content needs to clearly state specific knowledge, skills and attitudes the learner will acquire at the various levels of study and its relevance to the fashion industry.

It also needs to be abreast with current industrial practices that will facilitate effective skill transfer of the graduates in the industry. To maintain a high standard in content delivery there is a need for curriculum assessment with the skills the students use in the industry to find out the training influence on the expected outcome of the training. Based on this there is a need to investigate how the art of millinery curriculum content support HND Fashion Design students' skill acquisition and utilisation of the art of millinery for effective performance in the fashion industry.

In as much as the curriculum content is vital to the level of skill to be acquired, the skill delivery process is also very essential. This is because a well-stated curriculum content with a poor delivery process limits the skills to be acquired by the learner hence their inability to use the skill (Nnabuike et al., 2016). The lack of progression in content delivery makes it difficult for the learner to acquire the necessary skills, hence learners are unable to transfer the art of millinery to the industry.

This situation is likely to create a gap between schools and the fashion industry and hence needs to be evaluated. As stated by Dyjur et al (2019) a critical examination of academic programmes to facilitate effective teaching and learning experiences should be led by academic staff who the implementers of the programme. This helps in understanding explicitly the challenges facing the implementation of the programme.

2.5.1 Instructor Competency and Instructional Resources in Millinery Art

A well-planned curriculum can only be realized when it's explicitly delivered by competent personnel who have mastery of the subject matter (Kigwili, & Akala 2017). As stated by Ko and Bakkum (2014) content proficiency is the mastery of the subject area. This implies that the instructor needs to have mastery of the art of millinery and be able to deliver lessons with less or no difficulty. The level of proficiency of the instructor determines what will be taught to learners in terms of skills and knowledge (Tambwe, 2017).

The knowledge, experience and qualification of the instructor determine how much he/she can contribute to reviewing content to be abreast with time to meet the needed demand. The millinery art as a practical-oriented course requires variation in pedagogy application in the delivery of knowledge and skill as stated in the curriculum content. It is a fact that academic qualifications, knowledge of the subject matter, competent skills in teaching and the commitment of the teacher influence the teaching-learning process (Westbrook et al., 2013).

This implies that professionalism in the application of instructional strategies is very important to skill acquisition and will be investigated. Therefore, there is a

need to find out how the instructors' level of mastery of the art of millinery skills content, influences the HND fashion design students' skill acquisition and usage for effective performance in the industry.

2.5.2 Instructional Strategies

Instructional strategies are the modes by which the planned curriculum is brought to life. Several modes of instruction are available to enhance teaching and learning and these are grouped under two main headings namely student-centred and teacher-centred methods. The teacher's choice in using any of these methods largely depends on the teaching philosophy, classroom demography, subject area, and mission of the institution (Muhammad, 2019). These normally guide the teacher in the combination of applicable methods for the effective delivery of content.

Delivering a single topic in practically oriented courses may involve the use of two or more instructional strategies which if not well planned, the acquisition of the right skill becomes a challenge and learners cannot acquire the right skill to use. According to Allsop (2017) the major internal challenge facing institutions in training students is the lack of competent trainers and resources of which the art of millinery is not excluded. However, acquiring the art of millinery skill is crucial to the fashion design student because, it helps them to accessorize their project garment, which enables them to be versatile for the fashion industry since they design and produce a complete garment with accessories.

As stated by Muhammad (2019) teaching a practical-oriented course needs a combination of both teacher-centred and student-centred methods. These are

essential towards the effective delivery and achievement of the expected change in behaviour, however, the method used mostly depends on the content to be given out. In this case, classroom learning activities need to be planned sequentially, thus from simple skills to complex skills at every stage of the learning process. The teaching process needs to consider individual learners' needs, experiences and feelings to facilitate effective teaching/learning towards the acquisition of the expected skills for effective use (Sumra & Mugo, 2012).

The most appropriate strategies for content delivery for practical courses are demonstration and practicals, experiment, role model, exploration, and discussion (Puyate & Eniekenemi, 2017). Therefore, the proposed study intends to ascertain the influence instructional strategies have on the skill acquisition process and utilisation of the millinery art skills by the HND Fashion Design students' internship performance in the fashion industry.

2.5.3 Instructional Resources for Effective Skill Acquisition in Millinery Art

Providing a well-resourced teaching and learning environment facilitates effective teaching and learning. Students are motivated to learn, and teachers can deliver on their mandate through the effective use of resources that enhances knowledge and skill acquisition (Kanyonga, et al., 2019). Learners who have access to instructional materials and explore the skills introduced to them can develop their creative skills. More so technological improvements in education have made life easier for learners since sequential video documents from instructors enable them to practise skills during their studies to acquire the needed skills (Haleem et al., 2022)

Through exploration, they gather more knowledge/skills that encourage them to practice all the time. Aston (2012) explains that in acquiring the art of millinery the learner needs to explore all sorts of fabric manipulations and observe the outcomes because this skill helps in producing unique hair pieces with a professional touch. Fashion trends change over time and these changes that occur from time to time also affect instructional resources for teaching and learning. Obsolete technology and a lack of major resources cannot support effective skill transfer (Chepchumba & Cheruiyot, 2018). The art of millinery has evolved over the years and new inputs and technology are being introduced based on demand.

Learners need to be provided with the right resources since their interaction with these resources help in breaking down complex skills to be learnt into stages and makes it simpler to practice achieving an excellent result. Likoko et al., (2013) in their research, states that institutions that can acquire higher numbers of teaching-learning resources for teaching, have their learners perform better than institutions with a lower number of teaching-learning resources. This is because learners can study based on their abilities hence, they can make the best meaning of the learning process.

Lyons (2012) explained that learning is a complex exercise that takes into consideration learners' motivation, infrastructural facilities, instructional resources, proficient teaching skills and curriculum content. Therefore, there is a need to find out how instructional resources are applied to skill acquisition and utilisation of the millinery art by the HND Fashion Design students for effective performance in the fashion industry. These learners develop effective self-

directed learning skills and identify what they need to learn in a specific area to acquire the needed skills. As indicated by Panworld Education (2017) video documentary instructions are very helpful since it presents real learning experience.

As stated by Zhuwau and Shumba (2018) the availability, adequacy and utilisation of instructional resources cannot be overemphasized. Having adequate instructional resources positively influences the proficient instructional skills of the instructor, which consequently affects curriculum implementation towards achieving good results in the student's achievement. A renowned milliner and author Henriksen (2014) stated that acquiring millinery tools may be expensive, but whatever tool is acquired stays for a lifetime if the milliner is creative and has skills in manipulating fabrics.

Hat steamer, hat stretcher, hat oven, steam iron and mannequin are ever-present essential tools that can never be obsolete unless they are out of service (Potter, 2016). Head blocks change over time, however, creative milliners are always able to produce different designs of headdresses from a single head block. Hence this study seeks to fill a research gap by ascertaining resources available in the Fashion Design department of the technical universities for skill acquisition and utilisation of millinery art skills by HND fashion design students towards effective performance in the industry.

2.6 Utilisation of Millinery Skills in the Fashion Industry

Literature on fashion design states it clearly that there is a difference between a fashion designer and a dressmaker. Fashion designers, design and produce

garments with possible accessories to enhance the total presentation of their designs. However, dressmakers only produce garments without considering the total presentation of their work with accessories. The dressing is complete when a garment is accessorized because accessories are meant to complement or accentuate individual styles of dressing (Ericol Fashion, 2018). Choosing and wearing the right dressing accessories can make or unmake one's dress. Hence it is a need for fashion design students to acquire the millinery skills to accessorize their designs to achieve excellent presentation of their design to the public.

The ability to design and produce hair brooches, fascinators and hats add significantly to the style of simple wear making it classy. This can be easily made with fabric pieces that are normally disposed of in the fashion industry. Fashion design students' ability in making hair brooches, fascinators and hats as a task assigned him/her on internship demonstrates the skill acquired in millinery is being used.

As Fowler (2019) states every piece of fabric can be used in making headdresses it all depends on the skills of the individual. This is because the ability to use the needle and thread to present a design idea in the form of a headdress is a skill. This implies the ability of learners to exhibit this skill in the industry mostly depends on the training received to acquire the skill hence their level of competence (Alhassan & Habib 2016).

The findings of this study will be used to review the skill acquisition process that will facilitate effective skill acquisition and its use by the learners. Therefore, there is a need to assess how students on internships use their millinery skills in the fashion industry.

2.6 Summary of Literature Review and Research Gaps

Studies by McDowell (1992) stated that millinery was practised since 1890 and alongside dressmaking. The training period as stated by Mack (2011) at that time was three to four years. In Africa, Tia (2016) states that hat-making can be traced back to 3000 B. C. E. and was mainly used for protection alongside traditional headdresses. The art of millinery has evolved over the years just as dressmaking, different periods have observed several varieties alongside clothing styles. Currently, the art of millinery is being studied in vocational/technical institutions all over the world including Ghanaian Technical Universities. There is a research gap on millinery art skills acquisition process and use in the fashion industry that needs to be addressed.

A study by Ananga et al., (2016) focused on skills acquired by graduates of Technical Universities and highlighted deficiencies in their skills in meeting industrial needs. Allsop (2017) looked at the skill gap in fashion education and states that graduates of fashion design do not have enough skills to effectively perform in the fashion industry. Although these studies focused on the level of skills acquired by the graduate in the Technical Universities, they did not address the skill gap in the art of millinery as a unit course of study. In addition, the use of technological tools to enhance skills acquisition is an understudied area in most fashion-related education in Africa, thus an important gap to address as well.

Chepchumba and Cheruiyot (2018) looked at the challenges facing the fashion programme in Kenya. Isika et al., (2016) also studied the competencies of fashion design instructors in draping in Kenya which gave excellent views on gaps in the fashion design programme. In Ghana, Obinim and Pongo (2018), Foster and Ampong (2012) focused on competent skills in pattern making. These scholars did not specifically address the skills gap in millenary art skills which requires more interrogation on instructor competency, application of instructional strategies and millinery skills acquired by the students.

Wovenu (2017) also looked at constraints hindering the employment of fashion design graduates in the fashion industry in Ghana. He found among others that the skill acquired by graduates in the art of millinery is low and cannot help them operate in the fashion industry. His study, however, did not focus on internship and how the skills acquired in the institution are used during this period. To fill this research gap identified, this study investigated millinery art skills acquisition and usage by the HND students during their internship in the fashion industry.

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter presents a general overview of the methodological framework of the study. During the discussion, the major methodological issues that were involved in conducting this research were highlighted. Hence, this section is organized under the following headings: Research Design, Study Area, Target Population, Sampling Procedure, Sample Size Determination, Research Instrument, Data Collection & Processing, Data Analysis and Logical and Ethical Considerations.

3.1 Research Design

The research adopted a cross-sectional survey. There are two types of cross-sectional survey namely cross-sectional descriptive survey and cross-sectional analytic survey which were used to collect qualitative and quantitative data from the respondents (O'Leary, 2014; Yazan, 2015). This study employed a cross-sectional descriptive survey design because it allows the collection of quantitative and qualitative data at a minimum cost (Creswell, 2014).

In cross-sectional survey, studies time for data collection should be well defined across the study population to avoid variations in responses concerning time lapses. The mode of data collection is not also limited, any suitable mode of data collection can be applied (Omair, 2016). Hence data for this study was collected when HND Fashion Design students returned from the internship. A cross-sectional descriptive survey is appropriate because it helped the researcher to investigate whether there is a significant association among variables at a defined time.

The cross-sectional descriptive survey approach was used to examine the skill acquisition process in the art of millinery and its usage in the fashion industry during internship. This design was appropriate because the study is concerned with data collection from a large number of sampled populations across five regions in Ghana within a short time. The study was evaluative and end with recommendations for action (Cohen et al., 2011). The focus is on students' skill acquisition and usage in the fashion industry, in the art of millinery in the implementation of the Fashion Design and Technology curriculum of Ghanaian Technical Universities.

3.2 Measurement of Variables

Variables are measurable concepts that can take several values (Kothari & Gaurav, 2014). The study examined independent variables, personal interest and fundamental skills. Moderating variable curriculum content, instructor content proficiency in millinery art and instructional resources (TLM). Dependent variables millinery skill utilisation was measured by the ability to make quality hair brooches, fascinators, and hats (Figure 1.2).

3.2.1 Independent Variable

3.2.1.1 Interest in Millinery Art

The interest of students in the art of millinery was measured as follows: using interest inventory on reasons why they enrol for the fashion design programme: - need for the academic certificate, garment construction, garment designing, accessory development, pattern-making, beauty and cosmetology, designing garment with accessories skills; using five-point Likert scale ranging from five, Very interested (VI) to Not Interested (NI) Students rate their interest levels.

3.2.2 Practical Skills of Interest

The practical skills they practice most during their spare time were measured focusing on the skill they practice most often. This considers practical interest skills as follows: skills in sketching designs of hats, skills in decorative fabric manipulation, draping to make fascinators, hand sewing to create unique designs of clothes, blocking fabrics to make a hat, modelling personal designs for fit and surfing on the internet.

This was measured using a five-point Likert scale from five, Very Often to one, Never. The five-point Likert scale was used because it is simple and easier in providing a quality comprehensive report without confusing respondents. Students' area of specialization was measured using the following: garment technology, garment designing, millinery accessory and beauty culture and they selected as appropriate.

3.2.3 Fundamental Skills in Millinery

Fundamental skills in millinery art, ability to hand stitch, ability to design and ability to style garments by complementing them with millinery products were measured using a five-point Likert scale from five, Excellent to one Very Bad.

3.2.4 Moderating Variables

The research explored moderating variables that were likely to confound the results of the analysis of millinery skill acquisition to account for their effects. The moderating variable accounted for were curriculum content, instructor content proficiency in millinery and instructional resources (adequacy and availability).

3.2.4.1 Curriculum Content

In determining the strength of the relationship between the independent variables and the dependent variables the moderating variables curriculum content, instructor competency and instructional resources were measured as follows: - Curriculum content was measured based on the following variables draping and modelling, decorative techniques, creative design and fabric manipulation skills in the curriculum were measured. These variables were rated using the five-point Likert scale from five, Strongly Agree to one Strongly Disagree or its equivalent Excellent to one Very Poor. This helped in determining how curriculum content supports skill acquisition in the millinery art in the fashion industry.

3.2.4.2 Instructor Content Proficiency in Millinery Art

Instructor content proficiency in millinery art was measured using the following variables: - training received by the instructor, instructional strategies applied to teaching, industrial training/attachment, and practical skills level of the instructor in the millinery art. This was measured using a five-point Likert scale from five, Strongly Agree to one Strongly Disagree. This was complemented by open-ended questions.

3.2.4.3 Instructional Resources

Instructional resources were measured using the following variables: - availability, adequacy and utilisation of instructional resources and duration (time) and space allocated for teaching and learning. This was measured using a five-point Likert scale from five, Always Available to one Not Sure for availability; Adequacy was measured using a five-point Likert scale from five, Adequate to one Not Sure. Utilisation was measured using a five-point Likert scale from five, Always Used to one Not Sure. This approach was adopted to find

out the strength of the relationship between the dependent and independent variables.

3.2.5 Dependent Variables

The main dependent variables accounted for in this research was the millinery art skills use in quality production of brooches, fascinators and hats. This was examined based on the views of students, lecturers, and industry supervisors. Millinery skill acquired was examined in terms of performance in millinery skills (production of brooches, fascinators and hats) in the fashion industry during the internship.

3.2.6 Use of Millinery Art Skills in the Fashion Industry during Internship

The utilisation of millinery art skills the ability to produce quality hair brooch, fascinators and hats was measured using a five-point Likert scale from five, Excellent to one Very poor. This approach was adopted to find out the level of skills acquired and how effectively the millinery skills are utilized by the students during internship in the fashion industry in Ghana.

3.3 Study Area

The study was carried out in Ghana. The study was done in five regions in Ghana because all the government Technical Universities are in the regional capitals. Currently, Ghana has sixteen regions, and ten regions have Technical Universities. Out of this, nine Technical Universities study Fashion Design up to Higher National Diploma (HND) level. These are Accra Technical University, Takoradi Technical University, Kumasi Technical University, Tamale Technical University, Ho Technical University, Koforidua Technical University, Cape Coast Technical University, Bolgatanga Technical University and Sunyani Technical University.

The study used cluster and purposive sampling to select the five oldest technical universities of Ghana, which are Accra, Kumasi, Takoradi, Ho and Tamale Technical. The five institutions were selected from the northern, middle, southern, western, and eastern zones in Ghana although they were initially selected from the three primary zones (North, South and Middle zones). Ho technical university was from the eastern zone, Accra technical university was from the southern zone and Takoradi was from the Western zone. Kumasi Technical University was from the middle zone while Tamale Technical University was from the Northern zone.

A preliminary survey conducted by the researcher in November 2019, shows that these Technical Universities have been offering the Fashion Design programme for at least 25 years. These five Technical Universities were among the first Polytechnics that was established following the work of 1987, University Rationalisation Committee (URC). THE URC was mandated to develop a proposal to reform the management, academic structure, and funding of tertiary education in Ghana.

The committee's report and the subsequent government White Paper issued in 1991 led to the promulgation of the polytechnic law (PNDCL 321) which upgraded all polytechnics to tertiary institutions offering Higher National Diploma programmes since 1994. Later in 2016, the Technical Universities Act (922) as amended in 2018 (Act 974) was enacted to convert polytechnics into Technical Universities. The experiences of these universities are suitable for

meeting the study objectives in the skill acquisition in the art of millinery and its utilisation in the fashion industry. This was the condition through which the institutions were selected for the sample.

3.4 Target Population for the Study

The target population refers to the specific group the researcher intends to use for desired purposes and the sample size is selected from the target population (Kothari, 2014). This study focused on second-year HND students whose population was 662 (Preliminary Survey, 2019). The target population was the population of students studying Fashion Design at HND and a two-year top-up Bachelor of Technology in Fashion Design at Technical Universities in Ghana. From this population, the focus population was the second-year HND students who have returned to school from industrial internship only.

That is, $N = N_1 + N_0$, Where

N = the population of students studying Fashion Design at HND and two-year top-up Bachelor of Technology in Fashion Design in Technical Universities in Ghana.

N_0 = the population of second (2nd) year HND students only.

And $N_1 = N\text{-}N_0$.

This was because, there were 1st year HND students, 2nd year HND and 3rd-year students. Also, there were two-year top-up Bachelor of Technology (1st and 2nd year).

Table 3.1: Distribution of Target Population Across the Nine Technical Universities

Regions	Institutions		Population	Population of Level 200
Greater Accra	Accra Technical University	ATU	542	186
Western	Takoradi Technical University	TTU	430	182
Central	Cape-Coast Technical University	CTU	221	46
Volta	Ho Technical University	HTU	235	88
Eastern	Koforidua Technical University	KTU	222	52
Ashanti	Kumasi Technical University	KsTU	442	148
Brong Ahafo	Sunyai Technical University	STU	128	54
Northern	Tamale Technical University	TaTU	145	58
Upper East	Bolgatanga Technical University	BTU	122	32
Total			**2,487**	**846**

Data Source: Preliminary Survey Agordah (2019)

The study was interested in the 2nd year HND students only. Essentially, the population was drawn from five institutions. These students have returned from the eight weeks internship programme after receiving training in millinery art. It included their industry supervisors and the lecturers who teach millinery and accessory in the Technical Universities. Where students were allocated to the same industry, only such industry supervisor(s) served the students; regardless of the number of students attached to the industry.

In cases where two or more students were attached to the same industry and the industry has only one supervisor the supervisor was interviewed concerning students attached to the fashion industry. Where there were two or more supervisors, a random sample or convenient sample of supervisors was conducted. Consequently, the study selected two supervisors where an industry has more than two supervisors.

3.5 Inclusion Criterion

The study focused on only second-year students in the Fashion department at the HND level who had industrial internship for the semester and returned to school to do their presentation for assessment. The lecturers who teach millinery and accessory in the Technical Universities and the supervisors of the interns in the fashion industry where the students had their internship. Only the industry supervisors who have their fashion industry located in the cities (in the five regional capitals) where the technical universities are forms part of the respondents.

3.6 Exclusion Criterion

Fashion Design students who were not in HND level 200 and had not been on internship were excluded and those in level 200 who could not be to industrial internship within the time frame where also excluded. Lecturers in the fashion departments who do not teach millinery and accessory and staff of the fashion industry who did not supervise the internship students and those who have their fashion business located outside the city where the technical university is located were also excluded.

HND level 100 students were excluded because they are still in the process of acquiring the art of millinery skills. HND level 300 was also excluded because

they are concentrating on their final year collection for their fashion show. The Bachelor of Technology students have their lectures at the weekends, therefore, were excluded due to the high possibility of accessibility challenges.

3.7 Sampling Procedure

Due to the nature of the population and the subgroups involved, the study adopted multi-stage sampling techniques to select the five Technical Universities. As stated in table 3.5 the five oldest Ghanaian Technical Universities running Fashion Design and Technology programmes were selected purposively based on their years of experience and relevance in the Fashion Design programme.

Parenthetically, the five institutions are naturally clustered into the three Ghanaian Zones (the Southern Zone, the Middle Zone, and the Northern Zone).

Table 3.2: Sample selection of the Technical Universities according to Zones

Cluster	No. of Institutions	No. to be selected
Southern Zone	5	3
Middle Zone	2	1
Northern Zone	2	1
Total	**9**	**5**

Source: Annual Report 2019

Essentially, the study covers each economic zones of the nation and proportionately covered the target population while reducing the cost of research. As indicated in Table 3.2 each zone is represented by a Technical University. Hence, a sample size of the target population was selected using random sampling technique due to unequal distribution of students across the selected institutions within each institution.

Table 3.3: Population of HND level 200 in the Five Selected Technical Universities

Institution	TTU	ATU	HTU	KsTU	TaTU	Total
Male	6	32	5	39	13	95
Female	176	154	83	109	45	567
Total	**182**	**186**	**88**	**148**	**58**	**662**

Source: Data from the preliminary survey Agordah (2019)

3.7.1 Sample Size Determination

For this study, proportional random sampling was used to calculate the sample size of students Table 3.3 from the five Technical Universities selected in Ghana. The study also considered the proportional gender representation of the student respondents Table 3.4. The study employed a systematic random sampling technique in selecting student respondents of HND level 200 in the Fashion Design departments.

This was done by selecting every second student who came in to do their presentation to the panel of lecturers assessing them taking into consideration gender (male and female) thus every second male and every second female. The students were spoken to after the presentation, their consent was sought and they were given a questionnaire to respond to. The starting point at the systematic random sampling was when they were called based on the list of the panel members examining them as they present their project collection.

The contacts of their supervisors were taken from them and followed for an interview where the student did the internship using a convenient sampling technique. Purposive and census sampling techniques were used to select all lecturers who teach millinery and accessory in the Fashion Design departments.

The sample size for this study was determined using the formula of Fox et al., (2007).

3.7.2 Sample size (n) determination:

To determine the sample size (n) out of the total population (N) which was 662, the following assumptions were used based on the traditional statistics formula cited by Fox et al., (2007).

Given that the total population is N=662,

1. The population is normally distributed such that N (0, 1). This implies that the population is normally distributed with a mean (μ) = 0 and variance (σ^2) = 1.
2. The margin of error (e) = 0.0982. It is assumed that any misclassification of the sample from the population is 9.82% of the entire population.

According to traditional statistics in Fox et al., (2007), the sample size determination formula is given as $n = \frac{Z_{\alpha/2}^2\ \sigma^2\ N}{e^2\ (N-1) + Z_{\alpha/2}^2\ \sigma^2}$

Where $Z_{\alpha/2}^2 = 1.96^2$ (from the statistical table), $\sigma^2 = 1$.

Substituting the values, we have:

$$n = \frac{(1.96)^2(1)\ (662)}{(0.0982)^2(662-1) + (1.96)^2\ 1} \qquad n = \frac{(3.8416)(1)\ (662)}{(0.00964)(661) + (3.8416)\ 1}$$

$$n = \frac{2543.1392}{6.37204 + (3.8416)\ 1} \qquad n = \frac{2543.1392}{10.21364}$$

$n = 248.99$

$n \approx 249.$

NB: "n" is the number of students sampled.

Based on this formula, proportional random sampling was applied to select 249 students from the five Technical Universities as shown in Table 3.4

Table 3.4: Proportion Distribution of Sample across the Selected Five Technical Universities

Institutions	TTU	ATU	HTU	KsTU	TaTU	Total
Male	2	16	2	16	6	42
Female	48	48	38	48	25	207
Total	**50**	**64**	**40**	**64**	**31**	**249**

Data Source: Study Data 2021

In terms of total participants, three categories were established as shown in Table 3.4. They include students, lecturers, and industry representatives. The institutional affiliation and distribution of the various categories of participants are described in Table 3.5 below.

Table 3.5: Categories of Respondents Sampled in each Institution

Institutions	Student Respondent	Lecturers	Industry Supervisors
TTU	50	9	6
ATU	64	6	8
HTU	40	6	5
KsTU	64	6	6
TaTU	31	4	3
Total	**249**	**31**	**28**

Data Source: Study Data (2021)

From Table 3.4 it can be observed that there was a total of 249 student participants, 31 lecturers and 28 industry supervisors were involved in the study. A total number of 28 industry supervisors were conveniently sampled in the cities (regional capital) where the Technical Universities are located, in cases where the supervisor is located outside the city the Technical University is, such supervisors were not included. Even though 36 of them were conveniently located eight did not consent to participate when they were contacted on phone. A total of 35 lecturers who taught the millinery accessory were met in the field however, four

did not consent to participate in the study hence the actual sample size is 31 lecturers.

3.8 Research Instruments

The instruments for data collection were questionnaires, an interview guide (schedule), an observation checklist and document analysis. A questionnaire (Appendix II) was used to collect data from HND year two students. The questionnaire contained closed-ended, Likert scale and open-ended items. The study used a questionnaire to collect data from students because it is very fast and economical when used to collect data from a large group (Creswell, 2014). Also, it made it possible to collect data from a wider population of students. Semi-structured interview guides (Appendix III & IV) were used to collect data from the students' internship supervisors in the fashion industry and from lecturers who teach millinery at Technical Universities.

Course outlines and assessors' report were analysed to find out how curriculum content support the art of millinery skills acquisition in Technical Universities. Structured observation checklists (Appendix V) were used to collect data on available instructional resources for the training of students in the art of millinery in the Fashion Design and Technology department. This helped to observe available resources that support the teaching and learning process for effective skills acquisition in the art of millinery.

3.9 Pre-testing of Instrument

Pre-testing was done in Cape-Coast Technical University Fashion Design department using 10% (25) of the total sample size for students, a lecturer who teaches the art of millinery and two fashion industry supervisors where students

went for industrial internship. According to Bade (2022) 7% -10% is adequate for pre-testing of a questionnaire.

The feedback from the pre-test revealed that the list of instructional materials organized under Availability and Adequacy was redundant and was deleted with the argument that if the instructional materials are not available, they cannot be used, and they will also not be adequate. Also, the observation checklist can easily help to answer issues related to availability and adequacy of instructional materials. After the pre-testing, the research assistants become familiar with the process which facilitates the data collection by using minimum time. These samples were not included in the final data collection.

Table 3.3: Pre-test Sampling Frame of Respondents

Institution	Students	Lecturers	Industry Supervisors	Total
CTU	25	2	2	**29**

Data Source: Study Data 2021

3.10 Validity

Research requires that instruments used for data collection are both valid and reliable. Whereas threats to validity and reliability can never be erased, Cohen et al. (2018) stated that the effects of these threats can be attenuated by attention to validity and reliability throughout the research. Validity not only concerns the extent to which an instrument measures what it claims to measure but the meaning and interpretation of the data collection and instrumentation results are sound (Cohen et al., 2018 p. 242).

Survey study researchers explain that the most appropriate system for validating data is to count on the notion of triangulation (Lam et al., 2018; Yin, 2014). This study followed Lam et al., (2018) processes of (1) data source triangulation (2) investigator triangulation (3) theory triangulation and (4) methodological triangulation. Bhandari (2020) stated that validity refers to the truth or falsity of propositions generated by research. The questions were constructed based on the main objectives to ensure that the questionnaire items are valid. According to Taherdoost (2016) there are several types of validity; but for the purpose of this study, the researcher used content validity. Lam et al., (2018) noted that using a panel of experts to review the test specifications and the selection of items, improves the validity of test items.

To validate the instruments two experts in the art of millinery in fashion design reviewed the questionnaire items for face validity - to check whether the questionnaire would elicit the required information and comment on the items. To ensure content validity, the researcher also sorted the assistance of four evaluators who are experts in assessing curriculum implementation. Their feedback was used to revise the questionnaire by clarifying ambiguous questions and eliminating redundant items. This helped in reducing the bulk of the instrument.

3.11 Reliability

Reliability is a necessary precondition of validity. Reliability is an umbrella term for dependability, consistency and replicability over time, over instruments and groups of respondents (Cohen et al., 2018). Given the importance of reliability and validity, various steps were taken to achieve them. First, member checking

was used to check the reliability of the interview guides. In terms of the questionnaire, the expert review was used to assure the face validity of questions - to check whether the questionnaire would elicit the required information. The instruments were designed to cover all the content based on the main research objectives and the hypothesis developed to assure face validity. Supervisors (experts) checked the questions for face validity and reliability. The Cronbach's α test determined the instrument's internal consistency. In so doing, the average of all correlations was determined. The Cronbach's α result returned an acceptable reliability score of 83 items of the questionnaire was 0.76 after nineteen items each on availability and adequacy instructional resources were deleted in the pre-test. In Cronbach's α test, a reliability coefficient of 0.72 or higher is acceptable. The researcher trained and engaged four research assistants to administer the instruments to further improve the reliability of the data collected.

Table 3.7: Reliability Result and Cronbach Alpha Summary

Measurement Scale	**No of items**	**Cronbach alpha value**	**Cronbach alpha standard range**	**Interpretation**
Nominal	83	0.758	$0.5 > \alpha$	Unacceptable
			$0.6 > \alpha \geq 0.5$	Poor
Survey Tool Performance			$0.7 > \alpha \geq 0.6$	Questionable
Nominal scale items			$0.8 > \alpha \geq 0.7$	Acceptable
			$0.9 > \alpha \geq 0.8$	Good
			$\alpha \geq 0.9$	Excellent

3.12 Data Collection

Data collection started in October 2021 and ended in January 2022 when students returned from internship to the universities for their presentation on internship.

This was done to avoid time lapses in data collection that may affect data quality (Omair, 2016). Quantitative and qualitative data were collected concurrently, this was done because the two sources of data are being used to complement each other in providing a comprehensive answer to a specific objective (Santos et al., 2017).

The researcher trained four Bachelor of Technology holders in Fashion Design on how to administer the instruments. They were trained in two days on how to administer the questionnaire and ethical issues concerning data collection. A mock data collection exercise was done at the end of the training and their effectiveness was assessed in the data collection process.

A letter of introduction was given by the researcher's employers (Appendix IX) this was sent to all five Technical Universities introducing the researcher and her intent to the institutions. This paved way for ease of access to the various Technical Universities and the Fashion Departments. The communication between the researcher and the institutions helped in the timing of data collection.

Permission was sought from the heads of department with the introductory letter from the researcher's employer (Takoradi Technical University), Research Approval and Authorization letters from the Kenyatta University Graduate board for data collection (see appendix, XIII). The research instrument was administered by the researcher in collaboration with the four trained research assistants.

The questionnaire for students was administered by the research assistants under the supervision of the researcher and collected on the same day. Appendix II shows the data collection tool for these respondents. Data was collected that same day from the lecturers. On the second-day observation checklist was used to check for available resources for teaching and learning (Appendix V). Data was collected from students' respondents' places of internship (industry supervisors) on the third day and fourth days by tracing them to where the student had the internship to assess the level of utilisation of the art of millinery skill by the student during the internship in the fashion industry those who were not reached that day were contacted on phone.

On the issue of document analyses, only one of the institutions made copies of the course outline and the assessors' report available to the researcher on the second day of data collection in the institution. The other three institutions sent them through electronic media. The latest document was received in August 2022 after follow-ups. However, one institution did not send the document.

3.13 Data Analysis

The type of data collected was both quantitative and qualitative, the questionnaire was grouped according to the institution. The data were coded, and input was done in SPSS version 26, data were checked for missing data, outliers, wrong entries, and general data entry mistakes. Data was analysed based on the stated objectives using descriptive statistics.

The quantitative data on objectives two, three and five were analysed using multiple analyses of variance (MANOVA) and multiple linear regression to

determine the moderating effect of curriculum content, instructional strategies/resources used and millinery skills acquired by the HND Fashion Design students respectively. The hypotheses were tested at p-value ≤ 0.05 and results are presented in tables. Objectives one and four were analysed using descriptive statistics.

The interview guides and observation checklists were grouped and organized based on respondent type and institution. Semi-structured interviews were transcribed, cleaned, and checked for uniformity and grouped under themes reflecting patterns of shared meaning (Braun et al., 2019). The observation checklists were analysed using (1) Categorical Aggregation and (2) Direct Interpretation (researchers reach new meanings about cases). Open coding was used to develop a template which was used to discuss non-numeric data based on themes for discussion (Yin, 2014). Objectives one and four were analysed using descriptive statistics and cross-tabulation where necessary.

3.14 Data Presentation

The data presented on quantitative and qualitative are done simultaneously to allow for the identification of the convergence and divergence between the qualitative and the quantitative data. This helped in forging an overall account of the findings giving a holistic view of responses for decision-making (Almalki 2016). The integration provided comprehensive results on each objective since the quantitative, qualitative and hypotheses complement each other (Santos et al., 2017). The data were presented using tables, pie charts and bar graphs in percentages and frequencies. Inferential statistics were presented in tables with explanations.

3.15 Logical and Ethical Considerations

Ethical principles of research as well as rights of withdrawal and feedback were observed. A letter of introduction from the researcher was given by the researcher's employer Takoradi Technical University (Appendix IX), and Research Approval and Authorization letters from Kenyatta University Graduate School (Appendix XII). Ethical clearance from the University of Cape Coast, Institutional Review Board (IRB) (Appendix X) in Ghana to comply with research rules and regulations. These documents were used to seek permission from all the Technical Universities involved in the study in Ghana.

The researcher also sought the consent of participants and assure them of anonymity, confidentiality, and privacy. However, they have the right to withdraw if they so wish at any level. When permission was granted, participants were informed about the research objectives of the study. Those who were willing to participate in the study signed the letter of consent (Appendix I). Eight industry members and four instructors/lecturers who did not consent were not involved in the study.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter focuses on the presentation of results from the analysis of data. It begins with the process of generating knowledge on millinery skill acquisition and usage by HND Fashion Design students. The chapter is organised under various thematic areas. The first section begins with a general descriptive analysis of the demographic variables including institutional affiliation, gender, and age groupings of participants in the research. This is followed by an examination of the student's interest in the art of millinery, views on how the Fashion Design curriculum contents support millinery skill acquisition among HND Fashion Design students, the millinery skills acquired and the millinery skill rating among participants.

The second and third sections examined curriculum content, instructional techniques, content proficiency and resources in millinery skills acquisition of the Fashion Design students in the Technical Universities. The fourth and fifth section looks at the usage of millinery art skills and challenges in the implementation process of the millinery art programme by the HND Fashion Design students of the Technical Universities during the internship. The last section presents the results on the relationship between the millinery curriculum content, instructional strategies/resources used, and the skills acquired by the HND Fashion Design students.

4.2 Response Rate

The response rate is expressed as stated in figure 4.1, the three main categories of respondents namely the HND Level 200 Fashion Design Students who have returned from industrial internship to school, lecturers who teach millinery art in the Technical Universities and fashion industry members who supervised the students during the internship in Ghana.

Table 4.1: Response Rate

Response Categories	Target Response	No. of Respondents Achieved	Percentage Achieved
HND L200 Fashion Design Students	249	249	100%
Millinery Lecturers	35	31	88.6%
Internship Industry Supervisors	31	28	90.3%

Data Source: Study Data 2021

The response rate was very high due to the right timing for data collection and all the questionnaire for students were administered and collected on the same day. A study by Kwegyiriba, Agyemang and Osei-Mensah (2021) in the school environment targeted 132 students which were realized as the sample size for the study. On the issue of document analysis, one out of five of the institution responded immediately after it was requested during data collection. Four of the institutions promised to send it through electronic media, after follow-ups three of the institutions responded while one did not.

4.2.1 Demographic Information of Respondents

Demographic data analysis serves as an important statistical analysis method that provides an overview of the participant's basic information collected with the study questionnaire. Such information supports the determination of whether the individuals in a particular study are a representative sample of the target population for generalization purposes (Salkind, 2010). Although they are usually

reported in the methods section as independent variables in the research design, their appearance in the analysis is to present how they formed the foundations for the analysis of variability within the results. The main areas covered in the analysis of demographic variables in this study were:

(i) student affiliation/institution

(ii) gender distribution

(iii) age group.

Table 4.2 shows the results from the analysis of demographic variables.

Table 4.2: Institution, Gender, and Age of respondents

Variable	Responses	f	%
Institution	Takoradi Technical University (TTU)	50	20.1
	Accra Technical University (ATU)	64	25.7
	Ho Technical University (HTU)	40	16.1
	Kumasi Technical University (KsTU)	65	26.1
	Tamale Technical University (TaTU)	30	12.0
Gender	Male	40	16.1
	Female	208	83.5
	No response	1	0.4
Age	20 – 22 years	63	25.3
	23 – 25 years	106	42.6
	26 – 28 years	55	22.1
	29 years and above	23	9.2
	No response	2	0.8

Source: Study data 2022

NB: Frequency is the number of individuals who participated (responded) in the study and value in the bracket is the actual percentage of the respondents given the option/responses. Hence, no response is the number of people sampled but declined to answer the question.

Table 4.2 presents a detailed description of the frequency distribution of the institution of respondents, gender, and age. The table above shows that the majority (26.1%) of the student sampled are in Kumasi Technical University (KsTU), followed by Accra Technical University (ATU) – 25.7% and Takoradi Technical University (TTU) - 20.1% of the total population of students sampled. The institutions with the lowest sample case (based on sample size calculation

using the number of males and females) are Ho Technical University (HTU) and Tamale Technical University (TaTU), respectively. Although the differences in frequency distribution among the institutions are negligible.

Similarly, the majority of the students are females (83.5%). This implies that the Fashion Design programme in Technical Universities is female-dominated. Also, majority (42.6%) of the students are between 23-25 years. The age of most of the students found in the Fashion Design of the Technical Universities is between 20 and 25 years. The majority in this group of age 23-25 years and those between 20- and 22 years form 25.3% of the total population of students from these Universities. Tables 4.3 and 4.4 presents the summary of demographic data on lecturers and industry supervisors. The main areas covered in the analysis of the lecturers' demographic variables in this study were education, gender, rank, age and teaching experience

Table 4.3: Education, Gender, Rank, Age and Teaching Experience

Variable	Responses	f	%
Educational Level	PhD	1	3.2
	Masters	30	96.8
Gender	Male	2	6.5
	Female	29	93.5
Rank	Assistant Lecturer	18	58
	Lecturer	9	29
	Senior Lecturer	4	12.9
Age	35-40	10	32
	41-45	10	32
	46-50	6	19
	50yrs and above	5	16
Experience	1-4years	16	51.6
	5-8years	9	29
	9years and above	6	19

Source: Study data 2022

Table 4.3 presents a detailed description of the frequency distribution of educational level, gender, rank, age and teaching experience of lecturers of millinery art in Technical Universities. The result shows that 98.8% are master's degree holders, 93.5% are female, 58% are assistant lecturers, most of them are between the age of 35-45years 64% and 51.6% have been millinery for at least 1-4years and 19% have been teaching millinery for nine years. Their experiences are good enough to provide good information on the millinery art skills acquisition.

Table 4.4 presents summary on demographic data of industry supervisors' years of training supports, whether they accessorize their garments and type of accessory they use.

Table 4.4: Training Support, Used of Accessories, Accessory type

Variable	Responses	f	%
Training Support to TTUs	1-2years	3	10.7
	3-4years	4	14.2
	5-6years	7	25
	7years and above	14	50
Accessorize Garment	Yes	11	29.3
	Not Always	7	25
	No	10	35.7
Type of Accessory	Beads	5	17.8
	Headdresses	13	46

Source: Study data 2022

Table 4.4 presents a summary of demographic data on industry supervisors of student interns in frequency distribution on industry supervisors' training support to the Fashion Design Departments of the Technical Universities, whether they accessorize their products and the accessory type they used. Half of the industry supervisors 50% have been supporting the training of Fashion Design students for seven years and above and 10.7% have been supporting them for 1-2 years.

Interestingly, only 29.3% of the fashion industries in which the students had their internship accessorized garments for their clients always, 25% do not accessorize them always, and 35.7% do not accessorize their products. Out of the total number of nineteen fashion industries that stated they accessorize garments 46% indicated they used headdresses in accessorizing. This is a serious challenge for effective millinery art skills acquisition in Fashion Design at Technical Universities since the support from the industry is not the best.

4.2 Interest of Fashion Design Students in the Millinery Art

4.2.1 Interest of HND Fashion Design Students in Acquiring Millinery Art Skills

The study examined the personal interest of Fashion design students to ascertain why they enrolled in the Fashion Design programme. This answers objective one of the study, two stages were involved in this assessment. The first stage explored the students' broad interest in enrolling in the Fashion Design programme at the technical Universities table 4.5. This finding was important because it helped to identify the reason students enrolled in the Fashion Design programme at the Technical Universities. The reasons for their interest in the programme were the need for an academic certificate, skill in garment construction, designing, hat making, accessory development, modelling, pattern making, designing garment accessories and hairdressing/cosmetology.

The second stage specifically explored their interests in millinery skills acquisition by finding out the Fashion Design skills they practise most during their spare time. This finding is important because it helped the study to identify specific skills of interest to the students after they were introduced to the various courses in fashion design. The skill areas of practise were sketching designs,

decorating, manipulation of fabric, draping to make fascinators, pattern drafting, sewing for customers, hand sewing to create designs and hair styling. Tables 4.5 and 4.6 present the summary of the result.

Table 4.5: Reasons for the Student's Interest in being Enrolled on the Fashion Design Programme at the Technical Universities

Variables	Interested	F/Interested	Not Interested
	f (%)	f (%)	f %
Interested in			
Academic Certificate	**247 (99.2**)	2(0.8)	0(0)
	242 (97.2)	6(2.4)	1(0.4)
Garment construction	239 (96.0)	8(3.2)	2(0.8)
Garment designing	182 (82.1)	21 (58)	9 (3.6)
Hat making	205 (82.3)	32(12.9)	12 (4.8)
Accessory development	80 (32.1)	131(52.6)	38 (15.2)
Modelling	207 (83.2)	28(11.2)	14 (5.6)
Pattern making	214 (86.0)	24(9.6)	13 (4.4)
Designing garments with accessories	34 (13.6)	80(32.1)	135(54.2)
Hair dressing and cosmetology			

Source: Study Data 2021 **N = 249**

The results in table 4.5 indicate the interest of the students in enrolling for the Fashion Design programme in the Technical Universities, almost all the students 99.2% (247) stated that they were interested in acquiring an academic certificate, 0.8% (2) of the students were fairly interested in acquiring a certificate in Fashion Design. Nearly all the students 97.2% (242) of the student participants indicated being interested in garment construction, 2.4% (6) of the students were fairly interested and 0.4% (1) of the students were not interested.

A total of 82.1% (182) of the students, reported their interest in the Fashion Design programme was because of hat making, 23.3% (58) of the students indicated fairly interested and 3.6% (9) of the students were not interested. With interest in accessory development, 83.2% (205) of the students stated they are

interested, 12.9% (32) were fairly interested and 4.8% (12) of the students were not interested. Interest in modelling 32.1% (80), of the students, indicated they are interested, 52.6% (131) were fairly interested and 15.2% (38) students were not interested.

Majority of the students 83.2% (207) of the students stated they have an interest in pattern-making, 11.2% (28) of the students were fairly interested and 5.6% (14) were not interested in pattern-making in Fashion Design studies. On the issue of interest in designing garments with accessories, 86% (214) of the students stated they are interested in studying Fashion Design to be able to design garments with its accessories, 9.6% (24) of the students were fairly interested and 4.4% (13) of the students were not interested in designing garments with its accessories. While 13.6% (34) of the students indicated that they were in Fashion Design studies because they were interested in hairdressing and cosmetology, 32.1% (80) were fairly interested and 54.2% (135) of the students were not interested.

In table 4.6 the study revealed the current area of interest of the respondents because they have been taught various courses in Fashion Design. This explores the skills they practised most during their spare time to check if their interest level in the art of millinery has improved or declined. Table 4.6 presents cumulative results in frequency and percentages (%) of the findings.

Table 4.6: Skills Fashion Design Students Practice most at their Spare time (interest inventory)

Variables on Skill Prerequisites	Often f (%)	Undecided f (%)	Rarely f (%)
Sketching designs	179 (71.1)	30 (12.0)	40 (16.1)
Decorations	162 (65.0)	48 (19.3)	39 (15.7)
Manipulating fabrics to create hair dresses	67 (25.9)	128 (51.4)	54 (22.7)
Draping to make fascinators	157 (63.0)	51 (20.5)	36 (14.4)
Pattern drafting	185 (74.3)	40 (16.1)	24 (9.6)
Sewing with machine for customers	182 (76.6)	50 (20.1)	17 (6.8)
Hand sewing to create designs	136 (54.6)	60 (24.1)	53 (21.3)
Hair styling	26 (10.4)	21 (8.4)	202 (81.1)
Produce fascinators to sell	26 (10.4)	40 (16.1)	183(73.5)
Blocking to make hats	26 (10.4)	44 (17.7)	179 (71.9)
Beading	173 (69.5)	24 (9.6)	52 (20.8)
Modelling designs to check for fit	136 (54.6)	75 (30.1)	38 (16.2)
Reading fashion-related books	207 (83.2)	31 (12.4)	11 (4.4)
Surfing internet for new fashion trends	245 (98.4)	3 (1.2)	1 (0.4)

Source: Study Data **N= 249**

In finding out about the most practised skills among students of the Fashion Design programme, 71.9% (179) of the students reported they practice sketching designs often, 12% (30) of them were undecided and 16.1% (40) of the students, reported sketching designs were rarely done. With regards to decorating, 65% (162) of the students reported it was done often, 19.3% (48) of the students were undecided and 15.6% (39) of the students, said they rarely practised decoration.

A total number of 25.9% (67) of the students documented practising fabric manipulation to create head-dresses often while 51.4% (128) of the students, were undecided and 22.7% (54) of the students said manipulating fabrics to create headdresses were rarely practised. More than half of the student respondents, 63.0% (157) said draping to make fascinators was often practised, 20.5% (51) students were undecided while 14.5% (36) of the students, said, draping to make fascinators was rarely practised.

In pattern drafting, majority of the students 74.3% (185) reported, they practise pattern drafting skills often, 16.1% (40) of the students' participants, were undecided and few 9.6% (24) of the students reported pattern drafting skill was rarely practised. More than two-thirds of the students 76.6% (182) indicated that they often practised sewing with the machines for customers, 20.1% (59) of the students' respondents were undecided and few 6.8% (17) stated they rarely sew for customers.

Hand sewing to create designs was often practised by 54.6% (136) of the Fashion Design students, 24.1% (60) of them were undecided, 21.3% (53) of the students indicated they rarely practice hand sewing to create designs. Concerning hair styling, 10.4% (26) of the student participants often practice hair styling, 8.4% (21) of the students were undecided while 81.1% (202) of the students, indicated they rarely practised hair styling.

In the case of the production of fascinators to sell 10.4% (26) of the students, responded practising often 16.1% (40) of students, were undecided and 73.5% (183) of students, rarely produce fascinators to sell. Few students 10.4% (26) of the student participant often practised blocking to make hats, 17.7% (44) of the students, were undecided and 71.9% (179) of the students reported they rarely practice blocking to make hats.

Majority of the students 69.5% (173) indicated they often practised beading, 9.6% (24) of the students were undecided while 20.8% (52) of the students, rarely practised beading. About modelling their designs to check for fit 54.6% (136) of

the students reported they often model their designs to check fit, 30.1% (75) of the students were undecided on modelling their designs to check fit while 16.2% (38) students reported they rarely model their designs to check fit.

On the issue of reading 83.2% (207) of the students indicated they often read, 12.4% (31) of the students were undecided about practising reading and few of the students 4.4% (11) of the student participants, indicated they rarely practice reading. Almost all the students 98.4% (245) of the students acknowledged surfing the internet often for new fashion trends, 1.2% (3) of the students were undecided and 0.4% (1) students reported they rarely surf the internet for new fashion trends.

The results in table 4.6 present detailed information on the various skills the students practise during their spare time in Fashion Design at the Technical Universities. What remains unclear is whether their choice of practice was contingent on institutional affiliation, the curriculum exposure: - what they were taught or determined by a personal interest in that specific area of study. It is also interesting to note that in table 4.3, 82.1% of the students who enrolled on the Fashion Design program indicated they were interested in hat-making. However, in table 4.6 only 10.4% of the students indicated they practise hat-making during their spare time after they have been introduced to the millinery art curriculum.

The study further explore skills Fashion Design students practiced most in the various institutions. Table 4.7 presents summary of the result.

4.2.2 Skills Fashion Design Students Practised Most at their Spare Time in Each Institution

Table 4.7 presents results on the various skills the students practise most in their leisure time in the various institutions. This was to determine the level of students' practice in each institution in the specific areas to find out whether what they practise is because of what they were taught or determined by a personal interest in that specific area of study.

Table 4.7: Fashion Design Skills Students Practised Most at their Spare time in each Institution

Variables - Skills Practised	Institutions				
	TTU	ATU	HTU	KsTU	TaTU
Sketching design	3	3	2	2	1
Decorations	3	3	2	2	1
Manipulation of fabrics to create hair	2	1	1	1	1
Draping to make fascinators	1	1	1	1	1
Pattern drafting	3	3	3	3	3
Sewing with machine	3	3	3	3	3
Hand sewing to create designs	3	3	1	2	1
Hair styling	2	1	1	1	1
Producing Fascinators to sell	2	1	1	1	1
Blocking to make hats	1	1	1	1	1
Beading	3	3	3	3	1
Modelling design to check for fit	3	3	3	3	1
Reading of Fashion related books	2	2	2	2	2
Surfing on the internet for new fashion trends	3	3	3	3	2

Keys: 3 = Well Practised, 2 = Practised, 1 = Rarely Practised
Source: Study data 2022

Table 4.7 outlines the results of the institution attended and its influences on the Fashion Design skills students practised during their spare time. The results from institution-based analysis of fashion design skills that students practise during their spare time indicate that institutional affiliation did not influence the level of practise by the students in pattern drafting and sewing with a machine. Those areas were well-practised by students from all five institutions. The result shows that aside from sewing with a machine, pattern drafting and surfing on the internet for new fashion trends, all other skills are rarely practised in TaTU.

Blocking to make hats and draping to make fascinators are “rarely practised” across all institutions. Aside from TTU, students from all institutions rarely practise the manipulation of fabrics to create head dresses, hair styling and produce fascinators to sell. Overall, the practice of pre-requisite skills is better among students in TTU and ATU. Also, the practice of prerequisite skills appears rare among students in TaTU. Based on the findings in table 47 the study sought the views of lecturers on students’ interest in millinery art skills, table 4.8 presents the findings.

4.2.3 The Views of Lecturers on Students' Interest in Millinery Art Skills

Table 4.8 presents lecturers' views on students’ interest in millinery art. This finding would help determine factors that motivate the students to acquire the art of millinery skills. The areas of interest were hand sewing, designing garments with accessories and styling garments with head-dresses. This finding was important to help determine factors that motivate students to acquire the art of millinery skills.

Table 4.8: Lecturers' Views on the Specific Interest of Students that can Motivate them to Acquire Millinery Art Skills.

Specific Interest Areas	High f (%)	Undecided f (%)	Low f (%)	Total f (%)
Hand Sewing	27 (87.1)	4 (12.9)	0 (00)	31(100)
Designing garments with head-dresses	29 (93.5)	0 (00)	2 (6.5)	31 (100)
Styling with head-dresses	29 (93.5)	0 (00)	2 (6.5)	31 (100)

Source: Study Data

The study also investigated the views of the lecturers concerning students’ interest in some specific areas that can motivate them to acquire the millinery skills, cumulatively, it was found that 87.1% (27) of the lecturers, indicated their students have high interest in hand sewing while 12.9% were undecided.

Concerning the issue of designing their project garment with head-dresses, more than half of the lecturers 93.5% (29) stated their students have high levels of interest in designing their project garment with head-dresses, 6.5% (2) of the lecturers were low. Results on the views of the lecturers on their students' interest in styling their garments with head-dresses, 93.5% (29) stated their students have high interest in styling their garments with head-dresses, 6.5% (2) were low on their view of students interest in styling their garment with head-dresses. The study in table 4.9 further investigated Fashion Design students' perception of success in millinery art in the fashion industry in Ghana.

4.2.4 Perception of Students on Millinery Art Skills Success in the Fashion Industry

The study also explored possible areas, in the HND Fashion Design students feel they have acquired enough skills to successfully practise in the Ghanaian fashion industry. This finding was to help determine whether students would be interested in practising the art of millinery skills in the fashion industry after school. The specific areas were garment construction, designing, pattern technology, millinery and beauty culture.

Table 4.9 presents the findings on how students perceive they can practise successfully in garment construction, designing, pattern technology, millinery art and beauty culture. This was to determine whether students are likely to practice millinery art skills in the fashion industry.

Table 4.9: Students' Perception of Skill Success in the Fashion Industry

Variables	Agree	Undecided	Disagree
	f (%)	f (%)	f (%)
Garment construction	230 (92.4)	14 (5.6)	5 (2.0)
Designing	224 (89. 9)	19 (7.6)	6 (2.4)
Pattern technology	216 (88.9)	24 (9.6)	9 (3.6)
Millinery	127 (51.0)	75 (30.1)	47 (18.9)
Beauty culture	44 (17.7)	100 (40.1)	105 (42.1)

Source: Study Data N = 249

In finding out from students, possible areas of skills they feel they can successfully practise after graduation, 92.4% (230) of the students agreed to skill success in garment construction, 5.6% (14) of the students were undecided and 2% (5) students disagreed. With regards to designing, 89.9% (224) of the students agreed, 7.6% (19) students were undecided and 2.4% (6) of the students disagreed. On the issue of pattern technology, 86.8% (216) agreed to see themselves as successful with the skills they acquired, 9.6% (24) of the students were undecided and 3.6% (9) of the students disagreed.

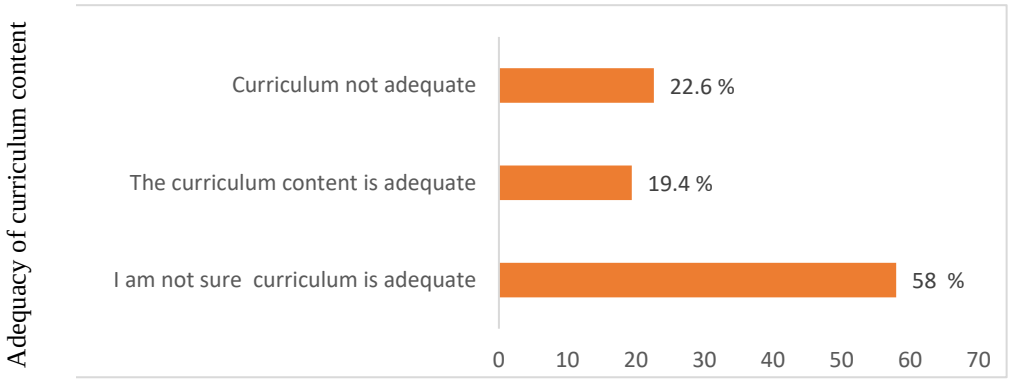
On the issue of success in millinery, 51% (127) of students agreed to be successful in millinery, 30.1% (75) of students were undecided and 18.9% (47) of the students disagreed. Under beauty culture, 17.7% (44) of the students agreed to acquire enough skills to be successful after graduation, 40.1% (100) students were undecided and 42.1% (105) of the students disagreed to skill success in beauty culture after graduation.

The next section of the study addresses objective two of the research. It presents the results of the data analyses concerning the Fashion Design curriculum being implemented in Ghanaian Technical Universities. This was to determine how

curriculum content support skill acquisition in the art of millinery at the HND level in the Technical Universities in Ghana. The summary of the result is presented in figure 4.1.

4.3.1 Fashion Design Curriculum Content Used in Training the Students of Fashion Design in Millinery Art

The study further analyzed the adequacy of millinery art curriculum in training fashion design students to acquire millinery art skills. The results of the lecturers on adequacy of the curriculum content are presented in figure 4.1 it is complemented with qualitative findings from document review.



Lecturers Responses on curriculum adequacy in Percentages

Figure 4.1: Adequacy of Curriculum Content

Figure 4.1 presents the views of the lecturers concerning the adequacy of the millinery art curriculum in Fashion Design used in the Technical Universities in Ghana. The results showed that majority 58% (18) of lecturers were not sure the curriculum content was adequate to support millinery skill development. Another 22.6% (7) indicated that the curriculum content was not adequate. Only 19.4% (6), were of the view that curriculum content was adequate.

Some of the reasons from the lecturers are as follows: -

> *There are issues with the curriculum and the time available for practice. Millinery itself is limited within the curriculum. … Also, these are special skills that need attention. Students have lots of courses to think through each semester. Therefore, it is difficult for them to have spare time for practice* (Lecturer, TTU)
>
> *To practise skills, you need a lot of time. The issue is that both the nature of our programme and the number of courses the students take each semester is such that they rarely have spare time to practise the art of millinery or to practise the skills they acquire. May be you should explore how lecturers use assignments to enable them to use their millinery skills. They may do many different things during their spare time. … I am not sure, but millinery is a specialized thing* (Lecturer, HTU).

The comments provide insight into why students might not be practising the millinery art. Analyses of the Millinery Accessory course outline from the Fashion Design departments revealed clearly stated course objectives and learning activities to be followed. One main challenge that was identified was the time allocated to the skills acquisition process in the millinery art at the Technical University. It is also stated instructional strategies that are used in delivery were lectures, discussions and practical demonstrations.

Alongside these instructional strategies, the students are given practical project assignments and class exercises. Assessment of the student is based on class exercises, mid-semester examination and end-of-semester examination. However, the review of the course outlines also revealed that curriculum content on Millinery art skills is not similar in the Technical Universities. Some of the Fashion Departments in the Technical Universities start studying millinery art skills at level 100 second semester others in the second semester.

Assessors' Reports did not comment on curriculum content in relation to areas covered in examining the students and the assessors are not the same for all the institutions. The are from institutions and their area of speciality were not the same. It was quite interesting that the excellent content areas stated in the course outlines could not help the HND Fashion Design students in acquiring the necessary skills in millinery art. Furthermore, if the curriculum content area stated in the course outline is given appropriate contact hours, application right instructional strategies, and adequate needed resources, the HND Fashion Design students will acquire excellent skills in the millinery art in the Technical Universities. The study further investigated students prerequisite skills in millinery art table 4.10 presents' results on their skills in hand stitching.

4.3.3 Hand Stitching Skills of the Fashion Design Students

Hand stitching skills are a prerequisite in millinery art. This skill was considered important because millinery products are mostly hand stitched. This finding helped in determining the ability of students in assembling parts of millinery products (crown, brim and embellishments). The types of stitches were back stitches, double stitches, blanket/wire stitches, stab stitches, cross stitches, invisible felt stitches, angle/diagonal stitches and slip stitches. Table 4.10 presents the summary of students' skills in hand stitching.

Table 4.10: Students' Skills in Hand Stitching

Types of stitches	Good		Fairly Good		Poor	
	f	(%)	f	(%)	f	(%)
Back stitches	219	(88.0)	20	(8.0)	10	(4.0)
Double stitches	213	(85.5)	22	(8.8)	14	(5.6)
Blanket or wire stitch	161	(64.6)	39	(15.7)	49	(19.7)
Stab stitches	135	(55.2)	36	(14.5)	78	(33.3)
Cross stitch	174	(69.8)	29	(11.6)	46	(18.5)
Invisible felt stitch	101	(40.5)	68	(27.3)	80	(32.1)
Angle or diagonal stitch	133	(53.4)	51	(20.5)	65	(26.1)
Slip stitch	108	(43.3)	62	(24.9)	79	(31.7)

Source: Study Data 2021 N = 249

Table 4.10 presents the result from the descriptive analysis of the student's ability to make hand stitches, majority of the students 88% (219) of the students indicated their skills in backstitching are good, 8% (20) indicated their ability to make back stitches using hand needle is fairly good and thread and 4% (10) considered their skills in back stitching using hand needle and thread poor.

More than two-thirds, 85.5% (213) of students can make good double stitches using hand needle and thread, 8.8% (22) of the students, stated their ability level is fairly good and 5.6% (14) reported their back stitching skills using hand needle and thread is poor. With regards to making a blanket or wire stitches with hand needle and thread, 64.6% (161) of the students referred to their ability as good, 15.7% (39) of the students stated their ability in making blanket stitches is fairly good and 19.7% (49) of the students, referred to their ability as poor.

Stab stitches was reported as good by 55.2% (135) of the students, opined that their ability in working stab stitches is fairly good 14.5% (36) of the participants and 33.3% (78) students acknowledged their ability to be poor. The use of some of these stitches can be found in the video documentary on assembling headdresses with the online link (https://www.youtube.com/watch?v=a8_jOlyIfK0).

Results on cross stitching with hand needle and thread indicate that 69.8% (174) of the students, rated their ability as good, 11.6% (29) of the students, indicated fairly good and 18.5% (46) of the students rated their ability as poor. Forty and half percent (40.5%) (101) students considered their ability to make invisible felt

stitches with their hand as good, 27.3% (68) of the students' participants indicated their ability as fairly good, 32.1% (80) students reported their ability as poor.

Under the ability in working angle or diagonal stitches with the hand using thread and needle, 53.4% (133) of the students rated themselves as having good skills, 20.5% (51) of the students, stated their ability to make angle stitches as fairly good and 26.1% (65) of the students declared their ability to be poor. Ability to perform slip stitches was reported as good by 43.3% (108) of the students, while 24.9% (62) of the students, reported fairly good skill level and 31.7% (79) of the students, rated their ability as poor.

The implication is that most Fashion Design students did not have good skills in the essential stitches needed for millinery arts. This again confirms that the curriculum may not have provided sufficient opportunity for students to practice these skills.

4.4 Instructor Proficiency in Millinery Art

This section provides answers to the third objective of the study. The section helped in determining the millinery art content proficient level of the lecturer/instructor, instructional strategies used in training, availability, adequacy and utilisation of instructional resources. This finding was important because curriculum objectives can only be realised when implementers are proficient, the right instructional strategies are applied and instructional resources are available, adequate and used as stated in the curriculum.

4.4.1 Professional Training in Millinery Art

This helped in determining the professional millinery skills level of the lecture/instructor in the Technical Universities. Figure 4.2 summarized the industrial/professional training received by the lecturers in millinery art.

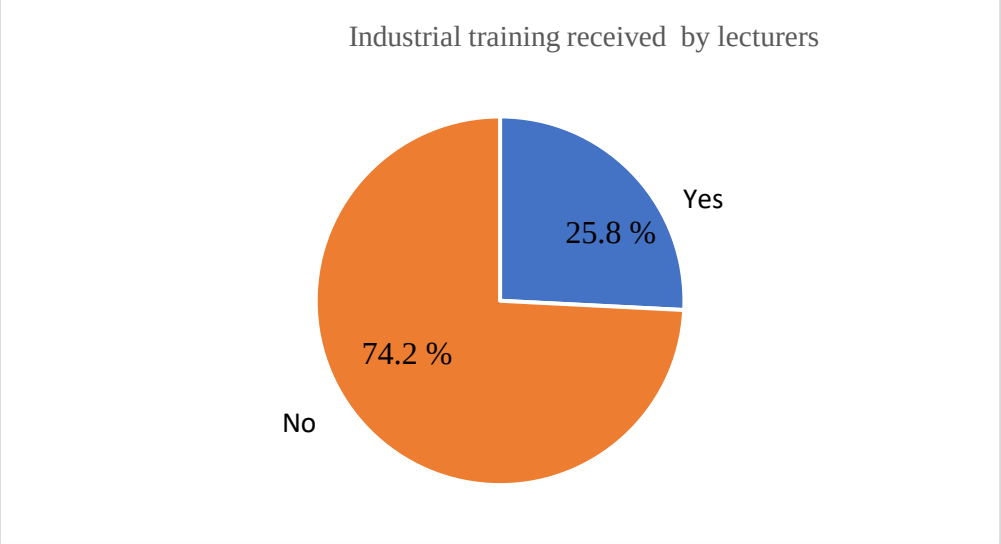


Figure 4.2: Lecturers/Instructors' Industrial/Professional Training

The result indicated that the majority, 74.2% (23) of the lecturers did not receive any industrial training. Only 25.8% (8) of the lecturers received industrial training in millinery art.

Some of the reasons from the lectures include the following: -

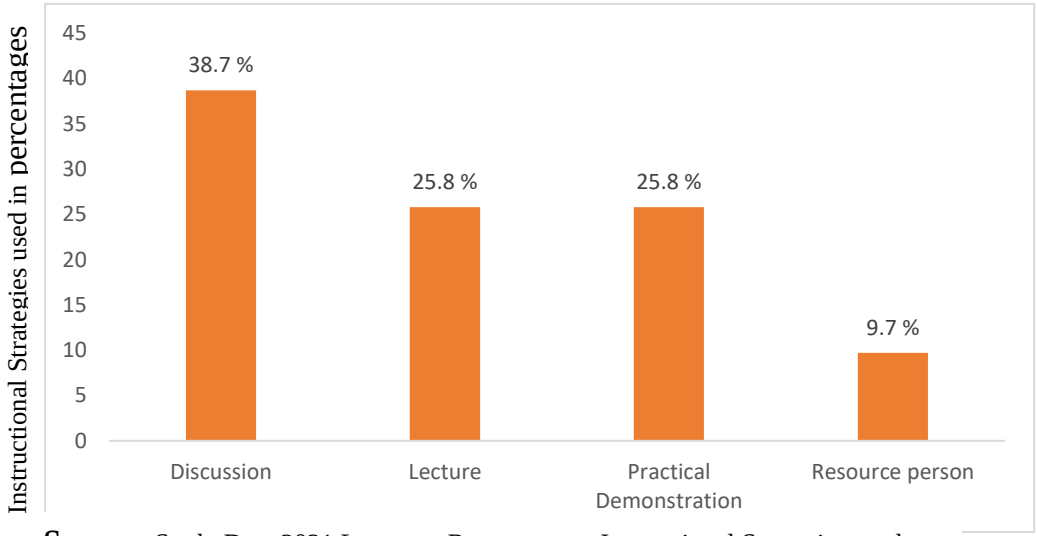
> *I have not received any training from the industry due to the high cost of training. The training is sometimes residential and expensive. You cannot attend if you don't have good support* (51.6%, 16 lecturers)
>
> *No, the department needs to help us acquire current skills so that we can do better. We need to update our skills in the art of millinery if we are to become effective lecturers* (9.6%, 3 lecturers)
>
> *I need more practical training in millinery to be able to teach my students better* (12.9%, 4 lecturers)

We need qualified lecturers because the school is not ready to help us get training to effectively teach millinery, so we always focus on the bead-making aspect of the curriculum (16, 5 lecturers)

We have not participated in any millinery skill development workshop. The main problem is the lack of support from the institution to help us get the skills. (19%, 6 lecturers)

4.4.2 Instructional Strategies Used in Training HND Fashion Design Students in Millinery Art in the Technical Universities

Instructional strategies used in skill transfer are very essential because it is supposed to facilitate understanding of the concept being taught, the skills to learn and how to practise the skills. The variables were discussion, lecture, demonstration/practical and the resource person instructional strategies. This helped in determining the instructional strategies used in training the HND Fashion Design students in millinery art to acquire the needed skills to practice during the internship in the fashion industry. Figure 4.3 presents the summary of instructional strategies used in training Fashion Design students in millinery art at the Ghanaian Technical Universities.



Source: Study Data 2021 Lecturers Responses on Instructional Strategies used

Figure 4.3: Instructional Strategies Used in Training Students to Acquire Millinery Art Skills

Figure 4.3 shows the instructional strategies lecturers specified they regularly use in teaching millinery skills. The results showed the lecturers mostly used discussions 38.7% (12) practical demonstration 25.8% (8) and lectures 25.8% (8) in teaching the art of millinery skills. Interestingly only 9.6% (3) stated they use the services of resource persons to help in the millinery art skill acquisition in the technical universities. Some of the lecturers' comments on learning millinery skills through social media were as follows: -

> *I tried that but it was not helpful because they don't demonstrate the skills very well, they mostly focused on finishing the product within a short time (45% , 14)*
>
> *Online content in millinery on social is not well illustrated to help acquire the needed skills in millinery. I tried following some milliners in the fashion industry online but that couldn't help me enough (58%, 18 lecturers)*
>
> *We need a well-illustrated online video on millinery skills that can also help us to update our skills and also used them for reference (70.9%, 22)*

This could be some of the reasons that most of the lecturers 38.7 figure 4.3 prefer using the discussion instructional strategy in millinery art skills acquisition process in Fashion Design at the Technical Universities.

4.4.3 Instructional Strategies and Millinery Art Skills Practise in the Fashion industry during Internship

The study also investigated how frequently the instructional strategies were used, how the instructional strategies helped the students in acquiring the millinery art skills they practised during their internship program as well as their effectiveness. Table 4.11 presents the summary of the results.

Table 4.11: Instructional Strategies Used and their Effects on Millinery Art Skills Practise during Internship

Instructional Strategy	**Never (%)**	**Sometimes (%)**	**Often (%)**	**Very often (%)**	**Always (%)**	**No response (%)**
Discussion	2 (0.8)	4 (1.6)	4 (1.6)	145 (58.2)	94 (37.8)	-
Lecturing	-	16 (6.4)	2 (0.8)	194 (77.9)	37 (14.9)	-
Practical demonstration	3 (1.2)	34 (13.7)	4 (1.6)	129 (51.8)	79 (31.7)	-
In-Practice	**Strongly Disagree (%)**	**Disagree (%)**	**Undecided (%)**	**Agree (%)**	**Strongly Agree (%)**	**No response (%)**
Discussion	-	6 (2.4)	12 (7.3)	140 (56.2)	90 (36.1)	1 (0.4)
Lecturing	15 (6.0)	46 (18.5)	15 (6.0)	166 (66.7)	5 (2.0)	2 (0.8)
Practical demonstration	-	2 (0.8)	8 (3.2)	105 (42.2)	134 (53.8)	-
Effectiveness	**Not Bad (%)**	**Rarely Effective (%)**	**Undecided (%)**	**Effective (%)**	**Most Effective (%)**	**No response (%)**
Millinery	33 (13.3)	15 (6.0)	9 (3.6)	184 (73.9)	3 (1.2)	5 (2.0)

Source: Study Data 2021 N = 249

Table 4.11 presents results from the analyses of the student's views on the common instructional strategies used very often across the technical institutions. The results did not depart from the lecturers' views except that the students' views did not mention the use of resource persons at all. The students' views show that discussion was the most frequently used strategy followed by lecturing and practical demonstration. A total of 98% (239) said the discussion was used very often or always. Also, a total of 92% (231) said lecturing was used very often or always while a total of 83% (208) said practical demonstrations were used very often or always. In-practice 53.8% (134) of the students strongly agreed that practical demonstration instructional strategy helps them to practise millinery skills. Majority 73.9% (184) of the students indicated that the millinery art skills acquisition process is effective.

4.4.4 Instructional Resources for Millinery Art Skills Training

To measure instructional resources in the technical universities for training the Fashion Design students in millinery art, provision, availability, adequacy and usage of instructional resources were measured using an observation checklist, interview guide and questionnaire. This helped determine the type of resources available, the quantity available and usage in training the Fashion Design students in millinery art at the technical universities in Ghana.

4.4.4.1 Lecturers Source of Instructional Resources for Millinery Art

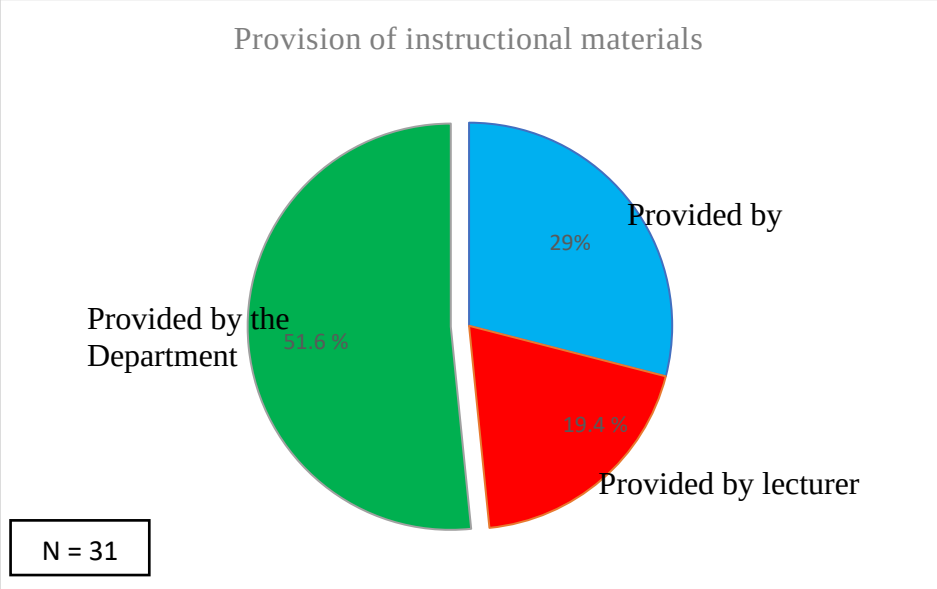


Figure 4.4: Shows Responses from Lecturers on the Provision of Instructional Resources

The result shows that only 51.6% (16) of lecturers get instructional resources from the department. As indicated in the results, 29% (9) of the lecturers noted that the students provided instructional resources. And the remaining 19.4% (6) of lecturers noted that instructional resources provision is by them. This situation is most likely to impact students' interest in acquiring enough skills in the art of millinery to effectively use it during the internship. Two typical interview comments explained the matter

> *One factor affecting the teaching and learning of fashion design is students' interest in millinery skill acquisition is not very good due to the cost of materials they must purchase. Even when the university provides… the students necessarily must purchase some items on their own. This is affecting interest in our area* (Lecturer, KsTU).
>
> *Students' choice of specialisation is affected by the supply of materials for the teaching and learning of millinery skills. In most cases, students buy the materials. Innovative and resolute lecturers sometimes use their resources to buy items for practicals. … We do that a lot of the time. That is a big part of the problem* (Lecturer, TTU).

The comments confirm the view that even when the departments provide resources, students need to buy some more and this influenced the student's ability to acquire enough skills in the art of millinery for effective practice during the internship in the fashion industry. That is, the availability of instructional materials influences what is taught and what is learnt at a particular time of the millinery skill acquisition process. This may also have affected the capacity of the students to practice millinery skill acquisition prerequisites or to have interest in millinery skill acquisition due to the high cost of millinery resources.

A typical comment was

> *For the number of years, I have been in this institution, I cannot say that there was a time when we had the full complement of instructional materials available. In fact, we always struggle to have some available. The students always must compliment. Sometimes the students buy everything* (Lecturer, ATU)
>
> *I am not sure I can say we ever have the full complement of instructional materials. That will be a miracle. We should be discussing if we have been getting the materials, not talking about the full compliment. Either you buy the materials as a lecturer, or you ask the students to buy them. It is*

a perennial struggle, and we always shift the burden to students (Lecturer, HTU)

4.4.5 Availability, Adequacy and Utilisation of Instructional Resources

To get good information on the available instructional resources in the Technical Universities for skill acquisition in millinery art physical observation was made on instructional resources. This helped in checking what is available for training in figure 4.5 & 4.6 and table 4.12 adequacy of instructional resources concerning the number of students in table 4.13 and usage of the instructional resources in training the students in millinery art table 4.14. However the usage of the instructional resource includes resources provided by the Fashion Design departments, lecturers/instructors and students figure 4.4 presented a summary of the provision of instructional resources. Tables 4.10 to 4.13 present a summary of the results.

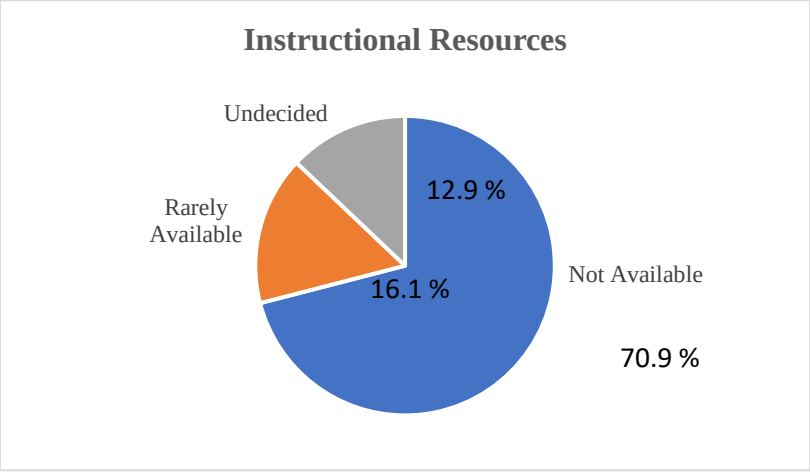


Figure 4.5: How Readily Instructional Resources are Available for Teaching

All the lecturers 100% (31), stated that they have never had the full complement of instructional resources for teaching the art of millinery skills in Technical Universities. In addition, 70.9% (22), of lecturers also indicated that instructional

materials are not readily available, 16.1% (5), of them stated that instructional materials were rarely available, while 12.9% (4), were undecided.

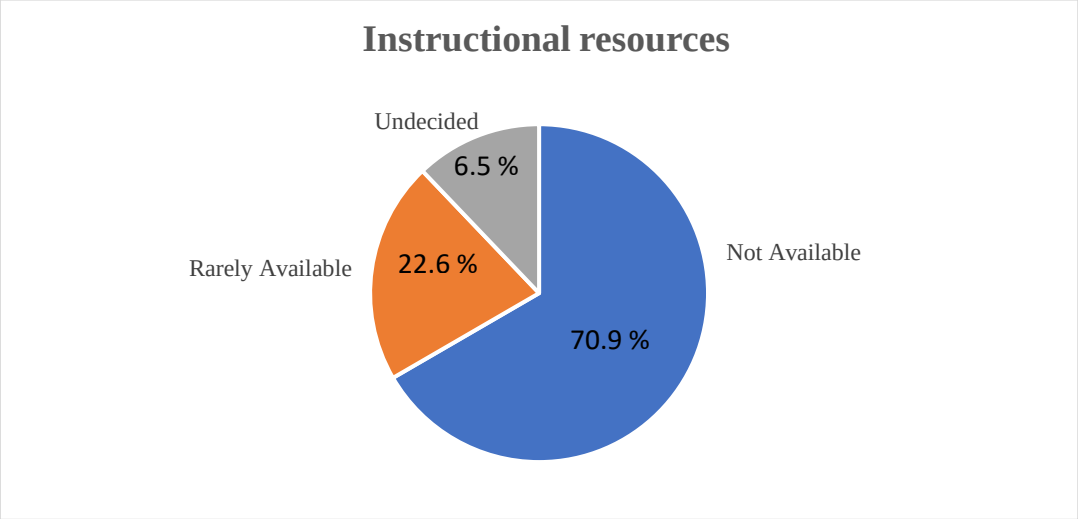


Figure 4.6: Instructional Resources Available for Students Practise

Figure 4.6 shows that on the issue of students practising millinery art skills, majority of the lecturers 70.9% (22), stated that there are no resources available for the students to practise what they have been taught, 22.6% (7), stated, that rarely happens and 6.5% (2), were undecided on availability of tools for students practise.

Table 4.12 presents results on observation made on available resources in the Fashion Design departments for skills acquisition in millinery art at the Technical Universities. Table 4.13 reports on adequacy of the instructional resources while table 4.14 reports on students' views on the utilisation of instructional resources during the millinery art skills acquisition process.

Table 4.12: Available Instructional Resources in the Institutions

Available of Instructional Resources in each Institution					
Instructional Resources	**TTU**	**ATU**	**HTU**	**KsTU**	**TaTU**
Hat steamer	0	0	0	0	0
Steam iron	1	1	1	1	0
Kettle	0	0	0	0	0
Brim blocks	1	1	1	1	0
Crown blocks	1	1	1	1	0
Fascinator blocks	0	0	0	0	0
Cutting scissors	1	1	1	1	1
Pliers	0	0	0	1	0
Mannequin	0	0	0	0	0
Hat stretcher	0	0	0	0	0
Milliners' needle	0	0	0	0	0
Milliners' pins	0	0	0	0	0
Millinery Textbooks	0	1	0	0	0
Buckram	1	1	1	1	0
Sinamay	1	1	1	1	0
Straw	0	0	0	0	0
Crinoline	1	1		1	0
Millinery wire	1	1	1	1	0
Sweatband	1	1		1	0

Key: Available = 1, Not Available= 0, Soure: Study data 2021

The result in table 4.12 shows that none of the institutions has half of the instructional resources for teaching the art of millinery skills. Additionally, mannequins, hat stretchers, milliners' needles and pins were not available in any of the institutions. The only instructional resource available in TaTU is cutting scissors. This explains why lecturers and students usually provide the materials themselves.

Table 4.13: Adequacy of Instructional Resources in the Institutions.

Adequacy of Instructional Resources in each Institution					
Instructional Resources	**TTU**	**ATU**	**HTU**	**KsTU**	**TaTU**
Steam iron	0	0	0	0	-
Brim blocks	0	0	0	0	-
Crown blocks	0	0	0	0	-
Cutting scissors	0	0	0	0	0
Pliers	-	-	-	0	0	-
Textbooks	0	0	0	0	-
Buckram	1	1	1	1	-
Sinamay	1	1	1	0	-
Crinoline	1	1	1	1	-
Millinery wire	1	1	1	1	-
Sweatband	1	1	1	1	-

Key: Adequate = 1, Inadequate = 0, Nil = - **Source: Study Data 2021**

It can be observed from table 4.13 that instructional resources available were only adequate for demonstration by the lecturers but not for student practice in the millinery art as observed by the study. This confirms the comment from lecturers that resources are not available for students to practise millinery art skills to be competent.

Table 4.14 illustrates instructional resources (materials and tools) used in the millinery art class in the Technical Universities as indicated by the students. The instructional resources used in millinery art class include the personal provision by lecturers and what students were asked to bring to class.

Table 4.14: Students' Views on the Utilisation of Instructional Resources

Instructional Resources	Responses (frequencies and percentages)				
	Always used	Used	Sometimes used	Not used	Not sure
Hat steamer	0(0%)	0 (0%)	0 (0%)	153 (61.4%)	96 (38.5%)
Steam iron	99 (39.8%)	38 (15.3%)	70 (28.1%)	28 (11.2%)	14 (5.6%)
Kettle	99 (39.8%)	39 (15.7%)	53 (21.3%)	46 (18.5%)	12 (4.8%)
Brim blocks	69 (27.7%)	28 (11.2%)	72 (28.9%)	63 (25.3%)	17 (6.8%)
Crown blocks	73 (29.3%)	30 (12.0%)	69 (27.7%)	65 (26.1%)	12 (4.8%)
Fascinator blocks	3 (1.2%)	18 (7.2%)	85 (34.1%)	130 (52.2%)	13 (5.2%)
Cutting scissors	156 (62.7%)	39 (15.7%)	33 (13.3%)	15 (6.0%)	6 (2.4%)
Pliers	129 (51.8%)	49 (19.7%)	39 (15.7%)	27 (10.8%)	5 (2.0%)
Mannequin	13 (5.2%)	29 (11.6%)	77 (30.9%)	121 (48.6%)	9 (3.6%)
Hat stretcher	0 (0%)	0 (0%)	0 (0%)	204 (81.9%)	45 (18.0%)
Milliner's needle	153 (61.4%)	46 (18.5%)	20 (8.0%)	21 (8.4%)	9 (3.6%)
Milliner's pins	146 (58.6%)	52 (20.9%)	21 (8.4%)	22 (8.8%)	8 (3.2%)
Millinery Text books	9 (3.6%)	76 (30.5%)	141 (56.6%)	19 (7.6%)	4 (1.6%)
Buckram	74 (29.7%)	32 (12.9%)	45 (18.1%)	82 (32.9%)	16 (6.4%)
Sinamay	73 (29.3%)	37 (14.9%)	41 (16.5%)	84 (33.7%)	14 (5.6%)
Straw	0 (0%)	0 (0%)	3 (1.2%)	227 (91.2%)	18 (7.2%)
Crinoline	77 (30.9%)	57 (22.9%)	50 (20.1%)	53 (21.3%)	12 (4.8%)
Millinery wire	126 (50.6%)	67 (26.9%)	21 (8.4%)	26 (10.4%)	9 (3.6%)
Sweatband	94 (37.8%)	99 (39.8%)	21 (8.4%)	26 (10.4%)	9 (3.6%)

Source: Study Data 2021 N = 249

Looking at the availability and use of instructional inputs, 61.4% (153) of students stated that, hat steamers were not used in teaching millinery art, while 38.5% (96) students indicated they are not sure of the use of hat steamers in millinery art class. With a steam iron, 39.8% (99) of the student reported it was always used, 15.3% (38) while 28.1% (70) reported steam iron was sometimes used in the art of millinery class to teach them and 11.2% (28) indicated it was not used and 5.6% (14) of the students were not sure of the use of steam iron in the art of millinery class in the Technical Universities.

According to 39.8% (99) of the students the kettle was always used in skill acquisition of the millinery art 15.7% (39) of the students, indicated the kettle is used in the millinery art class, 21.3% (53) stated it was sometimes used, 18.5%(46) students indicated it was not used and 4.8% (12) of the students were not sure of the use of the kettle in the millinery art class.

On the use of brim blocks in skill acquisition of millinery art 27.7% (69) of the students reported it was always used, 11.2% (28) of the indicated brim blocks were used in the art of millinery class, 28.9% (72) students indicated the brim blocks were sometimes used, 25.3% (63) students stated brim blocks were not used and 6.8% (17) students were not sure of the use of brim blocks in the millinery art skill acquisition process.

Crown blocks, 29.3% (73) students participants said they always used crown blocks, 12% (30) students stated crown blocks were used, 27.7% (69) students indicated crown blocks were sometimes used, 26.1% (65) students said crown blocks were not used and 4.8% (12) students were not sure of the use of crown blocks in skill acquisition in the art of millinery.

Regarding the use of fascinator blocks in skill acquisition in the art of millinery 1.2% (3) of the students stated it was always used 7.2% (18) indicated fascinator blocks were used 34.1% (85) of the students reported sometimes used 52.2% (130) of the students admitted fascinator blocks were not used 5.2% (13) of the students were not sure about the use of fascinator blocks in the skill acquisition in the art of millinery in the Technical Universities.

The majority of the students 62.7% (156) of the student said cutting scissors were always used, 15.7% (39), students indicated cutting scissors were used 13.3% (33) students reported cutting scissors were sometimes used 6% (15) students reported cutting scissors were not used and 2.4% (6) students stated they are not sure of the use of scissors in millinery art class.

With the use of pliers in the skill acquisition in the art of millinery 51.8% (129) students affirmed they are always used 19.7% (49) students also said they use pliers 15.7% (39) students said pliers are sometimes utilized during class sessions, 10.8% (27), of the student reported they do not use pliers and 2% (5) of the students state they are not sure of the use of pliers during their class sessions.

Mannequin was always used as indicated by 5.2% (13) 11.6% (29) of the student reported they are used 30.9% (77) indicated they are sometimes used 48.6% (121) of the students reported not used and 3.6% (9) of the students indicated they were not sure mannequins were used during the skill acquisition process in the art of millinery.

On the usage of the hat stretcher 81.9% (204) of students indicated it was not used while 18.0% (45) stated they are not sure. Milliners' needle 61.4% (153) of the students stated they are always used during the art of millinery class sessions, 18.5% (46) reported they are used 8% (20) indicated sometimes used 8.4% (21) said not used and 3.6% (9) students were not sure of the use of milliners' needle during their class sessions in the art of millinery.

In the case of the use of milliner's pins 58.6% (146) more than half of the students reported using the pins always 20.9% (52) of students indicated they are used, 8.4% (21) of the students stated sometimes used 8.8% (22) of the students reported they were not used and 3.2% (8) of the students were not sure of the use of milliner's pins in the skills acquisition process in the art of millinery in the Technical Universities.

Issues on millinery textbooks revealed only 3.6% (9) of the students reported they always used their millinery textbooks during their millinery class sessions 30.5% (76) of the students reported textbooks were used 56.6% (141) reported they were sometimes used, 7.6% (19) reported not used and 1.6% (4) reported they were not sure of the utilisation of textbook.

Buckram was always used by 29.7% (74) in the art of millinery class sessions, 12.9% (32) students indicated, it was used 18.1% (45) of the students reported they are sometimes used 32.9% (82) indicated buckram was not used and 6.4%) (16) of the students reported they were not sure of buckram use during their millinery class session.

Regarding the use of sinamay in the skill acquisition process of the art of millinery 29.3% (73) of the students indicated that it was always used 14.9% (36) of the students reported it was used, 16.5% (41) indicated sometimes used 33.7% (84) stated not used and 5.6% (14) of the students were not sure of the use of sinamay during a class session in the art of millinery. The majority of the students 92.4% (230) indicated that the straw material has not been used in the millinery

class and 7.2% (18) reported they were not sure of its use in the art of millinery class sessions.

Crinoline was reported as always used by 30.9% (77) of the students 22.9% (57) of the students indicated crinoline was used during their class sessions 20.1% (50) of the students reported it is sometimes used 21.3% (53) of the students stated crinoline was not used and 4.8% (12) of the students were not sure if they used crinoline during their class sessions. Millinery wire 50.6% (126) of the students said they always use it during class sessions in the art of millinery 26.9% (67) of the students stated millinery wire is used 8.4% (21) of the students reported they sometimes use it, 10.4% (26) students indicated not used and 3.6% (9) students responded as not sure.

Finally on the issue of sweatband usage in the art of millinery skill acquisition process 37.8% (94) of the students said they always use sweatbands, 39.8% (99) said they use sweatbands, 8.4% (21) of the students reported they sometimes use sweatbands, 10.4% (26) students reported they do not use sweatbands and 3.6% (9) of the students responded as not sure sweatbands were used in skill acquisition in the art of millinery skills in the Technical Universities.

Table 4.15 presents results on observation of instructional materials/tools used in the Fashion Departments of the Technical Universities in the skill acquisition in the art of millinery as indicated by the lecturers during observation.

Table 4.15: Use of Instructional Resources in the institutions

Use of Instructional Resources in each Institution					
Instructional Resources	**TTU**	**ATU**	**HTU**	**KsTU**	**TaTU**
Hat Steamer	-	-	-	-	-
Steam iron	1	1	1	1	0
Kettle	-	-	-	-	-
Brim blocks	1	1	1	1	0
Crown blocks	1	1	1	1	0
Fascinator blocks	1	1	0	0	0
Cutting scissors	1	1	1	1	1
Pliers	1	1	1	1	0
Mannequin	1	1	0	0	0
Milliners' needle	1	1	1	0	0
Hat stretcher	-	-	-	-	-
Milliners' pins	1	1	1	0	0
Millinery Textbooks	1	1	1	1	0
Buckram	1	1	0	1	0
Sinamay	1	1	1	1	0
Crinoline	1	1	1	1	0
Straw	-	-	-	-	-
Millinery wire	1	1	1	1	0
Sweatband	1	1	1	1	0

Key: Used= 1, Not Used= 0, Nil = - Source: Study Data 2021

From table 4.15, most of the instructional resources were used in teaching the art of millinery skills in TTU, ATU, HTU and KsTU this confirms the lecturer's comment on forcing students to buy most of the instructional materials. However, in TaTU only the scissors were used in the art of millinery class. However, hat-steamer, kettle, hat stretcher and straw were not available in any of the institutions when the observation of instructional resources was made. This explains why the students were not conversant with the names of some of the instructional resources.

The suggestions from the industry relating to how to improve millinery skill acquisition include the following: -

> *Millinery materials are expensive and so the school should support them with materials. They should invite milliners to help in training the students* (industry supervisor/17.8%, 5).

4.5 Millinery Art Skills Acquired by HND Fashion Design Students

Table 4.16 summarised the millinery skills the students stated they have acquired in the millinery art. The construct measured were blocking/draping, fabric manipulation, decoration and hand stitching skills. This helped to determine the prerequisite skills acquired by the students.

Table 4.16: Students' views on the level of Millinery Art Skills they Acquired

Skill Prerequisites	Very poor		Fairly Good		Very Good		No response	
	f	%	f	%	f	%	f	%
Blocking/Draping	88	(35.3)	54	(21.7)	104	(41.8)	3	(1.2)
Fabric manipulation	52	(20.9)	40	(16.1)	152	(61.0)	5	(2.0)
Decoration	40	(16.1)	33	(13.3)	172	(69.0)	4	(1.6)
Hand stitching	35	(18.1)	32	(12.9)	169	(67.8)	3	(1.2)

Source: Study Data 2021 N = 249

The results of the analysis of student's level of skills acquired in the prerequisite areas cumulatively indicated that 69.0% n = 172 stated they have acquired very good skills in the decoration of millinery products 67.8% (169) also indicated that they have acquired very good skills in hand stitching, 61.0% (152) reported they have acquired very good skills in fabric manipulation and 41.8% n = (104) also stated they have acquired very good skills in blocking.

However, 35.3% (88) and 21.7% (54) of the students indicated that the skills they acquired in blocking are very poor and fairly good respectively. Quite a number of them 20.9% (52) and 16.1% (40) also stated that the skills they have acquired in fabric manipulation are very poor and fairly good respectively. Concerning skills acquired in hand stitching, few of the students 18.1% (35) and 12.9% (32) rated the level of skills they acquired as very poor and fairly good respectively. Plate 4.1 present the picture of blocked or draped sinamay on a brim mould this

is supported by a video illustration in the attached online link (https://www.youtube.com/watch?v=t7v1jZyP-IQ&t=13s).

Blocked/Draped Brim

Plate 4.1: Blocked / Draped Brim

Source: Agordah (2022)

4.5.1 Lecturers/Instructors' View on Millinery Art Skills Acquired by the Students

The results in Figure 4.7 present a summary of lecturers'/instructors' views on the adequacy of the millinery skills acquired by the Fashion Design students.

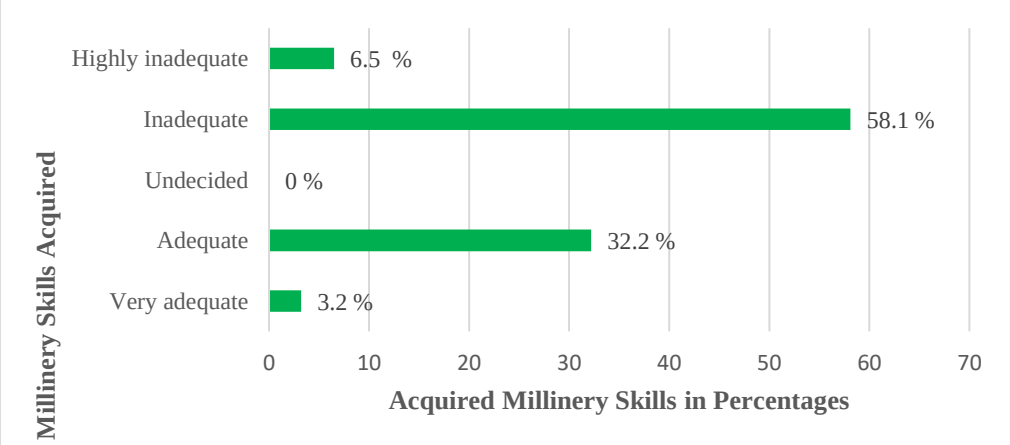


Figure 4.7: Lecturers' Perspectives on Millinery Art Skills Acquired by the Students

From figure 4.7, 58% (18) indicated that students had inadequate millinery skills. Two out of that number indicated that students' millinery skills were highly inadequate. However, 32% (10) indicated that students had adequate millinery skills. The study further explored lecturers' views on students' millinery skills in designing hair brooches, fascinators, and hats.

4.5.2 Students' Skills Acquired in Designing and Constructing Headdresses.

The results in Figures 4.8-4.9 and tables 4.17-4.18 present a summary of how the lecturers and students rate students' millinery skills acquired in designing headdresses for facial shapes. The study also finds out the skill level of the students in constructing headdresses for the various facial shapes. Figure 4.9 and Table 4.17 presents the results. This was important because fashion design students need to make a quality fashion statement in their production.

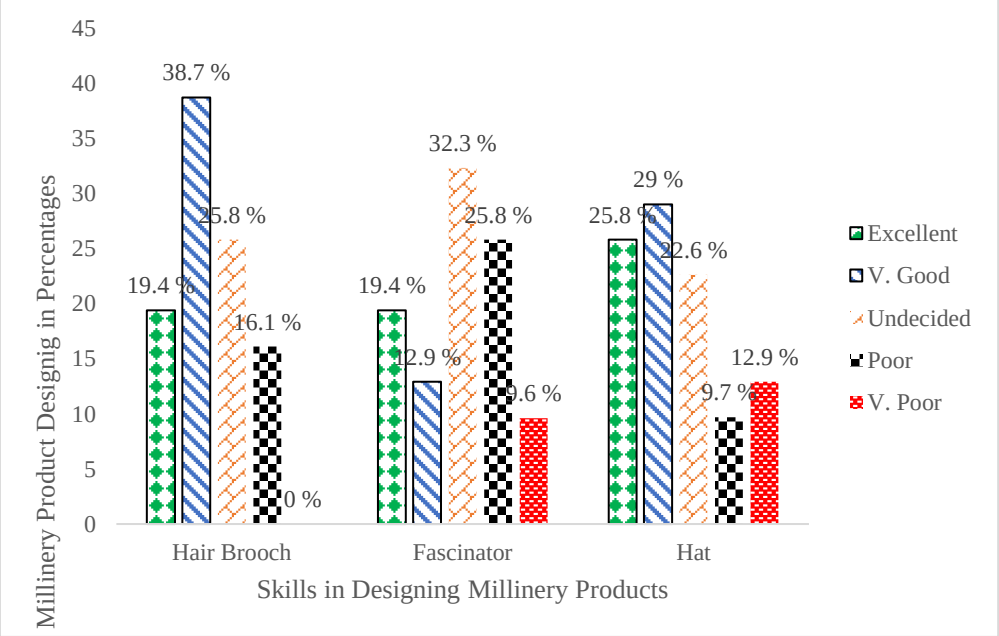


Figure 4.8: Lecturers' Views on Students' Millinery Art Skills in Designing Hair Brooches, Fascinators, and Hats

The results of the analysis in Figure 4.6 shows that 19.4% (6), and 38.7% (12) of the lecturers, stated that their students had excellent and very good millinery skills

in designing hair brooch respectively. On the issue of students' skills acquired in fascinator designing, the lecturers rated the skills levels of the students indicating 19.4% (6), and 12.9% (4), have excellent and very good skills respectively in designing fascinators. Also, students' skills in designing hats were rated as follows 25.8% (8) and 29% (9) indicated by the lecturers respectively.

The study further investigated the lecturers' views on students' millinery skills in constructing hair brooches, fascinators, and hats. Table 4.17 presents how the students rate their skills in designing hair brooches, fascinators and hats.

Table 4.17: Students' Rating of their Skills in Designing Millinery Art Products

Millinery Product	**Responses (frequencies and percentages)**		
	Good	**Fairly Good**	**Poor**
	f (%)	**f (%)**	**f (%)**
Hair brooches	79 (31.7)	45 (18.1)	125(51.2)
Fascinators	94 (37.7)	33 (13.2)	122 (48.9)
Hats	90 (36.1)	37 (14.9)	108 (43.3)

Source: Study Data 2021 N = 249

Table 4.17 shows how fashion design students rated their skills in designing millinery products 31.7% (79) rated their ability to design hair brooches as good, 18.1% (45) were not sure of their ability to design hair brooches and 51.2% (125) of the students, admitted to poor ability in designing a hair brooch. In the case of rating, their ability in designing fascinators, 37.7% (94) of the students rated themselves as good, 13.2% (33) of the students considered themselves neither good nor poor and 48.9% (122) rated themselves as poor.

On rating students' ability to design hats 36.1% (90) of the students rated their ability as good, 43.3% (108) rated their ability as poor and 14.9% (37) of the

student, also stated they were fairly good in designing hats. This means that most of the fashion design students did not regard themselves as having millinery art skills.

The study further investigated the views of lecturers and students on the ability to construct headdresses. Figure 4.9 and Table 4.18 presents the summary of the results. Lecturers' view on students' skills in constructing millinery products thus hair brooches, fascinators and hats.

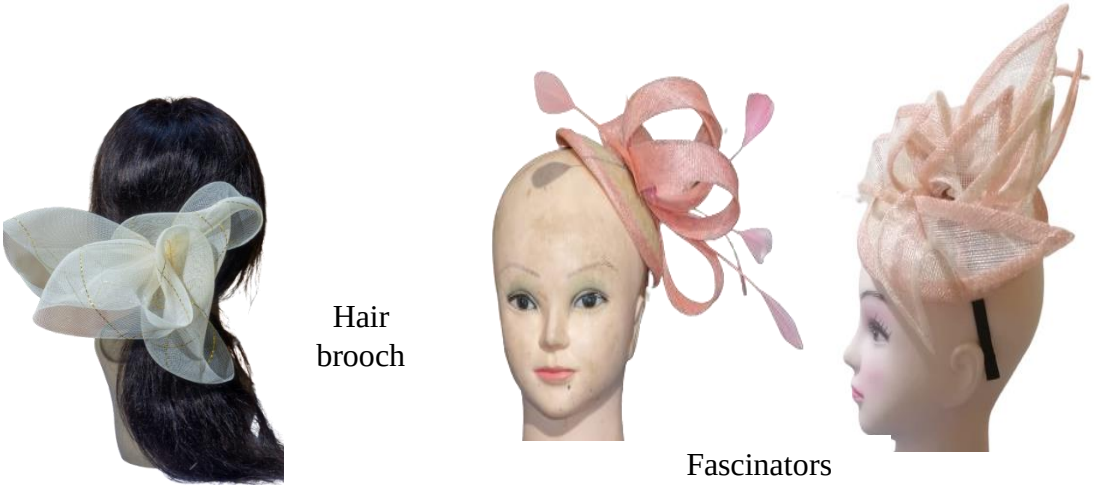


Plate 4.2. Hair Brooch & Fascinators
Source: Agordah 2022

Plate 4.3: Hats
Source: Agordah (2022)

Figure 4.9 presents lecturers' views on students' skills in constructing millinery products

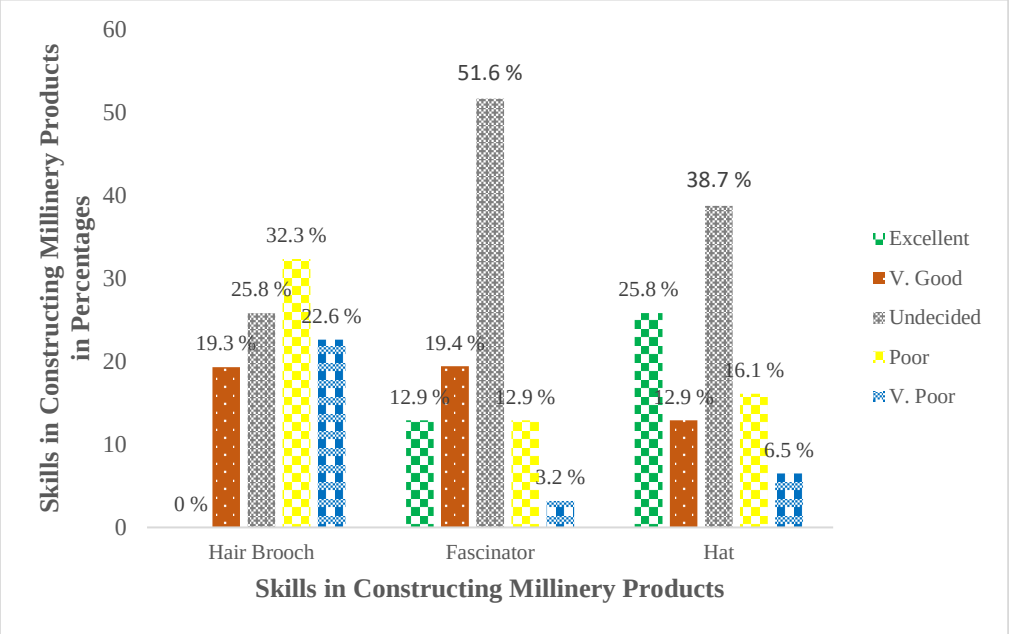


Figure 4.9: Lecturers' Views on Students' Millinery Art Skills in Constructing Hair brooch, Fascinators, and Hats

Figure 4.9 shows 19.3% (6) of the lecturers each stated students had very good millinery skills in constructing hair brooches and fascinators. In the case of fascinators, 51.6% (16) of the lecturers were undecided while 12.9% (4) and 3.2% (1) indicated that the students had poor and very poor millinery skills respectively in fascinator construction. Table 4.18 presents results on students' skills in constructing millinery products

Table 4.18: Students Rating of their Skills in Constructing Millinery Art Products

Variables	Responses (frequencies and percentages)			
	Good	Fairly Good	Poor	Total
Hair brooch	77 (30.9%)	47 (18.9%)	125 (50.2%)	249 (100%)
Fascinator	92 (36.9%)	31 (12.4%)	126 (50.6%)	249 (100%)
Hats	103 (41.3%)	37 (14.9%)	109 (43.7%)	249 (100%)

Source: Study Data 2021

Table 4.18 shows the results from the analyses of HND Fashion Design students' self-rating of their ability in constructing millinery products. As indicated in the table 50.2% (125) have poor skills in constructing brooches 18.9% (47) of the students were doubtful of their skills in making hair brooches and 30.9% (77) indicated they have good skills in constructing hair brooches. In terms of constructing fascinators 50.6% (126) said their ability to make fascinators was poor 12.4% (31) of the students reported fairly good and 36.9% (92) of the students, reported they have good skills in constructing fascinators. On hat-making 43.7% (109) stated their skill is poor 14.9% (37) students indicated fairly good and 41.3% (103) of the students, reported they have good skills in constructing hats. Table 4.19 present students view on the training received in millinery art at the Fashion Design departments in the Technical Universities.

Table 4.19: Students' Rating of Training Received in the Millinery Art as Fashion Design Students

Rating Scale	**Responses (frequencies and percentages)**
Very poor	41 (16.5%)
Poor	52 (20.9%)
Fairly Good	47 (18.9%)
Good	98 (39.4%)
Excellent	11 (4.4%)
Total	**249 (100%)**

Source: Study Data 2021

Table 4.19 shows HND Fashion Design students self-rating of the training received in millinery art 16.5% (41) students rated the training given them as very poor 20.9% (52) students also rated their training as poor 18.9% (47) of the students reported training received fairly good, 39.4% (98) stated their training was good and 4.4% (11) students reported their training was excellent.

4.6 Usage of Millinery Art Skills in the Fashion Industry during Internship

Practising millinery art skills in the fashion industry during internship is very important for this study and answers objective four. To find out the millinery skills they used during the internship, a five-point Likert scale was used to find out how often their skill in hat, fascinator and hair brooch making was used during the internship.

Table 4.20 presents the summary of the millinery skill usage, table 4.21 present how the students rate the millinery skill practise and table 4.22 indicated the confidence level of the students in the millinery art.

Table 4.20: Millinery Art Skills Used During Internship

Making of Millinery items	Always	Sometimes	Rarely	Never	Not Sure
	f (%)	f (%)	f (%)	f (%)	f (%)
Hat	0(0)	58(23.3)	40(16.0)	105(42.2)	46(18.5)
Fascinator	20(8.0)	52(21)	10(4.0)	112(45)	55(22.1)
Brooch	0(0)	15(6.1)	86(34.5)	106(42.6)	42(16.8)

Source: Study Data 2021 N = 249

The results by the students on the usage of the millinery skills in the fashion industry during internship indicated that none (0%) of the students always used the millinery skills 23.3% (58) sometimes used 16% (40) rarely, 42.2% (102) never and 18.5% (46) of the students are not sure whether they used their skills in hat making.

On the issue of using their skills to produce fascinators during internship only 8% (20) always did, 21% (52) sometimes did, 4% (10) rarely, 45% (112) never and 22.1% (55) were not sure. The result on using their skill in making hair brooch during the internship, none of the students made hair brooch always, 6.1% (15)

did that sometimes, 34.4% (86) rarely, 42.6% (106) never and 16.8% (42) were not sure.

Table 4.21: Millinery Art Skills Practise in Ghanaian Fashion Industry

Description	Range	Responses (frequencies and percentages)
Very Poor	0-20	52 (20.9%)
Poor	21-40	90 (36.1%)
Average	41-60	83 (33.3%)
Very Good	61-80	22 (8.8%)
Excellent	81-100	2 (0.8%)
	Total	**249 (100%)**

Source: Study Data 2021 N = 249

In table 4.21 the study found out the level of millinery skills practice in the fashion industry during the internship by the students, 20.9% (52) rated their use of acquired millinery skills as very poor, 36.1% (90) rated their millinery skills utilisation as poor, 33.3% (83) rated their millinery skills utilisation as average, 8.8% (22) students rated their millinery skill utilisation very good and 0.8% (2) rated their utilisation millinery skill in the fashion industry during internship excellent. Table 4.22 investigated students confidence level in millinery art.

Table 4.22: Confidence Level of Students in Millinery Art

Variable	Responses (frequencies and percentages)
Very poor	39 (15.7%)
Not confident	75 (30.1%)
Fairly confident	36 (14.5%)
Confident	89 (35.7%)
Very confident	10 (4.0%)
Total	**249 (100%)**

Table 4.22 presents results on students confidence level to practice based on the skills acquired in millinery art. 15.7% (39) of the students, rated their confidence as very poor, 30.1% (75) of the students also rated themselves as not confident,

14.5% (36) of the students were doubtful about being confident to practice or not, 35.7% (89) of the students reported they were confident to successfully practice and 4% (10) of the students, rated themselves as very confident to successfully practice based on the millinery skills acquired. One typical comment from an industry member speaks volumes about the importance of confidence in the Fashion Design industry.

> *Even if the person has all the skills, I will be looking for confidence. Those I have interacted with now don't meet my expectations - they lack confidence* (industry contact or participant 12)

This shows that confidence is an important factor in the Fashion Design industry. As such the HND Fashion Design curriculum in Ghanaian Technical Universities need to purposefully integrate the development of confidence among students.

4.7 Challenges with Millinery Skill Acquisition Process

In this research, one major issue that was reported in the data was the challenges students faced in the acquisition of millinery art skills. This section presents results from the data on the challenges in acquiring millinery art skills in Ghanaian Technical Universities. Table 4.23 presents the results of the challenges in acquiring millinery art skills.

Table 4.23: Challenges of Students in Acquiring the Millinery Art Skills

Challenges	Yes	No	Total
Large class size	31(100%)	0(0%)	31(100%)
Learners find it difficult to buy head-blocks to practice	31(100%)	0(0%)	31(100%)
Limited time allocated to the course	31(100%)	0(0%)	31(100%)
Expensive millinery materials	31(100%)	0(0%)	31(100%)
Difficulty in practising on their own	22(71%)	9(29%)	31(100%)
Students not paying attention to the course	16(51.7%)	15(48.3%)	31(100%)
Limited curriculum content	20(64.5%)	11(35.5%)	31(100%)

Source: Study Data 2021

Table 4.23 presents the views of lecturers on challenges in the millinery art skills acquisition process, on the issue of the large class size it emerged that 100% (31) all the lecturers view that large class size is a challenge in the millinery skill acquisition process. The second area of challenge in the view of lecturers buying head-blocks for millinery skills practise 100% (31) of the lecturers, indicated that students find it difficult to buy head-blocks to practise because head-blocks are expensive.

All the lecturers 100% (31) were also of the view that the high cost of millinery materials is a serious challenge for effective skill acquisition in the art of millinery. On the issue of the students practising on their own 71% (22) of the lecturers indicated that the students have difficulty practising on their own while 29% (9) of the lecturers, stated that students do not have difficulty practising on their own.

On the issue of students not paying attention in millinery art class 51.7% (16) of the lecturers indicated that their students do not pay attention in the art of millinery class while 48.3% (15) of them, were with the view that their students pay attention in the art of millinery class. Finally, on the issue of curriculum content 64.5% (20) of the lecturers stated that curriculum content is limited while 35.5% (11) of the lecturers were with the view that the curriculum content for skill acquisition in the art of millinery is not limited.

Typical comments by the lecturers concerning the challenges were as follows: -

> *For me, time is an issue. The two hours contact period for practicals is not the best. You can't do much within two hours every week* (38.7%, 12 lecturers)
>
> *Sufficient time should be allocated to the course. Time allocated to the millinery course is not adequate* (41.9%, 13 lecturers)
>
> *Human and material resources for implementing the art of millinery curriculum content is not enough. It is struggled to get the needed resources even for demonstration. We cannot be buying the materials ourselves because they are expensive* (Lecturer, HTU)

The comments show that the challenges were time allocated for teaching and instructional resources available for teaching and learning millinery art skills. The study further explored how the fashion departments involve the fashion industry in the skill acquisition process in millinery art. Several responses emerged which speak to further challenges that need attention. Among them are the following:-

> *We have limited capacity. Industry members are also busy small-scale business persons who cannot easily abandon their shops to come to the lecture halls. What I do is visit them and observe trends to guide my teaching* (Lecturer, HTU)
>
> *We send students on attachment to industry. We follow to observe students during attachment. … That's the main collaboration system that we have with the industry* (Lecturer, KsTU)
>
> *The department contacts the fashion designers whenever we want to review curriculum content. Sometimes we organize fashion shows and invite industry members to observe our work and comment. We usually have some conversations following the event to establish our relationships* (Lecturer, TTU)

> *Opportunities to practice is a challenge…..The student attachment programme is the time we come face-to-face with what is happening in the industry and tries to integrate it into our lecture hall knowledge (Lecturer ATU).*

Based on the above comments from the lecturers the study explored the views of the fashion industry on the art of millinery skills acquired by the students in the various technical universities.

4.8 Improving Skills Acquisition in Millinery Art in the Technical Universities

In this section, I examined the participants' perspectives on ways of improving millinery art skills acquisition in the Fashion Departments of the Technical Universities. Data was primarily from interviews with lecturers and fashion industry members. Given the analyses concerning the views of both students and lecturers, industry perspectives were obtained during the field interviews.

When lecturers were asked about the ways to improve the acquisition of millinery arts skills among Fashion Design students in Ghanaian Technical Universities, their suggestions were as follows: -

> *There is a need to review curriculum content to be abreast with new trends. It seems we are using an outdated curriculum at present. We need to promote the practice and that requires the availability of materials* (45%, 14 Lecturers)

> *Increase the supply of TLM. The main challenge is the inadequacy of the curriculum for practice. If we want to promote the acquisition of millinery skills, we may need to ensure that appropriate mechanisms are put in place to ensure regular supply and availability of instructional materials* (70.9%, 22 Lecturers)

> *The provision of practical equipment and space for practice is a prerequisite to millinery skill acquisition. We need to ensure that equipment is available for practice. Students need enough space for*

> *practice. … We need enough time on the timetable for practice* (48%, 15 Lecturers)
>
> *The provision of resource persons from industry will help much. I don't have much knowledge of millinery. I am sure some colleagues across the technical universities may not have sufficient millinery skills. Providing resources to tap into resource persons from the industry will be a useful thing to do* (51.6%, 16 Lecturers).
>
> *Even if the contact hours are increased, we cannot help if we don't have the needed materials/tools. … We need to have practical workshops and seminars with the industry to regularly update our skills. Time allocated to millinery and accessory should be increased to 2 credit hours* (58%, 18 Lecturers)

Several points can be seen from the lecturers' comments. The first is the need for curriculum review and enrichment to specifically address the acquisition of millinery arts skills among Fashion Design students in Ghanaian Technical Universities. The second is the supply of instructional resources needed to support the acquisition of millinery arts skills among Fashion Design students in Ghanaian Technical Universities. The third is the need to draw on resource persons within the fashion industry to support the acquisition of millinery arts skills among Fashion Design lecturers and students in Ghanaian Technical Universities. The fourth is to allocate enough time for practical lessons within the Fashion Design curriculum.

> *Millinery skills students need to acquire include hand stitching neatly with little or no trace. This is important. I observed that many students are struggling with this. The training needs to be strengthened in this area* (industry supervisor).

Similar comments were made when the question was put to industry members. Typical comments included the following: -

> *The school should use experts in the industry to help plan the curriculum, things are very fast these days. The students need to be taught well* (industry supervisor 35%, 10)
>
> *Lecturers should be encouraged to attend workshops organized by milliners in the fashion industry. Students should be taught more practical lessons on how to use most of the fabrics* (industry supervisor/contact)
>
> *Support for millinery skills acquisition must be purposeful. I can be a resource person if your school is ready to pay for my skills* (industry supervisor/contact 14%, 4)
>
> *It will be useful for institutions to specifically develop the capacity to support millinery skill acquisition. They may need to recruit staff specifically for that purpose* (industry supervisor 39%, 11)

Overall, the comments present several ways of addressing the challenges facing the acquisition of millinery arts skills among Fashion Design students in Ghanaian Technical Universities. From the comments, it can be argued that the principal ways of helping to improve the curriculum include purposeful recruitment of staff with skills to teach millinery arts, collaborations with experts from the fashion industry to review the curriculum to become more relevant to millinery skills acquisition and extending the time for practical work needed to support the acquisition of millinery arts skills. Also, students should have the opportunity to practice millinery skills on different kinds of fabrics. Lecturers are to update their skills regularly by attending millinery seminars, workshops and conferences.

4.9 Hypothesis Testing

The study used one-way multiple analysis of variance to establish variation in instructional strategies used by lecturers across institutions for impactful skills acquisition in the art of millinery by Fashion Design students table 4.24. Concerning the issue of curriculum content in millinery accessories of the Technical Universities one-way multiple analysis of variance was conducted to

test the significant difference in the curriculum content. Multi-linear regression was used to test the moderating effect of curriculum content, instructional strategies and instructional resources used on millinery skills acquired by the HND Fashion Design students in the Technical Universities. Tables 4.24 – 4.28 presents the results.

Table 4.24: One-way Multiple Analysis of Variance on Instructional Strategies Used Across the Institutions.

	WILKS LAMBDA	F	Sig	Hyp. df	Error df
Institutions	.35	25.82	.000	4	248
Discussion		2.44	.047	4	248
Lecturing		2.36	.054	4	248
Practical Demonstration		60.48	.000	4	248

To establish variation in terms of instructional strategies utilized by lecturers across institutions for impactful skills acquisition in the art of millinery by Fashion Design students, a one-way multiple analysis of variance was conducted to test the hypothesis. The results; $F(4,248) = 25.82$, $p<.05$, Wilk's lambda = .35 showed a statistically significant difference in instructional strategies used across the institutions.

Analyses on other sub-variables showed significant differences for discussion ($F(4,248) = 2.44$, $p = .047$), practical demonstration ($F(4,248) = 60.48$, $p < .05$) and lecturing ($F(4,248) = 2.36$, $p = .054$). The results of the hypothesis provided sufficient evidence against the sig. level = .05 hence the study rejects the null hypothesis. Therefore, there is a significant difference in the instructional strategies used by lecturers for imparting millinery skills across the institutions. There is no significant difference between curriculum content in the Technical Universities and the millinery skills acquired by the HND students in millinery.

4.10 Millinery Art Curriculum Content and Skills Acquired

MANOVA **table 4.25** was used to test if there is any variation in millinery curriculum content and millinery skills acquired in Fashion Design at the Technical Universities in Ghana.

Table 4.25: MANOVA Results on Millinery Art Curriculum Content in the Technical Universities

	WILKS LAMDA	F	SIG	Hyp. df	Error df
Instructional resources	.068	2.103	.000*	308	674
Curriculum Content: Constructing headdresses for facial shapes		1.860	.000	77	171
Draping and modelling of fabrics		4.520	.000	77	171
Manipulating fabrics to create a decorative design for finishing head-dresses		6.311	.000	77	171
Stitching hat parts		2.711	.000	77	171

To test the hypothesis, a one-way multiple analysis of variance was conducted. The analysis showed a statistically significant difference in skills acquired based on curriculum content available in the various universities F (308,674) = 2.103, $p < .05$, Wilk's lambda = .068. Therefore, the null hypothesis is rejected and the alternate hypothesis is retained. Further analysis shows significant effects for each of the acquired skills, constructing hat for facial shapes (F (77,171) = 1.860, $p < .05$), draping and modelling of fabrics (F (77,171) = 4.520, $p < .05$), manipulating fabrics to create a decorative design for finishing head-dresses (F (77,171) = 6.311, $p< .05$) and stitching hat parts (F (77,171) = 2.711, $p < .05$).

In conclusion, there was a statistically significant difference between curriculum content in the Technical Universities and the millinery skills acquired by the HND Fashion Design students in millinery art, F (308,674) = 2.103, $p < 0. 05$,

Wilk's lambda = 0.068. The results of the Multivariate analysis of variance (MANOVA) show there is no significant difference between curriculum content in the Technical Universities and the millinery skills acquired by the HND students in millinery. This means there is a direct relationship between curriculum content and millinery skills acquired by Fashion Design students.

4.11 Millinery Curriculum Content and Ability to Construct Headdress

Multiple linear regression was used to test the moderating effect of curriculum content on HND Fashion Design students' ability to construct millinery products. Table 4.26 presents the results.

Table 4.26: Moderating Effect of Curriculum Content on HND Fashion Design Students' Ability to Construct Millinery Products

Ability to construct millinery products	Coefficient	t-statistic	p-value	R^2	Adjusted R^2	F ratio
Model without moderating effect						
Constant	.779	.621	.535	.301	.287	20.954
Ability in draping and modeling	.546	1.869	.063			
Ability in decorative manipulation of fabrics	1.150	3.638	**.000***			
Ability in creative designing	-.367	-1.173	.242			
Ability in hand stitching	.005	.018	.986			
Ability in pattern drafting for soft hat	.896	3.603	**.000***			
Model with moderating effect						
Constant	.810	.565	.573	.301	.284	17.391
Ability in draping/blocking	.546	1.863	.064			
Ability in decorative manipulation of fabrics	1.149	3.621	**.000***			
Ability in creative designing	-.371	-1.138	.256			
Ability in hand stitching	.003	.010	.992			
Ability in pattern drafting for soft hat	.896	3.594	**.000***			
Interaction	**.001**	**.045**	**.964**			

The results in Table 4.26 indicates that the R^2 for the model with moderating effect presents weak correlation of 0.301. It also shows that with the inclusion of

the interaction effect of curriculum content, the value of R^2 remained the same but adjusted R^2 decreased from .287 to .284 and the accuracy of this prediction also decreased with the F-value decreasing from 20.954 to 17.391, implying a decrease in the accuracy of the prediction. This means that the independent variables explain 30.1% of the variability of the dependent variable. However, the accuracy of the data was found to be 28.4%. The overall regression was statistically not significant R^2 =.301, F (5, 243) =17.391, p = .535 > 0.05, therefore, the study accepts the hypothesis. However, the study result indicated that there is weak moderating effect of curriculum content on students ability to construct millinery products (dependent variable).

Furthermore, the ability in decorative manipulation of fabrics (0.000) and ability in pattern drafting for soft hats (0.000) were significant. These were supported by the qualitative data from the views expressed by fashion industry participants. Typical comments included the following: -

> [Students have] …*difficulty in hand stitching, they always want to glue. They find it quite difficult doing hand stitches* (industry contact or participant 10)
>
> *The students lack millinery skills. … They don't have enough skills in blocking/draping most of the materials. Lack of efficient skills in fabric manipulation. I do my best under the circumstances* (industry contact or participant 5)
>
> *Millinery skills, students need to acquire include hand stitching neatly with little or no trace. This is important. I observed that many students are struggling with this. The training needs to be strengthened in this area* (industry contact or participant).

The comments showed fashion industry members are doubtful, Fashion Design students from the Ghanaian Technical universities did not possess the millinery

arts skills needed in the industry. The industrial attachment component that was to support the acquisition of millinery skills among Fashion Design students was deficient for two principal reasons as communicated in the following comments.

> *I accepted her internship in my shop intending to learn millinery from her, but she couldn't teach me, the millinery aspect of her collection was bought from a milliner opposite my shop* (industry supervisors 28.5%, 8)

> *I don't take students on attachment or internships for free. ... I charge them for the millinery skills, and they learn a lot of skills in millinery within the 8 weeks. ...* (Industry supervisor 21%, 6).

From the comments, some industry members were expecting to learn millinery skills from student interns and were disappointed. Industry members who could help students acquire the skills were charging students for their services. This did not depart from the observations the researcher made in the field. During the data collection, it was observed that some of the fashion industries at which the students had their internship do not accessorize their garments with millinery items. More so, the fashion industry where the students can practice the millinery art skills they acquired were demanding money before accepting the students for internship.

4.12 Relationship between Instructional Strategies Ability to Construct Millinery Products

The result in table 4.27 presents result on the moderating effect of instructional strategies used in millinery art skills acquisition and students ability to construct millinery products.

Table 4.27: Moderating Effect of Instructional Strategies on Students Abilities to Construct Millinery Products

Ability to construct millinery products	Coefficient	t-statistic	p-value	R^2	Adjusted R^2	F ratio
Model without moderating effect						
Constant	6.306	3.387	**.001**	.043	.031	3.644
Discussion	.264	.797	.426			
Lecturing	.-.301	-.922	.358			
Practical demonstration	.540	2.427	.016*			
Model with moderating effect						
Constant	6.299	3.290	**.001**	.043	.027	2.722
Discussion	.263	.787	.432			
Lecturing	-.299	-.884	.377			
Practical demonstration	.541	2.322	.021			
Interaction	**-.004**	**-.017**	**.987**			

Table 4.27 shows the moderating effects of instructional strategies (discussions, lecturing and practical demonstration). Discussion lecturing and practical demonstration predicted the abilities of HND Fashion Design students' skills in constructing millinery products. The overall regression was statistically significant, $F(4, 244) = 3.644$, $p < 0.05$, $R^2 = .043$ therefore the study rejects the null hypothesis. The table shows that with the inclusion of the interaction effect of instructional strategies, the value of R^2 remained the same but adjusted R^2 decreased from .043(4.3%) to .027(2.7) and the accuracy of this prediction also decreased with the F-value decreasing from 3.64 to 2.72, implying a decrease in the accuracy of the prediction.

Also, table 4.27 indicates that the R^2 for the model with very weak moderating effect of instructional strategies on the ability to construct millinery products is 0.043. This establishes that the independent variable explains only 4.3% of the

variability of the dependent variable ability to construct quality millinery products.

In conclusion, a multiple regression used to determine the moderating effect of instructional strategies on students' ability to construct millinery products, discussion, lecturing and practical demonstration (instructional strategies) predicted HND Fashion Design students' skills in constructing millinery products $F(4,244) = 3.644$, $p < 0.05$, $R^2 = 0.043$ practical demonstration added statistically significantly to the prediction, $p < 0.05$.

4.13 Relationship between Instructional Resources Used and Millinery Skills Acquired by HND Fashion Design Students

Table 4.28 presents result of moderating effect of instructional resources used in millinery art skills acquisition process and millinery skills acquired by the students.

Table 4.28: Moderating Effect of Instructional Resources on Millinery Skills Acquired.

Ability to construct millinery products	Coefficient	t-statistic	p-value	R^2	Adjusted R^2	F ratio
Model without moderating effect						
Constant	6.867	5.929	**.000**	.508	.468	12.469
Utilisation of hat steamer	.109	.441	.660			
Utilisation of kettle	.108	.489	.626			
Utilisation of steam iron	-.417	-1.918	.056			
Utilisation of brim blocks	.460	1.008	.315			
Utilisation of crown blocks	.429	1.089	.277			
Utilisation of fascinator blocks	-.013	-.050	.960			
Utilisation of cutting scissors	.831	2.649	**.009***			
Utilisation of pliers	.012	.039	.969			
Utilisation of mannequin	.142	.650	.517			
Utilisation of hat stretcher	.258	1.082	.281			
Utilisation of milliners' needle	-.244	-.694	.488			
Utilisation of milliners' pin	.746	2.007	**.046***			
Utilisation of textbooks	.118	.416	.677			
Utilisation of buckram	-.292	-.761	.447			
Utilisation of sinamay	.163	.434	.665			
Utilisation of straw	-1.755	-2.948	**.004***			
Utilisation of crinoline	.228	.765	.445			
Utilisation of millinery wire	-.160	-.597	.551			
Utilisation of sweatband	.340	1.011	.313			
Model with moderating effect						
Constant	6.840	5.388	**.000**	.508	.465	11.794
Utilisation of hat steamer	.109	.440	.660			
Utilisation of kettle	.108	.489	.625			
Utilisation of steam iron	-.417	-1.913	.057			
Utilisation of brim blocks	.460	1.005	.316			
Utilisation of crown blocks	.429	1.086	.278			
Utilisation of fascinator blocks	-.012	-.048	.961			
Utilisation of cutting scissors	.832	2.637	**.009***			
Utilisation of pliers	.012	.039	.969			
Utilisation of mannequin	.142	.648	.517			
Utilisation of hat stretcher	.259	1.080	.281			
Utilisation of milliners' needle	-.244	-.692	.490			
Utilisation of milliners' pin	.745	2.000	**.047***			
Utilisation of millinery textbooks	.120	.419	.676			
Utilisation of buckram	-.293	-.759	.448			
Utilisation of sinamay	.163	.433	.666			
Utilisation of straw	-1.749	-2.875	**.004***			
Utilisation of crinoline	.228	.764	.446			
Utilisation of millinery wire	-.160	-.596	.552			
Utilisation of sweatband	.340	1.008	.315			
Interaction	**-2.016E-008**	**-.052**	**.958**			

Table 4.28 shows the linear regression to establish the moderating effects of instructional resources used to help students acquire millinery skills in constructing millinery products. The overall regression was statistically significant $R^2 = .508$, $F(20, 228) = 11.794$, $p < 0.05$, hence the study rejects the null hypothesis. Furthermore, the result indicated that, there is a moderately average correlation effect (50.8%) of instructional resources used on millinery skills acquired. The table shows that with the inclusion of the interaction effect of curriculum content, the value of R^2 remained the same, but adjusted R^2 decreased from .468 to .465 and the accuracy of this prediction also decreased with the F-value decreasing from 12.469 to 11.794, implying a decrease in the accuracy of the prediction.

As indicated in table 4.28 it was interesting to note that cutting scissors, milliners' pins and straw statistically significantly predicted the millinery skills acquired by the HND Fashion Design Students in the Technical Universities. Furthermore, the R2 for the model with moderating effect of utilisation of instructional resources on millinery skills acquired presents 0.508 also reveals that the independent variable explains 50.8% of the variability of the dependent variable ability to construct millinery products. On the other hand, the accuracy of the data was 46.5%

4.14 Summary

The findings in the chapter revealed many issues with the millinery art skills acquisition of Fashion Design in Ghanaian Technical Universities. The students who enrolled on the Fashion Design programme were interested in acquiring millinery art skills (Table 4.5). However, their interest in the millinery art skills

acquisition declined after they were introduced to the course hence were not practising the skills they were taught as shown in table 4.6 In addition to this most of the lecturers stated they do not have competent millinery skills to enable them to teach better as indicated in figure 4.2.

Furthermore, more resources for teaching the millinery art were not adequately available as shown in table 4.13, and the time allocated for teaching is very limited (see the course outline Appendix VII). Lecturers complained about limited curriculum content and lack of industrial training in millinery see figure 4.1. In some instances, they were compelled to forcing to students to buy the needed materials for class even though prices for millinery materials are very high. This influences the number of resources used in class as indicated in table 4.14. This situation made it difficult for the HND Fashion Design students to acquire the millinery skills to enable them to use the skills in the fashion industry during their internship as shown in table 4.20. The industry support that will help students was also not effective because those who can help were demanding fee payment and others thought of learning the millinery art skills from the students and were disappointed since the students could not help them. Some of the industry members are ready to support the Fashion Departments in the Technical Universities through collaborative workshops to facilitate effective skills acquisition in the millinery art in Technical Universities.

To test the various hypotheses, the researcher used one-way multiple analyses of variance to test the null hypothesis on instructional strategies used across the Technical Universities. The result showed a statistically significant difference in

instructional strategies used across the institutions at F (4,248) = 25.82, p<.05, Wilk's lambda = .35. as the result indicated in table 4.24 the study rejects the hypothesis. Furthermore, the analysis, one-way multiple analyses on curriculum content and ability to produce millinery products this hypothesis was rejected (F(308,674) = 2.103, p < 0. 05, Wilk's lambda = 0.068) as shown in table 4.25, implying that millinery art curriculum content in the Fashion design at the Technical Universities are different. Therefore, the null hypothesis is rejected.

Multiple linear regression results on the moderating effect of curriculum content on HND Fashion Design students' ability to construct millinery products were statistically not significant R^2 =.301, F (5, 243) =17.391, p = .535 > 0.05, as shown in table 4.26 with low moderating effect of 30.1% of curriculum content on the ability to construct millinery products. However, the multiple linear regression on moderating effect of instructional strategies on the ability to construct millinery products the regression was statistically significant, as shown in table 4.27 at F (4, 244) =3.644, p < 0.05, R^2 =.043, with very weak correlation of 4.3%. This is a very serious challenge being confirmed in figure 4.3 on instructional strategies used by lecturers.

It is also to note that practical demonstration predicted the significant p < 0.05 value. Furthermore, the multiple linear regression on the moderating effect of instructional resources used on millinery skills acquired as indicated in table 4.28 the overall regression was statistically significant R^2 = 508, F (20, 228) =11.794, p < 0.05, indicating that there is average moderating effect of 50.8% of

instructional resources used on millinery skills acquired. As indicated in table 4.28.

The statistically significant result was predicted by cutting scissors at a p-value of 0.009, milliners' pins, at a p–value of 0.047 and straw at a p–value of 0.047. The third hypothesis is maintained because the moderating effect of instructional strategies and instructional resources used have a positive effect on millinery skills acquired by the HND Fashion Design students.

CHAPTER 5: DISCUSSION OF FINDINGS

5.1 Introduction

This chapter is focused on the interpretation and discussion of the results in chapter four. The discussions are organized based on the objectives of the research. Therefore, the themes under which the results are organized include:

- HND Fashion Design students' interest in the art of millinery
- The relationship between millinery skill acquisition of HND Fashion Design students and curriculum content, content proficiency, instructional techniques and resources.
- Millinery art skills acquired by the HND Fashion Design students and their usage during the internship in the fashion industry
- Challenges with Millinery Skill Acquisition Process

5.2 HND Fashion Design Students' Interest in the Millinery art

Several factors were examined. The first factor was the professional millinery skills level of the lecturers/instructors in the Technical Universities. Based on the data analyses, it can be stated that the lack of millinery skills among lecturers/instructors is a major challenge to developing students' interest in millinery art. This supports the argument of Lyons (2012) that learning must take into consideration proficient teaching skills. The analysis of students' interest in enrolling on Fashion Design at the Technical Universities indicated 82.1% of the students were interested in hat-making.

However, most of these students were not practising the hat-making after they were taught, only 10.4% practise the hat-making skills during their spare time. Lent et al (1994) stated that there are many factors that motivate learners to

acquire a skill. However, unforeseen circumstances in school can make it difficult for them to acquire these skills. Due to the low level of millinery skills of the lecturers, students of Fashion Design could not attain their goals of acquiring millinery art skills at Technical Universities.

The analysis showed, 74.2% of the lecturers/instructors received no industrial training. Some of the lecturers/instructors never participated in any millinery skill development workshop. Their main reasons included the high cost of resources, lack of planning from the department and the lack of support from the institution to help lecturers/instructors update their millinery skills. They indicated that the department needs to help engineer the acquisition of current skills so they can do better. What was intriguing from the findings was that the lecturers/instructors were concerned that they need to update their skills in the millinery art if they are to become effective lecturers. As indicated in the lecturer's–perspectives, they were willing to do more practical training in millinery to be able to teach their students better.

The second factor examined was the course outlines and the assessors' report for millinery accessory skills acquisition in the Fashion Departments at Technical Universities. These were examined based on the fact that the curriculum content dictates the objectives of the course of study, and what to teach and learn. The document review revealed challenging issues, the first is the contact hours within which specific skills and knowledge is supposed to be acquired. It would be very difficult for the lecturer to effectively transfer skills and knowledge for learners to understand and practise. This is because the contact hours indicated in the

course outlines are not enough to facilitate effective interaction between lecturers and students, hence cannot support skills acquisition in millinery art.

To acquire enough skills in millinery art students need to learn with an understanding of why specific skills are needed, and how and when to use the skill in millinery art. It is then that learners can move on to practise these skills based on their understanding from their interaction with their lecturers. The course outlines indicated quite many topics to be studied however these are lumped together and cannot be achieved within the time frame. This affects excellent progression in practising millinery art skills. It can be said that students are not getting the appropriate learning experience to enable them to acquire the art of millinery skills in Fashion Design at Technical Universities. This situation has affected the implementation of the millinery accessory curriculum and led to the inappropriate application of instructional strategies for effective skills acquisition.

The third factor examined was the instructional Strategies used in training HND Fashion Design Students in Millinery Art skills acquisition in the Technical Universities. These were examined based on the fact that instructional strategies used in skill transfer are very essential in facilitating understanding of the concept being taught, the skills to learn and how to practice the skills (Kanyonga, et al., 2019). The results discussed in chapter four showed that the lecturers/instructors mostly used three instructional strategies.

The results in chapter four indicated that discussion (38.7%) was the most frequently chosen strategy of lecturers/instructors. This was followed by practical demonstration (25.8%), lecture (25.8%), and use of resource persons (9.6%). When this is examined in the context of teachers' lack of training in millinery art. It highlights that instructional processes could not help students develop interest in millinery art skills acquisition in Technical Universities.

It can be stated that instructional strategies used do not usually consider individual learners' needs, experiences and feelings (Sumra & Mugo, 2012). As Puyate and Eniekenemi (2017) opined, the most appropriate strategies for content delivery for practical courses are demonstration and practicals, experiment, role modelling, exploration and discussion. Out of these strategies, only practical demonstrations and discussions were employed.

As stated in the literature, acquiring millinery art skills requires the learner to explore all sorts of fabric manipulations and observe the outcomes because this skill helps produce unique headdresses with a professional touch (Aston, 2012). Therefore, the limited use of instructional resources meant that there is little effort by lecturers/instructors to build collaborations with industry to develop students' interest in millinery art and to support the acquisition of millinery skills.

The lack of major resources and the use of obsolete resources cannot support effective skill transfer (Chepchumba & Cheruiyot, 2018). This is because, the provision of the right resources helps in breaking down complex skills and institutions that can acquire an adequate number of major instructional resources

for teaching, to have their learners perform better than institutions with very few instructional resources (Likoko et al., 2013). However, availability must be balanced with adequacy and utilisation of instructional resources (Zhuwau, & Shumba, 2018).

Another factor was the millinery skills practised in the fashion industry during the internship. How the instructional strategies helped the students acquire the millinery art skills they practised during their internship program was investigated. The results from the data by the students indicated that the common instructional strategies used very often across technical institutions are lecturing, discussion, and practical demonstration.

The result shows that 58% of the students noted that discussion was the predominant instructional strategy commonly used in the millinery skill acquisition process in the five Technical Universities involved in the study. Majority (74%, 184) of the students see all three instructional strategies (discussion, lecturing and practical demonstration) as effective for the millinery skill acquisition process in the Technical Universities and effective in the use of the art millinery art skills during internship.

This makes it difficult to understand how non-practical methods can be used to promote students' interest in millinery art and to help them acquire millinery skills. As stated by Muhammad (2019) teaching a practical-oriented course needs a combination of both teacher-centred and student-centred methods.

Investigation of instructional resources used in teaching millinery art in Technical Universities. The study investigated the use of instructional resources in terms of provision, availability, adequacy and usage. This was measured using an observation checklist, interview guide and questionnaire. The study analysed and determined the type of resources available, the quantity available and usage in training the Fashion Design students in millinery art in the Technical Universities in Ghana.

In terms of provision instructional resources, the results showed that only about half, 51.6%, (16) of lecturers get instructional resources from the department; 29% (9), said students provided instructional resources while the remaining 19.4% (6), said lecturers provided instructional resources themselves. This situation tends to impact students' interest in the art of millinery.

In terms of adequacy, the interviews showed that even when the university provides instructional resources students necessarily must purchase some items on their own. Another factor affecting the adequacy of teaching and learning of millinery art was the cost of materials. This supports conclusions from the work of Henriksen (2014) that acquiring millinery tools may be expensive. However, issues about cost are mitigated by findings from the work of Potter (2016) that tools for millinery skills such as hat steamer, hat stretcher, head blocks, brims and mannequins are ever-present essential tools unless they are out of service.

The study also realised that the availability of instructional materials influences what is taught and what is learnt at a particular time of the millinery skill

acquisition process. The capacity of the students to practice millinery skill acquisition prerequisites or to have interest in millinery skill acquisition is affected by the high cost of millinery resources. The concern was the fact that lecturers explained they never had the full complement of instructional materials available for millinery skill training.

The usage of the instructional resource included resources provided by the Fashion Design departments, lecturers/instructors and students. From the findings, all the lecturers 100% n =31, stated that they have never had the full complement of instructional resources for teaching the millinery art and supporting millinery skills acquisition in Technical Universities. Also, 70.9% (22), of lecturers/instructors indicated that instructional materials are not readily available, 16.1% (5), of them stated that instructional materials were rarely available, while 12.9% (4), of them, were undecided.

The important observation from the data is that majority (70.9%, 22) of the lecturers said there were no resources available for the students to practise what they have been taught (Figure 4.6). The results show none of the institutions gets the required instructional resources for teaching millinery art skills. The main instructional resource available in TaTU is cutting scissors. It can be observed from table 4:12 that instructional resources available were only adequate for demonstration by the lecturers and not for students to practise the millinery art to acquire the skills. The shortage of materials explains why lecturers and students usually provide the materials themselves.

In line with the CIPP model figure 1.1, the research investigated the instructional resources (materials and tools) used in teaching the art of millinery in Technical Universities. The results provided several perspectives on the availability and use of instructional inputs. It shows that the resources often used were cutting scissors, pliers, milliner's pins and millinery wire. Interestingly those identified as least used were hat streamers, hat stretchers, sinamay, buckram, crinoline, sweatband, mannequin, fascinator blocks, crown blocks, brim blocks and kettles which are very important needs in acquiring millinery art skills.

However, the degree of severity of the non-use of instructional resources varied by institution. Whereas some institutions were using all the instructional resources only the scissors were used in the art of millinery class in one institution. This does not only mean that lecturers/instructors in that institution were not attending properly to students in teaching millinery skill development. Given earlier analyses, the institutions where the instructional resources were being used are those in which lecturers forced students to buy the instructional materials. Alternatively, the institution where only scissors were used in the art of millinery class is the one in which lecturers do not force students to buy the instructional materials. This creates a complex scenario – to force or not to force students to buy instructional materials.

5.3 Millinery Art Skills Acquisition and Use by HND Fashion Design Students

The analyses of millinery skills the students acquired in the millinery art considered blocking/draping, fabric manipulation decoration and hand stitching skills capabilities of the students. Based on the assertion they are good working stitches excellently to facilitate effective millinery skill acquisition (Lomax &

Skinner, 2017), I explored the students' views on the level of millinery skills they acquired in the prerequisite areas as indicated in table 4.16. The cumulative results indicated that 67.8% (169) have acquired very good skills in hand stitching, decoration of head-dresses (69.0%, 172) and fabric manipulation (61.0%, 152). Aside from these three areas, fewer students indicated they have very good skills in blocking (41.8% 104) and hand stitching (18.1%, 35).

This meant that students do not have the full complements of the millinery skills to engage in the art of millinery because draping/blocking and hand stitching are very essential skills in millinery. The inability of the students to practice these skills effectively is a serious skill gap that has a very high potential of affecting the use of millinery skills in the fashion industry. As indicated by Fowler (2019) draping is a very essential skills in hat making. Draping smoothly with less folds is a plus for a milliner in the fashion industry.

The analysis of lecturers'/instructors' views on millinery skills acquired by the students showed 58% (18) of the respondents indicated students had inadequate millinery skills as against 32% (10) that thought students had adequate millinery skills. This corresponds with the students' views that they do not have millinery skills to engage in the art of millinery.

In terms of specific analysis, Figure 4.8 shows lecturers' views on students' millinery skills in designing hair brooches, fascinators, and hats were not encouraging. It shows that only 19.4% (6), of the lecturers, stated that their students had excellent skills in designing hair brooches while 38.7% (12) said

their students had very good millinery skills. In terms of fascinator designing, only 19.4% (6), of the lecturers indicated students had excellent skills whiles 12.9% (n = 4) thought they had very good skills.

At the same time only 25.8% (8) of lecturers thought students had excellent skills in designing hats whiles 29% (8), indicated they had very good skills. The lecturers' views on students' millinery skills in constructing hair brooch only 19.4% (6) of the lecturers each stated students had very good millinery skills. This implies that at least 50% of the students would like to acquire the skills in constructing millinery (head-dresses) to accessorise their project garment to make a complete fashion statement.

Furthermore, among the students, they rated their ability in constructing millinery products (table 4.18), only 30.9% out of 100% of students could confirm that they could construct hair brooch. For fascinators, only 36.9% said they have good skills in constructing them. On hat-making, only 41.3% of the students said they had good skills.

However, when linked to their training, about 39.4% and 4.4% of the students indicated they had good and excellent training in constructing millinery products respectively (tables 4.18 & 4.19). This situation is not the best since less than half of the student population stated they have a good skill level in constructing millinery products. The challenge is how the other 55% of students can effectively prcatise their skills in millinery art within the fashion industry.

In terms of the usage of acquired millinery skills in the fashion industry during the internship, the study examined the influence of millinery art skills acquired and its usage during the internship in the fashion industry. The exploration of how students used millinery art skills during their internship in the fashion industry showed interesting results.

The investigation shows that the possession of millinery art skills influences their usage during the internship in the fashion industry. This was tested by analysing the relationship between various skill levels among the Fashion Design students and their practice during internship. From the results, only 23.3% of students sometimes used their skills in hat making, fascinator (21%) and hair brooch (6.1%). This indicates that most of the HND Fashion Design students never used the millinery skills during their internship. Only 0.8% of the students make use of their millinery skills in fascinator-making during their internship. This situation is worrying because for the students to be able to practise their skills in any form of employment either being employed or self-employment exposure in the industrial environment is very important.

However, this confirms the statement from industry members who are professional milliners that 'they accept students on internship for a fee'. This may imply students who cannot afford such payment can never have access to effective industrial exposure with practising millinery skills. More than half 57% rated their use of millinery skills during the internship as very poor. The analysis of the confidence level of the students to practice millinery skills acquired showed

that only 40% of the students reported they were confident or very confident to practice based on the millinery skills acquired.

The student's views were not very distant from the perspectives of the fashion industry members. Their views indicated that students had little skill in blocking/draping smoothly with no scattered folds but were good in decorative techniques and fabric manipulation in creating headdresses. This corresponds to the findings that different institutions provided different instructional experiences based on the availability of instructional resources and strategies as well as how lecturers choose to require students to supply resources.

This could be a contributory factor while industry members who practise millinery are not ready to accept the students on internship unless for a fee because they cannot benefit from but then the students will rather learn the skill from them.

5.4 The Relationship between Millinery Skill Acquisition of HND Fashion Design Students and Curriculum Content, Instructional Strategies and Resources

This session looked at the curriculum content used in the Technical Universities and the millinery skills acquired by fashion design students. Concerning the curriculum content used in the technical universities, the study used multiple analyses of variance and multiple linear regression tests to find the strength of relationship between the curriculum content and millinery skill acquired in the Technical Universities. The hypothesis that guided this study was there is no significant relationship between curriculum content, instructional

strategies/resources used and the skills acquired by the HND Fashion Design students in constructing millinery products. The result from the multiple analysis of variance rejected the null hypothesis on the relationship between millinery curriculum content and the construction of millinery products by the HND Fashion Design students.

The null hypothesis was rejected ($p < .05$) in the sense that there is a significant difference between millinery curriculum content in the Technical Universities and the millinery skills acquired by the HND Fashion design students. In the same way, the multiple linear regression results in determining the moderating effect of the millinery curriculum content on the ability to construct millinery products indicated weak moderating effect of curriculum content ($p = .535 > 0.05$) on the ability to construct millinery products by the HND Fashion Design students. The multiple linear regression indicated that the moderating effect of curriculum content and millinery skills acquired by Fashion Design students at 30.1%.

Decorative fabric manipulation is the only curriculum content area that is statistically significant at $p = 0.00$ is, however, draping/blocking, design creation, hand stitching and pattern drafting for soft hats were not statistically significant. This implies that there are other challenges either at the implementation stage of the millinery curriculum or by the implementer. As stated by Kigwili and Akala (2017) a well-planned curriculum can only achieve its stated objectives if it is delivered explicitly by competent personnel.

The qualitative analysis confirms millinery curriculum implementation challenges of lecturers' skill level, time allocated and resources for skill transfer and acquisition. Based on these findings of the study a video documentary is developed on two methods of blocking/draping millinery, fabric manipulation and hand-stitching in assembling components parts of headdresses. This was to help complement the major skills gaps identified in this study. The link to the online video in three documentaries are as follows methods of blocking/draping see (https://www.youtube.com/watch?v=t7v1jZyP-IQ&t=13s). The second video is on assembling component parts of headdresses see the attached online link (https://www.youtube.com/watch?v=a8_jOlyIfK0) and the third video is on decorative manipulation of crinoline to make headdresses see the online link (https://www.youtube.com/watch?v=EdPuz6kvk0k).

Furthermore, another factor was the instructional strategies used by lecturers/instructors. The one-way multiple analysis of variance was conducted to test hypothesis one thus there is no significant relationship between the millinery instructional strategies of the lecturer and the skills acquired by the Fashion Design students. The analysis rejected the null hypothesis at $p < .05$. It shows that there is a significant difference in the instructional strategies used by lecturers for millinery skill acquisition across the institutions. However, the multiple linear regression indicated that practical demonstration (instructional strategy) used by the lecturers/instructors predicted $F(4,244) = 3.644$, $p < 0.05$, $R^2 = 0.043$), added statistically significantly to the prediction of ($p < 0.05$) in HND Fashion Design students' skills in constructing millinery products.

The third factor was instructional resources (teaching/learning materials). The multiple linear regression of the moderating effect of utilisation of instructional resources in teaching HND Fashion Design students to acquire millinery art skills. The result indicated the statistical significance of moderating effect of instructional resources used in millinery skills acquisition at 50.8%. The statistical significance result was predicted by cutting scissors (p-value .009), milliner's pins at a p–value .044) and milliners straw at a p–value .004) with exception of the cutting scissors is essential tool milliners' needles and straw are not essential as compared to brim blocks, crown blocks, fascinator blocks, hat steamer, textbooks, buckram, sinamay and crinoline which are more essential resources (TLM) for skill acquisition in the millinery art.

5.5 Challenges with Millinery Skill Acquisition Process

A major aspect of this research was to examine the process in acquiring millinery skills in fashion. Aside from the documented challenges to the Fashion Design curriculum (see Chepchumba & Cheruiyot, 2018; Obinim & Pongo, 2018; Wovenu, 2017; Isika et. al., 2016; Foster & Ampong, 2012) the analyses showed that there were challenges from various areas of the process and these cannot be ignored in this study. The discussions in the previous sections of this chapter show that there were challenges with the availability of resources for teaching and learning millinery skills at the various institutions.

Also, the results on the lecturers' views on challenges in acquiring millinery skills show the three major challenges were class size, the responsibility for learners to buy resources such as head-blocks, limited time allocated to the course and the cost of millinery materials. Adjoining challenges mentioned include the difficulty

of students practising on their own, limited curriculum content and students' attention during classes. In addition, another factor that should be considered and has been so well communicated is the lecturers/instructors' lack of millinery skills which impacted students' interest in the millinery art after the enrolment in the Fashion Design programme.

Overall, the challenges can be categorised into three – policy-level factors, institutional factors and student-related factors. However, within the CIPP model, they can be categorised differently as content issues, input issues, process issues and output issues (Stufflebeam 1971; Aziz et al., 2018; Darma, 2019). The content issues are related to the curriculum. This is concerning to the extent that it questions how Fashion Design curriculum content supports HND Fashion Design students' skill acquisition in the millinery art in the Ghanaian Technical Universities. The input issues include the millinery content proficient level of the lecturer/instructor, capacity in terms of personnel recruited as lecturers and the supply of instructional resources. Kigwili, and Akala (2017) corroborate that a plan curriculum can only achieve its goals if it is delivered explicitly by competent personnel.

The process issues are related to the instructional strategies deployed by the lecturers, the quality of the internship experience and the time allotted for the teaching of the millinery art as well as the students' attention to instructional activities. The combination of these factors tended to affect the product – the acquisition of millinery skills among students. It can be argued that the nature of the curriculum, the lecturer/instructor competency in the millinery art, the time

allotted for instruction in the art of millinery and the supply of instructional resources are the main challenges.

The other challenges appear dependent on these factors. For example, when students do not have the instructional resources to do practical lessons in a large class, some are likely to get disinterested in lessons even though the lecturer may try hard to use demonstrations to teach the art millinery skills. However, Allsop (2017) indicates that the major internal challenge facing institutions in training the students is lack of competent trainers and resources. This appears to be so as the lecturers complained that they lacked millinery skills.

What compounds the challenges was the qualitative data indicating that the industry has limited capacity to support students' millinery skill development. Therefore, effective training of students with millinery skills will address an important skill gap in the fashion industry (Allsop, 2017). As such, there is a need for curriculum policy reflections involving stakeholders – lecturers, students and industry members on the best ways to shape the students' general experiences in ways that can support millinery skill acquisition in Technical Universities.

In terms of feedback (as shown in the CIPP model in figure 1.1), the perspectives from the fashion industry on millinery skills acquired by students and the analyses concerning the views of both students and lecturers showed some major issues that can be used for curriculum improvement. First, students' millinery skills acquisition was poor. As such industry members thought students need to acquire more millinery skills.

One skill that was most prominently recommended was hand stitching neatly with little or no trace. Second, the analyses from the observation data showed the fashion industries at which most of the students had their internship do not accessorize their garments with millinery items as they do not have staff with the skills. The evidence is that some fashion industry members accepted student interns with the view of learning the art of millinery from them and were subsequently disappointed in the students' lack of millinery art skills. This speaks to four issues.

First, it supports arguments about deficiencies in the skill acquired by graduates of Technical Universities (Ananga, et al., 2016). Second, it questions the competencies available within the industry to support students' millinery art skills acquisition as the industry itself needs the skills (Allsop, 2017). Third, the fashion industries where the students can practice the millinery art skills, they acquired were demanding money before accepting the students for internships.

Fourth, when industry actors were asked to indicate the factors, they will consider in engaging/employing graduates from TUs, their main points included the exhibition of millinery art skills such as the ability to make hats, fascinators, and all forms of head-dresses with little or no supervision.

Industry members see millinery art skills as high-end, customer-attractive and twenty-first-century skills needed to boost their businesses. As Ericol Fashion (2018) noted that dressing in the twenty-first century is complete when a garment is accessorized to complement or accentuate individual styles.

As such, it appears the TUs need to invest in the development of this skill if their products are to be relevant to the needs of the industry because of arguments to the effect that everything in Fashion Design depends on the skills of the individual (Fowler, 2019). A caveat was that some industry members require the millinery skills to go with a soft skill – confidence.

The analyses of lecturers' views corresponded with those of industry members. A major theme in the lecturers'/instructors' comments was the need to review curriculum content to be abreast with new trends. This is important because skills acquisition for industry mostly depends on training received (Alhassan & Habib 2016). There is a need for Fashion Design curriculum developers to review curriculum content and the inputs required for instruction in millinery skills acquisition.

However, the analyses of lecturers' views also highlighted the provision of practical equipment, space for practice and resource persons as a prerequisite to millinery skill acquisition. They speak of inter-institutional collaboration, practical workshops and seminars with industry to regularly update their skills. In that sense, the Fashion Design curriculum content can effectively support HND fashion Design students' skill acquisition in the art of millinery in the Ghanaian Technical Universities.

5.6 Virtual Academic Instructional Content on Blocking/Draping, Fabric Manipulation and Assembling of Headdresses

The use of digital tools to enhance skill acquisition has become imperative because it serves as a reference for personal practice. From the analysis, there was

little or no use of video aids to reinforce learned skills or share lecturers' competencies remotely (see comments in *italics* under figure 4.3). Digital tools such as recorded videos on YouTube, Instagram, Facebook or other channels, can reinforce learned skills Auta & Giwa (2020) therefore it becomes a vital to bridge the gap developments of online content. This statement justifies the sixth objective of preparing an online video to mitigate the skill acquisition gap in this study. The content was developed based on the gaps identified and can be viewed from (https://www.youtube.com/watch?v=t7v1jZyP-IQ&t=13s) video on two methods of blocking/draping, the second video documentary is assembling of headdresses (https://www.youtube.com/watch?v=a8_jOlyIfK0) video documentary and the third video is on decorative fabric manipulation (https://www.youtube.com/watch?v=EdPuz6kvk0k). The researcher has also included a digital versatile disc recording in case the students do not have access to stable internet. This is helpful in complementing the skill gaps identified in the study on skills acquisition and utilisation of millinery art by higher national diploma fashion design internship students in Ghana.

CHAPTER SIX: SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter is the concluding chapter. It brings the research to a close by presenting the summary of the main findings, the contingent conclusions and the recommendations for policy and practice. The summary, conclusions and recommendations presented in this chapter represent my reflections – methodological, theoretical and professional – on the research process, the findings and my contribution to knowledge in the field of Fashion Design. The chapter is organized into four main sections. The first is the introductory chapter. The second section provides a summary of the research, outlining the key findings that have emerged from the results. The third section is the conclusion where the researcher presents the study's contribution to knowledge. In my thesis, I propose to add to the existing knowledge in the field of Fashion Design. In the fourth section, the researcher provides recommendations for the Fashion Design curriculum policy, curriculum implementation, and classroom practices.

6.2 Summary

The purpose of this research was to examine skill acquisition and usage of the art in millinery by HND Fashion Design students on an internship in the fashion industry, in Ghana. Based on the purpose, six objectives were developed. The objectives of the study were to:

1. Examine the interest of HND Fashion Design students in the Ghanaian Technical Universities in the art of millinery.

2. Examine curriculum content used to train HND Fashion Design students in millinery art skills acquisition in Ghanaian Technical Universities.
3. Identify the adequacy of fashion design curriculum content used to train the HND Fashion Design students in millinery art skill acquisition at the Ghanaian Technical University.
4. Establish whether millinery skills acquired by the HND Fashion Design students are used during the internship in the fashion industry.
5. Determine the relationship between millinery skill acquisition of HND Fashion Design students and curriculum content, instructor content proficiency, instructional strategies, and resources.
6. Develop virtual academic instructional content prototype on skill gaps identified in the study.

However, due to the intersection nature of the findings and new emerging issues, the researcher decided to organize the summary under the following themes: -

- Identify the HND Fashion Design students' interest in millinery art in Ghanaian Technical University.
- The millinery art skills acquired by the HND Fashion Design students and use during an internship in the fashion industry
- Determine the relationship between millinery skill acquisition of HND Fashion Design students and curriculum content, content proficiency, instructional strategies and resources.
- Examine challenges with millinery art skills acquisition process in Fashion Design departments in the Technical Universities

Examine the challenges with millinery skill acquisition in Ghanaian Technical Universities.

The research adopted a cross-sectional survey. The study used multistage, stratified and census sampling to select the five oldest Technical Universities in Ghana namely Accra, Kumasi, Takoradi, Ho and Tamale Technical. The five institutions were selected from the northern, middle, southern, western and eastern zones in Ghana although they were initially selected from the three primary zones (North, South and Middle zones). In each University, only second-year students in the Fashion department at the HND level 200 who had returned from internship were involved in the study. The lecturers involved in the study were those who teach millinery and accessory and the supervisors of the interns in the fashion industry where the students had their internship.

6.2.1 Summary of research findings

In this subsection, the study presents the main findings from the research. This is presented based on the main objectives that the research aimed to achieve. The interest of HND Fashion Design students in the Ghanaian Technical Universities in the art of millinery.

From the analysis presented in chapter four and the discussion of results in chapter five, it can be argued that HND Fashion Design students in the Ghanaian Technical Universities have a good level of interest in millinery art before enrolling on the Fashion Design programme. However, their interest level reduced drastically as they pursue the Fashion Design programme. This was due to several factors.

The first factor was the professional millinery skills level of the lecturers/instructors in the Technical Universities did not measure up. Most (74.2%) of lecturers/instructors received no professional/industrial training. The high cost of resources, lack of planning from the department and the lack of support from the institution to help lecturers/instructors update their millinery skills made lecturers unable to participate in any professional or practical millinery skill development workshop. The lecturers/instructors were willing to receive industrial/professional training in millinery to be able to teach their students better and were similarly concerned that they need to update their skills in the art of millinery if they are to become effective lecturers.

As they do not attend workshops and seminars, they could not build collaborations with industry to help keep the interest of the students in the millinery art and to support the acquisition of millinery skills. The second factor affecting the students' interest in millinery art was the instructional Strategies used in training HND Fashion Design students in millinery art in the Technical Universities. The instructional strategies were not mainly suitable for the delivery of practical courses. The three main strategies used by the lecturers/instructors were discussions, practical demonstration and the use of resource persons.

This combined with the lecturers'/instructors' lack of training in the millinery art truncates the students' interest in millinery art skill acquisition in the Technical Universities. Aside from practical demonstrations, there were no experiments, role modelling or exploration. The main issue was that the teaching strategies do

not usually consider individual learners' needs, experiences and feelings. Out of these strategies, only lectures, practical demonstrations and discussions were employed.

The third factor affecting the students' interest was the limited use of instructional resources. All the lecturers never had the full complement of instructional resources for teaching the millinery art to support millinery skills acquisition in the Technical Universities. In some cases, aside from cutting scissors, the materials for teaching millinery skills were mainly unavailable in the Technical Universities. This underlies the instructional strategies being used by the lecturers/instructors. The limited use of resources meant that there is little opportunity that can be used to support effective skill transfer.

Learning was more abstract than concrete, and students' performance and practice opportunities were limited. Where the resources were available, they were obsolete, and inadequate and utilisation was a problem because of the lack of skills among the lecturers/instructors. This situation tends to negatively impact students' interest in the art of millinery as the instructional resources available were only adequate for demonstration by the lecturers and not for students to practise the art of millinery.

The inadequacy of instructional resources comes with an attendant problem. As the lecturers never had the full complement of instructional materials available for millinery skill training, the students were sometimes forced to purchase some items on their own. This combined with the high cost of materials negatively

affected the students' interest in the millinery art. Acquiring tools can be expensive and it appears many students did not have the financial resources to purchase the materials.

It was realised that the availability of instructional materials influences what is taught and what is learnt at a particular time of the millinery skill acquisition process. The inadequacy of instructional resources affected the opportunities for the students to practice millinery skill acquisition prerequisites and to be more interested in the millinery skill acquisition process.

The final factor affecting the student's interest in the art of millinery was the instructional resources used. From the analysis and discussion of results, the resources often used were cutting scissors, pliers, milliner's pins and millinery wire and predicted the statistical significance of the moderating effect of instructional resources used on millinery skills acquired.

However, the major instructional resources, hat streamers, hat stretchers, sinamay, buckram, crinoline, sweatband, mannequin, fascinator blocks, crown blocks, brim blocks and kettle were least used. This presents a challenging situation of the non-use of essential millinery instructional resources across the institutions. This made it impossible for the students to acquire blocking/draping and hand-stitching skills which are very essential in millinery product development.

In complementing these skill gaps the following video documentaries were developed. Video documentary one presents a demonstration of two methods of blocking/draping (https://www.youtube.com/watch?v=t7v1jZyP-IQ&t=13s), the second one is on assembling parts of headdresses using hand stitches (https://www.youtube.com/watch?v=a8_jOlyIfK0) and the third video is on decorative fabric manipulation (https://www.youtube.com/watch?v=EdPuz6kvk0k).

6.3 Millinery Skills Acquisition and use by HND Fashion Design Students

As indicated in the analyses in this research, it can be stated that there is a direct relationship between millinery skill acquisition among HND Fashion Design students and use during internship. There are several reasons for this. First, some industry members who accept student interns expected to learn millinery skills from them. This meant that the students who did not acquire the skills cannot practice them during the internship. Secondly, the analyses of millinery skills the students acquired in the millinery art were those they practised in the industry.

The common skills practised were blocking/draping, fabric manipulation decoration and hand stitching skills capabilities of the students. Thirdly, the students who do not have the full complements of the millinery skills cannot engage in the art of millinery. The analysis of lecturers'/instructors' views on millinery skills acquired by the students showed they did not acquire adequate millinery skills to practise during the internship. It is not expected that students will acquire millinery skills while on internship because the industries that can support millinery skill development were rejecting students. After all, the TUs did not pay them for accepting to mentor students during internships.

Therefore, the millinery skill level of students on internship was very low. As the analysis showed, only 30.9% of the students, rated their ability to design hair brooches as good; only about 37.7% of the students self-assessed as having good skills in designing fascinators; only 30.9% of the students could confirm that they could construct hair brooches; only 36.9% said they have good skills in constructing fascinators; only 41.3% of the students said they had good skills in hat-making.

The students were good at decorative techniques and fabric manipulation in creating headdresses but had little skill in blocking/draping smoothly with no scattered folds. In terms of the usage of acquired millinery skills in the fashion industry during the internship, overall, the possession of millinery skills influences its usage during internship in the fashion industry. The relationship between the millinery skill acquisition and usage was evident in the fact that only 23.3% of the students sometimes used their skills in hat making, fascinators (29%) and hair brooches (6.1%). Overall, 57% rated their use of millinery skills during the internship as very poor and only 40% of the students reported they were confident or very confident to practice based on the millinery skills acquired.

6.4 The relationship between millinery skill acquisition of HND Fashion Design students and institution attended, curriculum content, millinery content proficiency, instructional strategies and resources

The analysis of factors that influence the acquisition and usage of millinery skills has revealed significant relationships between the millinery art skills acquired by Fashion Design students and the Technical University they attended. The study also indicated that the level of millinery art skills acquired by Fashion Design

students is a direct result of the curriculum available in Fashion Design departments of Technical Universities. Furthermore, the proficiency of lecturers in millinery curriculum content, instructional strategies, and instructional resources used also affects the level of millinery art skills acquired and used by students in the fashion industry. Therefore, based on this study, several propositions can be made.

The first proposition is that curriculum content is an important predictor of millinery skill acquisition among HND Fashion Design students. There is a direct relationship between curriculum content and millinery skill acquired and its usage among HND Fashion Design students. Based on the analysis, the instructors have suggested that the Fashion Design curriculum should be revised to encompass new trends in millinery art skills that are essential in the fashion industry. Therefore, it is imperative to review the policy on curriculum relevance and involve all stakeholders, including educators, students, and fashion industry professionals, to determine the most effective approach to enhancing students' overall learning experiences and supporting their acquisition and use of millinery art skills in the fashion industry.

Additionally, it can be inferred that a strong correlation exists between the educational institution attended and the level of proficiency in millinery art skills among HND Fashion Design students. Specifically, those who attended institutions mandating the purchase of millinery materials for Fashion Design classes demonstrate a greater aptitude for and utilisation of millinery art skills compared to their counterparts who did not encounter such requirements. This

observation reveals that the extent to which these skills were acquired and used was contingent with the kind of educational environment. Such disparities can also have impact on the use of millinery art skills during internships within the fashion industry by the Fashion Design students.

More so, there is a direct relationship between the lecturers'/instructors' content proficiency in millinery skills and the millinery skill acquisition and usage among HND Fashion Design students. The analysis showed that students had challenges with the acquisition of millinery skills, primarily because the lecturers/instructors do not have professional skills in millinery arts. The lecturers were unable to teach what they themselves did not know. As a result, the analyses revealed a very weak correlation between the curriculum content and the millinery skills acquired by the students. This affected the usage of millinery art skills during internships in the fashion industry.

The fourth proposition is that there is a direct is relationship between the instructional strategies used by lecturers/instructors and millinery skill acquired and used among HND Fashion Design students. The instructional strategies utilized by lecturers across the institutions did not support effective millinery skill acquisition and usage in the fashion industry. Hence there is very weak correlation between instructional strategies on the Fashion Design students' ability to construct millinery products.

The fifth proposition is that there is a direct relationship between the instructional resources used in the Technical Universities and millinery art skill acquired

among HND Fashion Design students. The availability, adequacy and utilisation of instructional resources by lecturers determines the millinery art skill acquired by the students and usage in the fashion industry. The analysis revealed a moderate correlation of effectiveness of instructional resources on millinery art skill acquired and millinery art skills usage during internship in the fashion industry.

6.5 Challenges with Millinery Skill Acquisition Process

The evidence from this research shows there were various challenges - policy-level factors, institutional factors and student-related factors - that affect the acquisition of millinery art skills. One challenge was the limited curriculum content at the various institutions. This implies curriculum content does not sufficiently support millinery art skill development. Other challenges include class large size, limited time allocated to the course and the cost of millinery materials as well as the difficulty students have in practising on their own.

Additional challenges identified include the availability of resources for teaching and learning millinery skills; students' attention during classes and the lecturers/instructors' lack of millinery skills which impacted students' interest in the millinery art. In the context of the CIPP model, there were content challenges, input challenges, process challenges and output challenges.

The content challenge was that the Fashion Design, curriculum content did not appear to effectively support skill acquisition in the millinery art in the Ghanaian Technical Universities. The input challenges include the lecturer/instructor competency in the millinery art and the inadequacy of instructional resources.

The process challenges are the instructional strategies, the quality of the internship experience (the industry's limited capacity to support students' millinery skill acquisition) and the time allotted for the teaching of the millinery art as well as the students' attention to instructional activities.

The combination of these factors tended to affect the product – the acquisition of millinery skills among students. As the students do not have the instructional resources to do practical lessons in a large class, some are likely to get disinterested in lessons even though the lecturer may try hard to use demonstrations to teach the millinery art skills. However, the major challenges were the deficits in the curriculum and the lack of millinery skills among lecturers/instructors.

6.6 Conclusion

This research investigated millinery skill acquisition and usage by HND Fashion Design internship students in Ghana Technical Universities. The investigations highlight that millinery skill acquisition is faced with several issues. The overarching issue was that the interest of HND Fashion Design students in millinery art was not sustained after their enrolment in the Fashion Design programme (table 4.5 & 4.6). The curriculum content does not sufficiently support millinery skill acquisition and use in the fashion industry. The instructional resources were not available for lecturers and instructors to use to support millinery skill acquisition among students. Lecturers and instructors did not have the competency to facilitate millinery skill acquisition among students.

In addition, the instructional strategies used by lecturers and instructors as a result of competency issues and the inadequacy of instructional resources do not support effective millinery art skill acquisition. Lastly, the fashion industry where students benefit from internships had limited capacity to support millinery art skill acquisition. Therefore, the student on internship had limited opportunities to use the millinery art skills acquired and could not gain any experience in practising the millinery art skills in the fashion industry.

The arguments developed were that there is a direct relationship between millinery skill acquired and the institution attended, the curriculum content proficiency of lecturers, instructional strategies and instructional resources. Curriculum content is an important predictor of millinery art skill acquisition among HND Fashion Design students. There is a direct relationship between the curriculum content and millinery art skill acquired among HND Fashion Design students to the extent that lecturers believe the present curriculum is not relevant to millinery skill acquisition. However, as indicated in table 4.26 the curriculum content available in the Technical Universities contribute only 30.1% to the millinery art skills acquisition process.

Also, there is a direct relationship between the institution attended and millinery art skill acquisition among HND Fashion Design students. There is a direct relationship between the lecturers'/instructors' content proficiency in millinery arts and the millinery skill acquisition among HND Fashion Design students. There is a direct relationship between the instructional strategies used by lecturers/instructors and millinery skill acquisition among HND Fashion Design

students. There is a direct relationship between the instructional resources used in schools and millinery skill acquisition among HND Fashion Design students. Interestingly the instructional strategies used in the Technical Universities for skills acquisition in millinery art contributes only 4.3% (table 4.27) to students' ability to construct millinery product.

The availability, adequacy and utilisation of instructional resources by lecturers determines the level of millinery skill acquired and use by the students of Fashion Design during internship in the fashion industry. The effectiveness of instructional resources in millinery skill acquisition is only possible when the appropriate materials are available (figure 4.6, table 4.12) in adequate quantities (table 4.13) and can be utilized effectively (table 4.14). The lecturers need to be competent (figure 4.2) and their skills to be regularly updated through workshops and seminars. Furthermore, 50.8% of millinery art skills in producing millinery products is contributed by the instructional resources provided by fashion design departments, lecturers and students in Technical Universities (Table 4.28).

The evidence from this research also shows a direct relationship between the millinery skills acquired by the HND Fashion Design students and their usage of the millinery art skills during internship in the fashion industry (table 4.20). Industry members did not possess the skill and were hoping to learn from the students during internship. Therefore, students who did not have the skill had no opportunity to practice it at all. Those who have the skill were those who could use it during the internship.

Helping to complement the skill gaps identified in the study on skills acquisition and utilisation of millinery art by higher national diploma fashion design internship students in Ghana. A video documentary on methods of blocking/draping (https://www.youtube.com/watch?v=t7v1jZyP-IQ&t=13s), the second one is on assembling parts of headdresses using hand stitches (https://www.youtube.com/watch?v=a8_jOlyIfK0) and the third video is on decorative fabric manipulation, were developed to bridge the skill gaps in millinery art skills (https://www.youtube.com/watch?v=EdPuz6kvk0k).

The central argument this thesis puts forward is that millinery art skill acquisition among Fashion Design students is poor and flout with several challenges at the level of curriculum and practice. Industry feedback suggests poor millinery skills due to issues with curriculum content, input, process, and output. This requires several curriculum policies and implementation policy reflections which are presented in the next section.

6.7 Recommendations for Policy/Practice

In the process of developing this thesis, the researcher visited Ghanaian Public Technical Universities across the three usual zones of Ghana. Data was collected from lecturers/instructors and students and people in the industry where students' interns from the Fashion Design programme did their internship. The research investigated several issues related to millinery skill acquisition among students in the Fashion Design programme at Ghanaian Technical Universities.

The first aspect investigated was HND Fashion Design students' interest in the art of millinery. The second issue was the relationships between millinery skill

acquisition and the institution attended, the curriculum, the curriculum content proficiency of lecturers, instructional strategies and instructional resources. The third was the relationship between millinery skill acquisition and usage in the fashion industry during the industrial internship. The fourth issue was the challenges with millinery skill acquisition in Ghanaian Technical Universities. Based on the findings and the conclusions from the research, various recommendations can be made for policy and practice. As revealed in the study the following recommendations were made for theory, policy and practice.

6.7.1 Recommendation for theory

1. The evidence from this research shows there were challenges at three levels policy-level factors, institutional factors and student-related factors that affect the acquisition of millinery art skills. Therefore, there is a need for a holistic review of the millinery art curriculum using the CIPP model figure 1.1.

6.7.2 Recommendation for policy

1. The Fashion Design departments should liaise with interested industry members to establish millinery skill acquisition centre(s) to help with the issue of inadequacy of instructional resources for the teaching and learning of millinery skills in Technical Universities
2. The Fashion Design departments can sign Collaboration of Agreements with industries that can support students on internship. The collaboration agreements should enable members from the industry to accept students for internship: and to train them based on some Key Performance Indicators (KPI) or Competency Frameworks (CF).

3. As industry members see millinery skills as high-end, customer-attracting and twenty-first-century skills needed to boost their businesses, the state should support investment in instructional resources in millinery art because Ghana's current education at the TU level is required to be competency-based.

6.7.3 Recommendation for Practice

1. Heads of Departments of Fashion Design in various TUs need to audit and review their millinery accessory curriculum to be abreast with current trends and needs of the fashion industry.
2. Fashion Design Departments can assign aspects of annual departmental votes to organize conferences, seminars and workshops that support millinery art skill acquisition for lecturers.
3. Technical Universities should invest in the procurement of millinery art equipment. This can serve a trine purpose to help train students sufficiently in millinery art and can be used as a training hub for lecturers from other TUs. Also, it can become a centre of training for individuals and industry staff who desire to acquire millinery skills.

6.7.4 Recommendation for Further Studies

1. There is a need for a tracer study on the performance of Fashion Design graduates in millinery art skills in the fashion industry in Ghana.
2. The study used a cross-sectional descriptive design in data collection, it would be imperative if a different research design is adopted to establish the relationship between the study variables.

3. A similar study can be done in the other five Technical Universities in Ghana, to have a complete idea of skills acquisition and utilisation of the millinery art by HND Fashion Design internship students in Ghana.
4. This study evaluated the traditional approach to skills acquisition and usage of millinery art by HND Fashion Design students during an internship in the fashion industry and developed a video documentary of instructional content on the gaps identified in the study. It will be of great value if a similar study is carried out to investigate the blended learning approach to millinery art skills acquisition in Technical Universities.

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APPENDICES

Appendix I: Letter of Introduction

Dear Respondent.

The researcher is a PhD student from the Department of Fashion Design and Marketing, School of Performing Art, Film and Media Studies Kenyatta University. I am researching "HND STUDENTS SKILL ACQUISITION AND UTILISATION OF MILLINERY ART IN THE FASHION INDUSTRY". You have been selected as one of the participants in the study. Kindly assist me in providing answers to the following questions as accurately as possible.

All information provided will be treated with confidentiality and used solely for academic purposes. If you have any enquiry regarding the study, you may kindly contact the principal investigator on +233 244 469 327 or email to: tinaagordah@gmail.com

Thank you for your participation.

Sign……..

Name: Faustina Emefa Agordah

CONSENT OF RESPONDENT

If you accept, I kindly request for your time to respond to these questions to the best of your knowledge as honestly as possible.

I agree to participate in this study.

Sign……..
Date……

Participation will be voluntary and you have the right to withdraw from the study at any time without giving any explanation to the researcher.

THANK YOU

Appendix II: Questionnaire for Students of the Technical Universities

Serial Number …….

Skill acquisition in the art of millinery and the performance of graduates in the fashion industry

Section A: General Information (Student Identification)

Please tick √ as appropriate.

1. Institution? Tick the University you are attending

S/N	Name of Institution	Tick √
I	Takoradi Technical University (TTU)	
Ii	Accra Technical University (ATU)	
Iii	Ho Technical University (HTU)	
Iv	Kumasi Technical University (KTU)	
V	Tamale Technical University (TATU)	

2. Gender:

Sex	Place Tick √
Male	
Female	
Prefer not say	

3. Age

Age range	Please Tick √
20-22yrs	
23-25yrs	
26-28yrs	
29yrs and above	

SECTION B: MILLINERY SKILL ACQUISITION PROCESS

4. How frequent were the following instructional techniques used in teaching millinery art?

Please √ as applicable.

SN	Instructional techniques	Always	Very Often	Undecided	Rarely	Never
i	Discussion					
ii	Lecturing					
iii	Practical demonstration					

5.The following instructions help me in practicing my millinery skills very well.

S/N	Instructional Techniques	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
i	Discussion					
ii	Lecturing					
iii	Practical demonstration					

6. What is your view about the effectiveness of the millinery skills acquisition process? Please √ as applicable

Most Effective [ ] Effective [ ] Undecided [ ] Rarely Effective [ ] Not Effective [ ]

7. I feel I have acquired enough millinery art skills in the following.

SN	Skills	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I	Blocking					
ii	Fabric manipulating					
iii	Decoration					
iv	Hand stitching					

SECTION C: INTEREST IN MILLINERY SKILL ACQUISITION

8. Kindly state reasons you enroll for the fashion design programme. Please tick √ as appropriate the most important reason for which you enrolled.

S/N	Reasons	Very interested	Interested	Fairly interested	Rarely interested	Not Interested
I	I need a certificate					
Ii	I am interested in garment construction					
Iii	I am interested in designing					
Iv	I am interested in hat making					
v	I am interested accessory development					
vi	I am interested in modelling					
vii	I am interested pattern-making					
viii	I am interested in designing garment with its accessories					
ix	I am interested in hair dressing and cosmetology					

9. As a fashion design student which of these activities do you practice most during your spare time? Please tick √ as appropriate.

S/N	Activity	Always	Often	Undecided	Rarely	Never
i	Sketching designs					
ii	Decorating					
iii	Manipulating fabrics to create hair dresses					
iv	Draping to make fascinator					
v	Pattern drafting					
vi	Sewing with the machine for customers					
vii	Hand sewing to create design					
viii	Hair styling					

ix	Producing fascinators to sell					
x	Blocking to make hats					
xi	Beading					
xii	Modeling my designs to check for fit					
xiii	Reading					
xiv	Surfing on the internet for new fashion trends					

10. If you are asked to specialize in a specific course which one of these will choose?
Please tick √ one.

S/N	Courses	Tick √
i	Garment Technology	
ii	Garment Designing	
iii	Millinery and Accessory	
iv	Beauty Culture	

11. I feel I may succeed in the following skills after graduating?
Please tick √ as appropriate.

S/N	**Skills**	**Strongly Agree**	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
I	Millinery					
ii	Garment construction					
iii	Beauty culture					
iv	Designing					
V	Pattern technology					

12. How best can you make the following types of stitches when using hand needle and thread? Please tick √ as appropriate.

S/N	**Name of stitches**	**Excellently**	**Very Good**	**Fairly Good**	**Poor**	**Very Poor**
I	Back stitches					
Ii	Double stitch					
Iii	Blanket or wire stitch					
Iv	Stab stitches					
V	Cross stitch					
Vi	Invisible felt stitch					

Vi i	Angle or diagonal stitch					
Vi ii	Slip stitch					

SECTION D: MILLINERY SKILLS ACQUIRED IN SCHOOL

13. How best can you rate your ability in the following skills in millinery

S/N	Skills	Excellent	Very Good	Fairly Good	Poor	Very Poor
i	Draping/modeling					
ii	Decorative manipulation of fabrics					
iii	Creative designing					
iv	Hand stitching					
v	Pattern drafting for soft hat					

14. How do you think the programme course content can be improved to help you acquire millinery skills better?

……
……
……
……

SECTION E: MILLINERY SKILLS USED IN THE FASHION INDUSTRY

15. How would you rate your millinery skills in relation to what is practiced in the fashion industry in Ghana? Please tick √ as appropriate

0-20 [ ]
21- 40 [ ]
41-60 [ ]
61-80 [ ]
81-100[ ]

16. How will you rate your millinery skills in designing the following millinery product, please tick √ by rating your abilities?

S/N	Millinery Product	Excellent	Very Good	Fairly Good	Poor	Very Poor
1	Hair brooch					
2	Fascinator					
3	Hats					

17. How will you rate your abilities in constructing the following millinery product, please indicate by rating your skills.

S/N	Millinery Product	Excellent	Very Good	Fairly Good	Poor	Very Poor
1	Hair brooch					
2	Fascinator					
3	Hats					

18. Are you confident that the millinery skills you acquired in your training can help you to practice well in the fashion industry?
Very confident [ ] Confident [ ] Undecided [ ] Not confident [ ] Very Poor [ ]

19. What do you think about the training you received in the art of millinery as a fashion design student?
Excellent [ ] Good [ ] Undecided [ ] Poor [ ] Very Poor [ ]

SECTION F: UTILISATION OF INSTRUCTIONAL INPUTS

20. Please indicate by ticking (√) the option that best expresses your opinion on the utilisation of instructional inputs for millinery skill acquisition by your instructor.

21. UTILISATION

Please indicate by ticking √ Always Used=AU, Used=U, Sometimes Used=SU, Not Used=NU, Not Sure=NS

S/N	Tools/Materials	Utilisation				
		U	U	SU	NU	NS
i	Hat steamer					
ii	Steam Iron					
iii	Steam Iron					
iv	Brim blocks					
v	Crown Blocks					
vi	Fascinator blocks					
vii	Cutting scissors					
viii	Pliers					
ix	Mannequin					
x	Hat stretcher					
xi	Milliners' needle					
xii	Milliners' pins					
xiii	Text books					
xiv	Buckram					
xv	Sinamay					
xvi	Straw					
xvii	Crinoline					
xviii	Millinery wire					
xix	Sweatband					

Appendix III: Interview guide for Lecturers

Serial Number…….

1. **Section A: Background information**

Date of interview	
ID Number	
Rank of staff	

2. Educational qualification.
   Masters [ ], Ph.D [ ], Any other …….
3. Gender

Male	
Female	

4. Age

   35-40years [ ] 41-45years [ ] 46-50years [ ] More than 50years

5. How many years have you been teaching millinery?
   1-2years [ ] 3-4years [ ] 5-6years [ ] More than 6 years [ ]

Section B: Millinery Skill Acquisition Process. Please tick √ as appropriate.

6.

How do you get instructional materials?	Please √
Provided by students	
Provided by lecturer	
Other	

7. Do you have the full complement of basic tools for teaching millinery?

Yes	
No	

8. Are the instructional materials readily available?

   Always Available [ ] Available [ ] Undecided [ ] Rarely Available [ ] Not Available [ ]

9. Are the instructional tools available for students to practice with?
   Always Available [ ] Available [ ] Undecided [ ] Rarely Available [ ] Not Available [ ]

10. What are the main instructional techniques you use in millinery class?

S/N	Instructional strategies	Tick √
i	Discussion	
ii	Lecture	
iii	Practical Demonstration	
iv	Resource person	

11. What about complementing your instructional strategies with any online documentaries on millinery?
    ……
    ……
    ……
    ……
    ……
    ……

12. Have you ever received any industrial experience in the art of millinery?
    Yes [ ] No [ ]

Why do you say so?
……..……..
……
……
……

In your expertise, what are the main challenges students have in the millinery skills acquisition process?

S/N	Challenges	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
	Large class size					
	Learners find it to buy head-blocks					
	Limited time allocated to the course					
	Expensive millinery materials					
	Difficulty in practicing on their own					
	Students not paying attention to the course					
	Limited curriculum content					

Other……
……
……

SECTION B: MILLINERY CURRICULUM CONTENT

13. Is the curriculum content for millinery adequate to help in training students?

……
……
……

14. How will you rate the millinery curriculum content of your institution in relation to what is practiced in the fashion industry in Ghana?

Please tick √ as appropriate

S/N	Rating Scale	Very related	Related	Fairly related	Rarely related	Not related
i	0-20					
ii	21-40					
iii	41-60					
iv	61-80					
v	81-100					

15. Do you have enough time allocation to train students in millinery skill acquisition?

……
……
……

Do you have the minimum (human and material) resources required to support students in millinery skills acquisition?

……
……
……

16. How do you work with industry to help students acquire millinery skills?

……
……
……

17. How would you describe the millinery skills acquired by your students?

Very Adequate [ ] Adequate [ ], Undecided [ ], Inadequate [ ] Highly Inadequate [ ]

……
……
……

18. Would you say that the training students received in millinery has prepared them adequately with the skills required in the fashion industry?
Yes [ ] No [ ] Undecided [ ] Rarely [ ] Not at all [ ]

……
……
……

SECTION C: MILLINERY SKILLS ACQUIRED BY STUDENTS

19. How will you rate millinery skills of your students in designing the following millinery product, please tick √ by rating your abilities.

S/N	**Millinery Product**	**Excellent**	**Very Good**	**Fairly Good**	**Poor**	**Very Poor**
1	Hair brooch					
2	Fascinator					
3	Hats					

20. How will you rate your students' abilities in constructing the following millinery product, please indicate by ticking √ the appropriate response.

S/N	**Millinery Product**	**Excellent**	**Very Good**	**Fairly Good**	**Poor**	**Very Poor**
1	Hair brooch					
2	Fascinator					
3	Hats					

SECTION D: INTEREST LEVEL OF LEARNERS IN MILLINERY

21. In your opinion as a lecturer in millinery accessory. How will you rate the interest level of your students in millinery skills?

S/N	Rating Scale	Very High	High	Average	Low	Very low
	0-20					
	21-40					
	41-60					
	61-80					
	81-100					

24. How will rate your student interest in the following specific areas

Specific interest areas	Excellent	Very Good	Fairly Good	Poor	Very Poor
Hand Sewing					
Designing with head-dress					
Styling with head-dress					

25. In what ways will you improve the teaching and learning of the millinery skills if you were given the chance to do so?

Improve skill Acquisition	**Strongly Agree**	**Agree**	**Undecided**	**Strongly Disagree**	**Disagree**
Increase contact hours					
Review content to be abreast with industry needs					
Increase quantity of learning material to meet needs of class size					
Provision enough practical equipment and studio size number					
Provision for resource persons from industry					

Other……/……

……

……

……

……

……

……

Appendix IV: Interview Guide for Industry Supervisors

Background Information

1. What is the name of your fashion industry?
   Ans……..

2. How long have you been working in the fashion industry?

   1-5years 6-10years 11years and above

3. How long have you been supporting by helping train our students on internship?

   1-2years [ ] 3-4years [ ] 5-6years [ ] 7years and above [ ]

4. Do you accessorize your products?
   Yes [ ], Not always [ ] No [ ].

5. If yes to Q4. How do you accessorize them?

   Beads [ ], Shoes [ ], Hats [ ], Fascinators [ ]

Section B: Skills exhibited by the internship students in the Fashion Industry

6. Which of this skills were exhibited by the students on internship. Multiple answers accepted.

S/N	Skills exhibited in the industry	Please √
i	Pattern-making	
ii	Garment construction	
iii	Millinery (Head-dresses)	
iv	Fascinator making	
v	Beauty Culture	
vi	Designing garment	
vii	Styling of garment with accessories in showroom	

7. How will you rate the interns' skills in Millinery?

S/N	Millinery Skills	Excellent	Very good	Fairly Good	Bad	Very bad
i	Ability to make hair brooch					
ii	Ability to make fascinator					
iii	Ability to make hat					

11. How will you rate the millinery skills of the in relation to what is practiced in the fashion industry in Ghana?
Please tick √ as appropriate

S/N	Rating Scale	Very related	Related	Undecided	Somewhat related	Not related
i	0-20					
ii	21-40					
iii	41-60					
iv	61-80					
v	81-100					

12. What is your experience working with students on internship from the Technical Universities?

……

……

8. What skills gaps have you observed in the millinery skill acquired the Technical University students on internship?

……

……

9. Which millinery skills do you think the fashion design students need to acquire to perform effectively in millinery, so far as the fashion industry is concern? Multiple response are accepted.

Skills	Tick √
Hand sewing	
Blocking	
Draping	
Decorative techniques	
Fabric manipulation	
Designing	
Other	

10. What would you consider engaging Fashion Design graduates from Technical Universities as a milliners in your fashion industry?

……
……
……

11. Would you like to employ Fashion Design graduates to work in your establishment as a milliner?

    Yes [ ] No [ ] I can't tell [ ]

Reason for response

……
……
……..……

12. How do you see the fashion industry in relation to millinery skills in Ghana?

……
……
……

13. What suggestions would you offer for improving millinery skill acquisition in Technical Universities in Ghana?

……
……
……

14. How would you like to support and be involved in millinery skills acquisition in Technical Universities in Ghana?

……
……
……
……

Appendix V: Observation checklist

Institution:

Date:

Class size: …….

1. Availability of instructional inputs

Key: Always Available =AA, Available=A, Sometimes Available = SA, Not Available= NA, Not Sure = NS

S/N	**Tools/Materials**	**Available**				
		AA	**A**	**SA**	**NA**	**NS**
i	Hat steamer					
ii	Kettle					
iii	Steam Iron					
iv	Brim blocks					
v	Crown Blocks					
vi	Fascinator blocks					
vii	Cutting scissors					
viii	Pliers					
ix	Mannequin					
x	Hat stretcher					
xi	Milliners' needle					
xii	Milliners' pins					
xiii	Text books					
xiv	Buckram					
xv	Sinamay					
xvi	Straw					
xvii	Crinoline					
xviii	Millinery wire					
xix	Sweatband					

2. ADEQUACY of instructional inputs

Key: Always Adequate= AA, Adequate=AD, Sometimes Adequate= SA, Inadequate=ID, Not Sure=NS

S/N	Tools/Materials	Adequacy				
		AA	AD	SA	ID	NS
i	Hat steamer					
ii	Kettle					
iii	Steam Iron					
iv	Brim blocks					
v	Crown Blocks					
vi	Fascinator blocks					

vii	Cutting scissors					
viii	Pliers					
ix	Mannequin					
x	Hat stretcher					
xi	Milliners' needle					
xii	Milliners' pins					
xiii	Text books					
xiv	Buckram					
xv	Sinamay					
xvi	Straw					
xvii	Crinoline					
xviii	Millinery wire					
xix	Sweatband					

3. UTILISATION of instructional inputs

Key: Always Used=AU, Used=U, Sometimes Used=SU, Not Used=NU, Not Sure=NS

S/N		Utilisation				
	Tools/Materials	AU	U	SU	NU	NS
i	Hat steamer					
ii	Steam Iron					
iii	Steam Iron					
iv	Brim blocks					
v	Crown Blocks					
vi	Fascinator blocks					
vii	Cutting scissors					
viii	Pliers					
ix	Mannequin					
x	Hat stretcher					
xi	Milliners' needle					
xii	Milliners' pins					
xiii	Text books					
xiv	Buckram					
xv	Sinamay					
xvi	Straw					
xvii	Crinoline					
xviii	Millinery wire					
xix	Sweatband					

Appendix VI: Guide for Document Analysis

1. Describe course features, topics, objectives
2. Instructional Strategies
3. Time allocated to the course
4. Methods of assessment
5. Instructional resources
6. Assessors comments

Appendix VII: Sample Course Outline

XXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

COURSE TITLE: Millinery and Accessories

COURSE CODE: FDT 114 (Second Semester) Full Time /Part Time (2021/ 2022)

LECTURER: XXXXXXXXXXXXXX

CREDIT HOURS: 1

CONTACT HOURS: 2 Hours/week

COURSE STRATEGY: Lecture, Practical Sessions/ Lab work, Discussions, Demonstrations Etc.

COURSE DESCRIPTION: The course aims at equipping students with knowledge and skills in the production of dressing accessories eg hats and head-dresses, bags, clutches etc.

COURSE OBJECTIVES: At the end of the course the student would be able to:

- Design hats and bags using different materials.
- Design accessories using modern techniques.
- Produce hats for all occasions – Pill box, Sectional hat
- Produce accessories for all occasions – shopping bags/clutches

REFERENCES.

- Lyn Waring (1995) **Hats Made Easy**
- Mildred Anlezark, (1994) **Hats on Heads.**
- Celia Stall-Meadows, (2004) **Know your Fashion Accessories**
- Anne-Mette Hermansen and Tina Elnef, (1998). **Happy Hats and Cool Caps to sew for the whole family**
- Ann Albrizio, (1998). **A complete guide to making and designing Today's Hats**.
- Denise Dreher, (1981). **From the neck up**. An illustrated guide to Hat making.

Assessment will be based on knowledge, values, skills and attitudes imparted during the semester.

Course evaluation

Attendance/Class participation	10 marks
Assignments	10 marks
Class Project	20 marks
End of Semester Exams	60 marks

PLAN OF WORK

HND 1 FULLTIME / PART TIME (2021/2022)

Week	TOPIC	ACTIVITY/ ASSIGNMENT
1&2	Registration and orientation	Registration and orientation
3	Introduction to accessories (what are accessories?)	Tools , Equipment and Materials used in hat making
4	Hat making (Types of hats) Sketch various types	Pill Box, Sectional Hats (6 piece & 3piece)
5	Introduction to Hat making	The parts of a hat
6	Hat construction (Pill box)	Taking head measurements and hat construction of hats
7	Making of variations of the pill box	Pattern making and construction (Pill box)
8		variations of the pill box using the slash method. (Safari Hat)
9	Hat construction (Sectional Hat)	Pattern making for the various Sectional Hats.
10		Sewing of the Sectional Hat
11	Introduction to Bags (shopping bags)	Pattern making for shopping bags
12	Shopping Bags: Materials needed for Shopping Bags	Construction of shopping bags using different materials. (fabric, Bontex, interfacing, leather)
13&14		Sewing of shopping bags
15&16	Examination	Examination

Appendix VIII: Millinery Course Outline

XXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXX

COURSE TITLE: Millinery and Accessories

COURSE CODE: FDT 213

LECTURER: XXXXXXXXXXX

CREDIT HOURS: 1

CONTACT HOURS: 2 Hours/week

COURSE STRATEGY: Lecture, Practical Sessions/ Lab work, Discussions, Demonstrations Etc.

COURSE DESCRIPTION: The course aims at equipping students with knowledge and skills in the production of hats, jewelry and footwear.

COURSE OBJECTIVES: At the end of the course the student would be able to:

- Design hats and bags using different materials.
- Design accessories using modern techniques.
- Produce hats for all occasions – brim hats, molded blocked hats.
- Produce accessories for all occasions – dressing bags and bead work.

REFERENCES.

- Anlezark, Mildred (1965) **Hats Made Easy**
- Mildred Anlezark, (1994) **Hats on Heads.**
- Celia Stall-Meadows, (2004) **Know your Fashion Accessories**
- Anne-Mette Hermansen and Tina Elnef, (1998).**Happy Hats and Cool Caps to sew for the whole family**
- Ann Albrizio, (1998). **A complete guide to making and designing Today's Hats**.
- Denise Dreher, (1981). **From the neck up**. An illustrated guide to Hat making.

Assessment will be based on knowledge, values, skills and attitudes imparted during the semester.

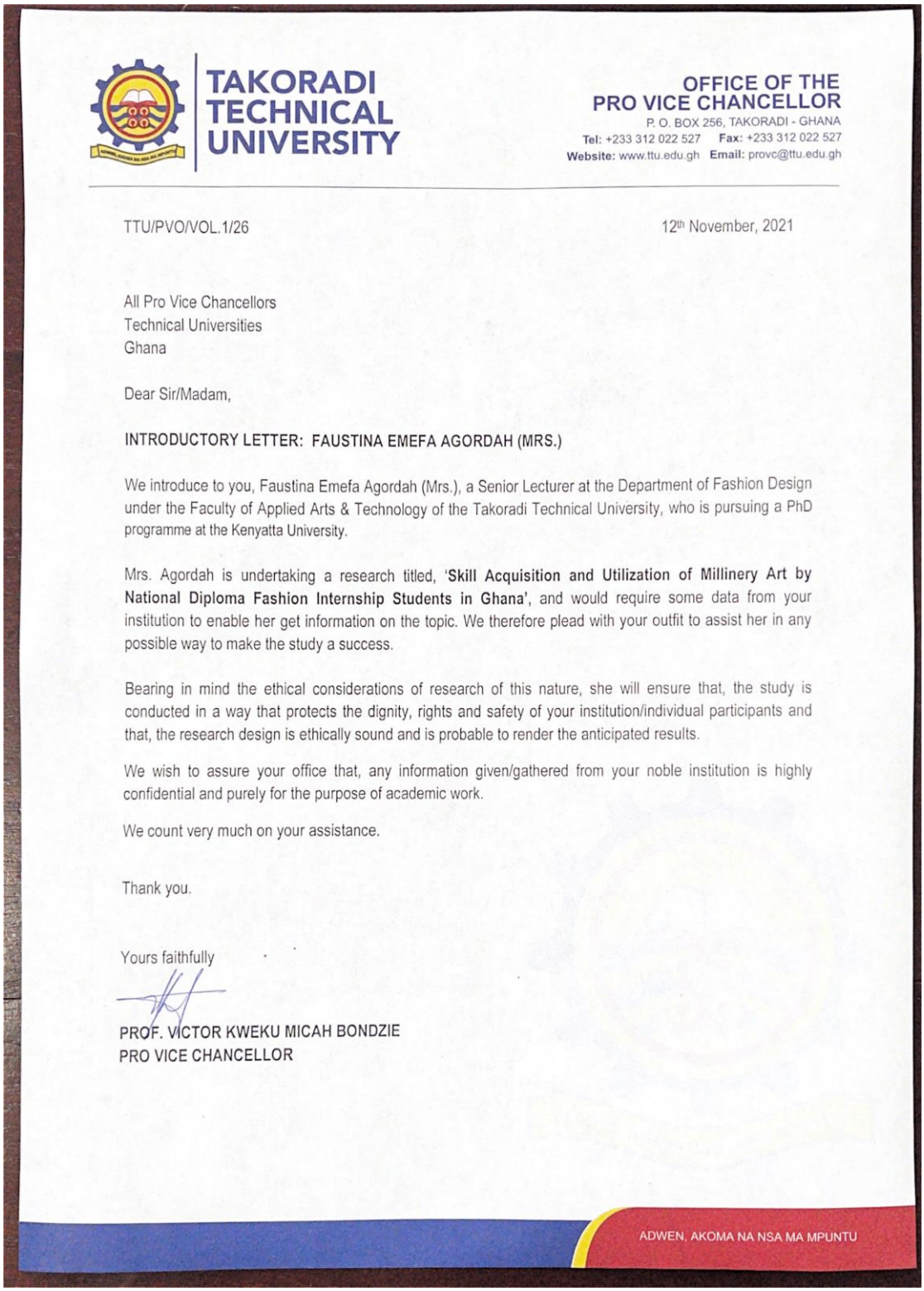
Course evaluation

Attendance/Class participation	10 marks
Assignments	10 marks
Class Project	20 marks
End of Semester Exams	60 marks

HND II FT/PT 2021/2022

Week	TOPIC	ACTIVITY/ ASSIGNMENT
1&2	Registration and orientation	Registration and orientation
3	Introduction to accessories	Hat making (Brim hat)
4-5	Pattern-making for soft hat	Pattern making for a Brim hat (brown paper)
		Construction of the Brim Hat. Materials needed: Fabric, lining fabric, Vilene
6-8	Construction of Crinoline and Blocking/draping of Sinamay for head-dresses	Making of hair brooch, fascinator and hats
9	Beading	Materials used: beads, thread, closures, pearls, earring hooks and elastic thread
10		Making of beads with different materials (wood, seeds, leather, fabric, shells, cowries)
11	Designing bedroom slippers	Making of sole and slippers. Making up bedroom slipper
12	Introduction to dressing clutches/bags	Sketching and drafting of the dressing bag
13	Construction of the dressing clutches/bag	Making of shapes for designs using Fabric, leather, Bontex, foam, lining fabrics etc.
14&16		Construction of the Dressing clutches/Bags
	Examination	Examination

Appendix IX: Introductory Letter



TAKORADI TECHNICAL UNIVERSITY

OFFICE OF THE
PRO VICE CHANCELLOR
P. O. BOX 256, TAKORADI - GHANA
Tel: +233 312 022 527 Fax: +233 312 022 527
Website: www.ttu.edu.gh Email: provc@ttu.edu.gh

TTU/PVO/VOL.1/26

12th November, 2021

All Pro Vice Chancellors
Technical Universities
Ghana

Dear Sir/Madam,

INTRODUCTORY LETTER: FAUSTINA EMEFA AGORDAH (MRS.)

We introduce to you, Faustina Emefa Agordah (Mrs.), a Senior Lecturer at the Department of Fashion Design under the Faculty of Applied Arts & Technology of the Takoradi Technical University, who is pursuing a PhD programme at the Kenyatta University.

Mrs. Agordah is undertaking a research titled, '**Skill Acquisition and Utilization of Millinery Art by National Diploma Fashion Internship Students in Ghana**', and would require some data from your institution to enable her get information on the topic. We therefore plead with your outfit to assist her in any possible way to make the study a success.

Bearing in mind the ethical considerations of research of this nature, she will ensure that, the study is conducted in a way that protects the dignity, rights and safety of your institution/individual participants and that, the research design is ethically sound and is probable to render the anticipated results.

We wish to assure your office that, any information given/gathered from your noble institution is highly confidential and purely for the purpose of academic work.

We count very much on your assistance.

Thank you.

Yours faithfully

PROF. VICTOR KWEKU MICAH BONDZIE
PRO VICE CHANCELLOR

ADWEN, AKOMA NA NSA MA MPUNTU

Appendix X: Ethical Clearance

UNIVERSITY OF CAPE COAST

INSTITUTIONAL REVIEW BOARD SECRETARIAT

TEL: 0558093143 / 0508878309
E-MAIL: irb@ucc.edu.gh
OUR REF: UCC/IRB/A/2016/1130
YOUR REF:
OMB NO: 0990-0279
IORG #: IORG0009096

14TH OCTOBER 2021

Ms. Faustina Emefa Agordah
Department of Fashion Design and Marketing
Kenyatta University

Dear Ms. Agordah,

ETHICAL CLEARANCE – ID (UCCIRB/EXT/2021/25)

The University of Cape Coast Institutional Review Board (UCCIRB) has granted Provisional Approval for the implementation of your research titled ***Skill Acquisition and Utilization of Millinery Art by Higher National Diploma Fashion Design Internship Students In Ghana.*** This approval is valid from 14th October 2021 to 13th October, 2022. You may apply for a renewal subject to submission of all the required documents that will be prescribed by the UCCIRB.

Please note that any modification to the project must be submitted to the UCCIRB for review and approval before its implementation. You are required to submit periodic review of the protocol to the Board and a final full review to the UCCIRB on completion of the research. The UCCIRB may observe or cause to be observed procedures and records of the research during and after implementation.

You are also required to report all serious adverse events related to this study to the UCCIRB within seven days verbally and fourteen days in writing.

Always quote the protocol identification number in all future correspondence with us in relation to this protocol.

Yours faithfully,

Samuel Aseidu Owusu, PhD
UCCIRB Administrator

ADMINISTRATOR
INSTITUTIONAL REVIEW BOARD
UNIVERSITY OF CAPE COAST

Appendix XI: Assessors Form

COMMISSION FOR TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING
MODERATION OF DRAFT QUESTIONS - EXTERNAL EXAMINER'S REPORT

SECTION A

INFORMATION ABOUT THE QUESTIONS

NAME OF INSTITUTION……..

DEPARTMENT…… PROGRAMME:……..

COURSE CODE……. COURSE TITLE……

ACADEMIC YEAR…… SEMESTER……...

NUMBER OF QUESTIONS:……DURATION OF PAPER…….

NAME OF LECTURER/INTERNAL EXAMINER……..

SECTION B

EVALUATION OF THE TEST ITEMS

No.	Criteria	Item	Yes	No	Please specify the problem and make your comments
1	CLARITY	Are the instructions to examinees clearly spelt out and unambiguous?			
		Do the items clearly define problem or task to the examinee?			
		Is the format, layout of the paper, illustrations and tables appropriate to test for the desired knowledge, skill or attitude?			
2.	VALIDITY	Does the paper cover all the content and skills as prescribed by the syllabus?			
		Are the questions aligned to the aims, objectives and learning outcomes list ed in the course outline?			
		Does the paper cover questions of various types e.g., multiple choice, data response, essay etc.?			
3.	PRACTICALITY	Is the time allocated adequate/ appropriate for the task?			
		Can the question be solved or answered effectively with additional materials listed (charts, tables, etc.) included in the question papers?			
		Does the question paper maintain same standard across optional questions, previous questions or questions from other institutions offering same programme?			
4.	COGNITIVE SKILLS	Do the items cover the various levels of instructional outcomes namely, knowledge, comprehension, analysis, synthesis, application and evaluation?			
		Is the level of difficulty of the items appropriate for the examinees?			
		Is the paper intellectually challenging and allowing for creative responses from the examinees?			
5.	LANGUAGE & BIAS	Does the paper use appropriate language register for the level of the examinees?			
		Does the paper avoid gender, race, cultural, stereotypes, ambiguities, offensive phrases?			

		Are there any subtleties in the grammar that might create confusion?			
6.	ADHERENCE TO POLICY	Does the paper adhere to the format requirements of syllabus/ guidelines?			
		Is the paper relevant to the actual classroom practice, latest developments and current trends?			
		Is the paper relevant to the labour market needs?			
7.	MARKING SCHEME	Are model solutions/ marking scheme provided for all the examination questions? Are the answers accurate including calculations?			
		Does the marking scheme provide adequate detail and direction for another examiner to mark the items?			
		Are the marks allocated in the scheme corresponding with the expected responses?			

8. Specific comments in relation to the questions,

a. ☐ I recommend that question(s) no(s) …… be accepted [Must not be resubmitted for second moderation]

b. ☐ I recommend that question(s) no(s) …… be conditionally accepted [No resubmission is required. Internal Moderator must ensure that changes are affected]

c. ☐ I recommend that question(s) no(s) ……. be rejected [Must be resubmitted for second moderation]

SECTIONC

9. Give your general comments of the question paper by putting a check (V) against any one of the following

a) Question paper accepted without any corrections/modifications.

b) Question paper accepted with minor corrections as indicated on the paper

c) Question paper accepted with some modifications as indicated in the questions,

d) Question paper rejected and new questions to be set.

10. On the whole, how do you rate the questions?

(a) Excellent [ ] (b) Very Good [ ] (c) Good [ ] (d) satisfactory [ ] (e) inadequate [ ]

Please attach any further comment(s) for improvement

…….. …….

Signature of External Examiner Date moderation completed

SECTION D: **FOR OFFICE USE ONLY**

EXTERNAL MODERATION CYCLE

Date draft questions received from Institution: ……..

Date submitted for external moderation: ……

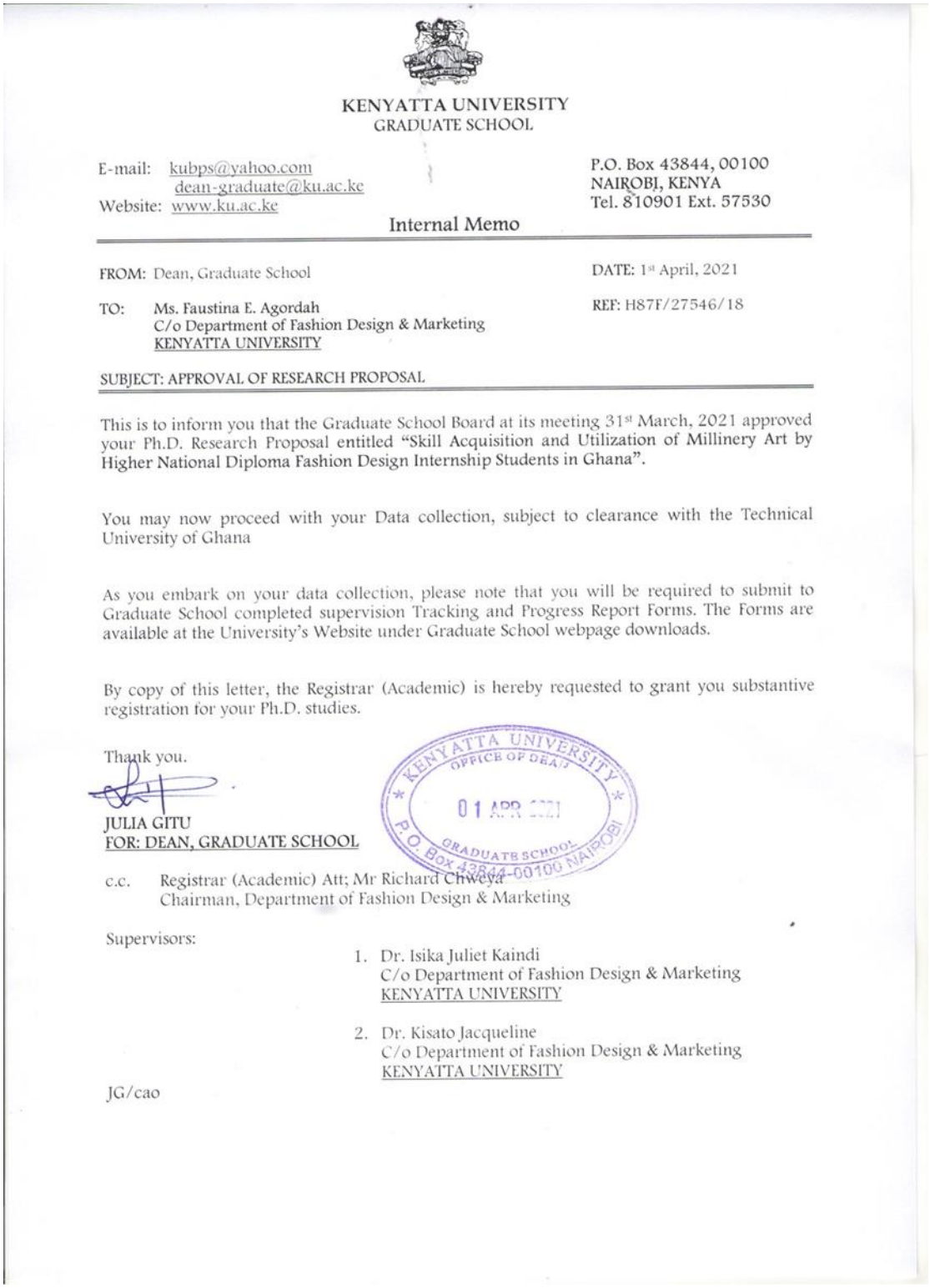
Date external moderation completed: ……

Date moderated questions sent back to institution: ……

NAME OF OFFICER IN CHARGE: ……..

SIGNATURE: …….. DATE: ……..

Appendix XII: Approval of Research



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 1st April, 2021

TO: Ms. Faustina E. Agordah
C/o Department of Fashion Design & Marketing
KENYATTA UNIVERSITY

REF: H87F/27546/18

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that the Graduate School Board at its meeting 31st March, 2021 approved your Ph.D. Research Proposal entitled "Skill Acquisition and Utilization of Millinery Art by Higher National Diploma Fashion Design Internship Students in Ghana".

You may now proceed with your Data collection, subject to clearance with the Technical University of Ghana

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking and Progress Report Forms. The Forms are available at the University's Website under Graduate School webpage downloads.

By copy of this letter, the Registrar (Academic) is hereby requested to grant you substantive registration for your Ph.D. studies.

Thank you.

KENYATTA UNIVERSITY OFFICE OF DEAN 01 APR 2021 GRADUATE SCHOOL P.O. Box 43844-00100 NAIROBI

JULIA GITU
FOR: DEAN, GRADUATE SCHOOL

c.c. Registrar (Academic) Att; Mr Richard Chweya
Chairman, Department of Fashion Design & Marketing

Supervisors:

1. Dr. Isika Juliet Kaindi
   C/o Department of Fashion Design & Marketing
   KENYATTA UNIVERSITY

2. Dr. Kisato Jacqueline
   C/o Department of Fashion Design & Marketing
   KENYATTA UNIVERSITY

JG/cao

Appendix XIII: Research Authorization

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: H87F/27546/18

Date: 1st April, 2021

The Pro Vice Chancellor,
Technical Universities of Ghana,
GHANA,
GHANA W/A

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MS.FAUSTINA E. AGORDAH - REG. NO. H87F/27546/18

I write to introduce Ms. Emefa who is a Postgraduate Student of this University. She is registered for a Ph.D. degree programme in the **Department of Fashion Design & Marketing in the School of Creative and Performing Arts, Film and Media Studies.**

Ms. Emefa intends to conduct research for Ph.D. thesis entitled, **"Skill Acquisition and Utilization of Millinery Art by Higher National Diploma Fashion Design Internship Students in Ghana".**

Any assistance given will be highly appreciated.

Yours faithfully,

PROF. ELISHIBA KIMANI
DEAN, GRADUATE SCHOOL

KENYATTA UNIVERSITY
OFFICE OF DEAN
25 JUN 2021
GRADUATE SCHOOL
P.O. BOX 43844-00100 NAIROBI

JG/cao