

**AKENTEN APPIAH-MENKA UNIVERSITY OF SKILLS TRAINING AND
ENTREPRENEURIAL DEVELOPMENT**

**THE IMPACT OF SKILLS DEVELOPMENT IN HAND EMBROIDERY ON JOB
CREATION IN CONTEMPORARY GHANA**

PEACE AKOSUA TSEKPO

NOVEMBER, 2023

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**A thesis in the DEPARTMENT OF FASHION DESIGN AND TEXTILE EDUCATION,
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Studies in partial fulfillment of the requirements for the award of the degree of Master of
Philosophy (Fashion Design and Textiles) in Akenten Appiah-Menka University of Skills
Training and Entrepreneurial Development**

NOVEMBER, 2023

DECLARATION

STUDENT’S DECLARATION

I, Peace Akosua Tsekpo, declare that this thesis, with the exception of quotation and references contained in published works that have been identified and duly acknowledged, is entirely my original work and has not been submitted, either in part or whole, for another degree elsewhere.

Signature.....

Date:

SUPERVISOR’S DECLARATION

I, hereby, declare that the preparation of this work was supervised in accordance with the guidelines for supervision of thesis as laid down by Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development.

Principal Supervisor: Ninette Afi Appiah (PhD)

Signature.....

Date:

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DEDICATION

This thesis is dedicated to the God almighty father, my children Patience Adjoa Ebon and Mr. Frederick Ekpe.

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ABSTRACT

Ghana's rich history in arts and crafts, particularly hand embroidery, offers untapped potential for job creation because it represents skill and tradition. The country faces a significant youth unemployment rate of 12%, necessitating innovative job creation strategies. Stakeholders advocate for skills acquisition programmes in indigenous crafts like hand embroidery to equip youth with profitable skills and stimulate employment. The goal of this study is to explore the impact of skill development in hand embroidery on job creation in Ghana. Human Capital theory was used in the study. It is a framework that conceptualizes education, training, and skill development as investments in human beings, akin to investments in physical capital like machinery or equipment. The research design used a descriptive survey that combines qualitative and quantitative methods. To establish the population and 149 sample size, two sampling approaches (stratified and purposive) were utilized. Tools such as questionnaires, focused group discussions, and an observation checklist were used by the researcher to gather data. Findings may guide policymakers, educational institutions, and NGOs in designing effective skills training programmes, potentially promoting cultural preservation, economic growth, and societal well-being in modern Ghana. Findings indicated that hand embroidery skills have the potential to drive job creation within Ghana's economy. Again, hand embroidery holds cultural significance within Ghana's heritage, aligning with previous research recognising its enduring artistic and cultural value. Also, the research findings unequivocally demonstrate that existing training programmes within the industry have not adequately addressed the teaching of hand embroidery, with very limited or no inclusion. The study suggests the continuation of traditional techniques to maintain authenticity and cultural identity. Design well-structured training programmes catering to participants' needs, regardless of their formal education, and provide hands-on instruction. Creation of vocational training centres with structured programmes focusing on diverse embroidery techniques, design principles, colour theory, and business skills. Integrate business-related workshops within technical training to equip individuals with entrepreneurial skills.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The first form of textile embellishment has always been hand embroidery, which combines threads, decorative stitches, and other materials to give the fabric's surface distinct textures (Sebesta, et al., 2022). The ancient Egyptians are credited with developing the craft of hand embroidery. A variety of needles, threads, and metal bands are utilized to embellish fabric with hand embroidery (Wang Tien, 2010). According to Rasha (2016), it is one of the fine ornamental arts that blends manual dexterity and aesthetic elements. It is a sort of embroidery that improves materials to raise the aesthetic value of a product. The verb "to embroider" denotes the action of embellishing a particular fabric (Ibrahim & Khaleq, 2021; Mabrouk, 2010).

In China, Wang (2022) noted that contemporary fashion design significantly incorporates traditional embroidered art. It still has a powerful voice in terms of contemporary fashion design. First, the design's integrity must be violated. Traditional embroidered art typically lacks abstract elements and exhibits rigidity, despite the pattern image being exceedingly precise. Conventional concepts can't be upheld forever, so in order to advance, contemporary fashion design needs to push past the constraints of conventional needlework and compromise the consistency of continuous stitching.

Fashion designers can divide the patterns correctly and choose the right composition techniques to better match the patterns with the aesthetics of modern people's clothing (Wang, 2022). Su and Ouyang (2021) claimed that as people's living conditions improve, so does their need for

fashionable home apparel. It includes outdoor activities in addition to house items. As a result, we must give the decorative design more consideration (embroidery). Today, highly revered natural elements like flowers, birds, fish, and insects can be used as patterns.

According to Chantia (2017), India is renowned for its customs and culture. India's minority communities are renowned for their traditional trades, crafts, and talents. Yet, the young generation is not pursuing these skills due to forces of competition and globalization, as well as the declining socioeconomic situations of master craftsmen and artisans. The Indian government firmly believes that it is important to maintain these arts and crafts.

Traditional arts and job creation abilities, which form the foundation of cottage and small-scale industries, must be strengthened, along with greater market connections, improved branding, and guaranteed access to credit. Jha (2019) added that the sector of traditional textiles and handicrafts has become closely linked to India's cultural identity. The necessity to redefine aesthetics in light of commercial viability is constant given the socio-cultural flux brought on by the interaction of the local and the global.

The majority of craftspeople, who make up a significant portion of the rural non-farm sector, continue to rely on their ancestors' knowledge and conventional, manual manufacturing techniques to make ends meet. The ability to weave, dye, and embroider on a handloom, as well as use other indigenous production methods, provides a living for millions of artisans. Cotton had an impact on India's textile culture, according to Sulthana (2021). The textile craftsmen found their richest expression in the growing, spinning, weaving, dyeing, printing, and embroidering of cotton. Over

two thousand years ago, the Arthashastra refers to textile design workshops being established under the patronage of Maurya kings. These workshops employed proficient spinners, weavers, and embroiderers. Royal karkhanas, or workshops, flourished under the patronage of the mogul emperors. Textiles of rare elegance and sophistication were woven, painted, and embroidered in the workshops by the finest craftsmen in the country (Sulthana, 2021).

In Africa, the embroidery industry is gaining more attention as the production of handmade and machine embroidery takes a new turn and the demand increases with each passing day. Despite the fact that embroidery dates back to between 200 and 500 AD (Adiji & Ojo, 2016), most Africans still place a high value on it since it gives their clothing more vigor and pride. This is especially true of the Yoruba and Hausa tribes in Nigeria. However, the traditional method (i.e., handcrafted embroidery) of detecting the weave patterns involves manually stitching embroidery designs into the fabric using hands and needles. A common technique for embellishing fabric that encourages creativity is handcrafted embroidery design (Jimoh et al., 2019).

In order to empower individuals financially if they choose to pursue a career in creative hand embroidery, it is important to introduce and expose people to the craft of hand embroidery. This was supported by Nwigwe and Arua (2019), who argued that someone with the necessary or verifiable creative skills can be independent. Ikenegbu et al. (2021) noted that a sizeable portion of Nigerian youngsters have turned to fraudulent activities to make a living. The goal of this project is to assist people in finding legitimate employment that pays well. In the long term, school dropouts and university graduates can thus find legitimate engagement and employment rather than turning to deception. Ghana needs to promote hand needlework as a potential source of

individual income. One method to achieve this is to develop strategies to increase customer acceptability of hand-embroidered goods and raise awareness of the handicraft's potential as a source of income for individuals (Abdulai et al., 2018).

There are several training programs in promoting skill acquisition in hand embroidery according to Santos and Ramos (2023), Viva de Costura project and project: “EMBRoider Myself” were created in 2011 by the Design school of UEMG-university state of Minas Gerais, to promote the training and improvement of manual embroidery practices, for the application in fashion products. The Department of Adult Independent Living of National Institute for Empowerment of Persons with Multiple Disabilities (NIEPMD) has launched an exclusive skill training programme on hand embroidery for young women with disabilities. This initiative is aimed at promoting vocational skills, which would empower them with economic independence and social inclusion.

The history of fabric and upholstery manufacture throughout the years can be embroidered whole or partially using various stitches. The significance of small projects in eradicating the issue of unemployment and creating new labor markets was emphasized by Thuraya et al., (2011) and Muhammad (2003). The necessity of preserving the history of handicrafts and cultivating them to produce contemporary and inventive handicrafts that contribute to the field of small projects (Ibrahim & Khaleq, 2021; Elhendawy et al., 2014). Job creation development is the process of strengthening an entrepreneur's skills in the conception, execution, and management of a business venture while taking risks into account. This is accomplished through lectures and training sessions designed to improve entrepreneurial skills. You will be assisting aspiring entrepreneurs in honing

their talents and overcoming challenges when launching their businesses if you choose to work in this profession (Anyadike et al., 2012).

A person's skill development is the focus of a purposeful process called "job creation development" that employs a variety of techniques. Several significant principles have impacted the growth of entrepreneurship (Owusu, 2021). Some of these include taking risks, innovating, being creative, and being environmentally conscious. If people want to be successful in business, they need to comprehend each of these concepts. "Entrepreneurship development" is the process of advancing entrepreneurial skills and knowledge through organized training and institution-building initiatives, according to the African Development Report (2011). In order to speed the creation of new firms, it seeks to increase the number of entrepreneurs.

The focus is on the person who wants to start or build a business, with a concentration on growth potential and innovation. Job creation fosters economic growth and development through market innovations, and there is a reciprocal relationship between entrepreneurship and economic growth and development (Chen et al., 2021). Despite the rich tradition of hand embroidery in Ghana, there has been a declining trend in this industry due to the challenges of globalization, mechanization, and lack of necessary skills among the younger generation. This downturn is occurring amid a high unemployment rate and a need for sustainable job creation in the country.

This study seeks to investigate the extent to which skill development in hand embroidery can stimulate job creation and foster economic growth in contemporary Ghana. By understanding the current state of the hand embroidery sector and the potential benefits of vocational training, the

study aims to contribute to the formulation of effective policies and programs that will revitalize this traditional craft and bolster employment opportunities in Ghana. It is against this background that the study seeks to explore the impact of skill development in hand embroidery on job creation in contemporary Ghana.

1.2 Statement of the Problem

The Republic of Ghana, with its rich history in arts and crafts, holds a unique potential for job creation in the field of hand embroidery (Aziz et al., 2019). This craft, deeply ingrained in Ghanaian culture, is a representation of skill, tradition, and creativity. However, the economic potential of hand embroidery in contributing to the Ghanaian labor market is not yet fully realized or explored. Yan and Chiou (2021) explored traditional craft that has been practiced for centuries and continues to be valued for its artistic and cultural significance in China. Mohammed (2022) Training is a continuous activity to provide individuals with the skills, experience and attitudes that enable them to perform their work better. The gap is in the effectiveness of differentiated education in acquiring female students' skills in hand embroidery.

The high unemployment rate in Ghana, especially among young people, presents a significant socio-economic challenge. According to the Ghana Statistical Service, as of 2021, about 12% of Ghana's youth population were unemployed. This figure underscores the urgent need for novel and sustainable job creation strategies (Aryeetey et al., 2021). In response to this, various stakeholders have encouraged skills acquisition programs focusing on indigenous crafts like hand embroidery, with the view to equip the youth with a profitable skill and in the process, stimulate job creation.

Despite these efforts, there is a limited body of research exploring the impact of skills acquisition in hand embroidery on job creation in contemporary Ghana. The few studies conducted focused on the area of embroidery (nwomu). This leaves a gap in understanding the role of hand embroidery in providing sustainable employment options, promoting local industries, and contributing to national economic growth. This study, therefore, aims to explore and understand the extent of the impact that skill development in hand embroidery has on job creation in Ghana.

1.3 Purpose of the study

The goal of this study is to explore the impact of skill development in hand embroidery on job creation in contemporary Ghana. The study aims to provide individuals with the means to acquire these skills and assesses whether this skill development contributes to their ability to secure employment, either through self-employment or being hired by others. Such research can have practical implications for employment and skill development policies and programs in the country.

1.4 Research objectives

Specifically, the study will:

1. To analyze the current state of hand embroidery skills acquisition as a viable source of job creation in the contemporary Ghanaian economy.
2. To evaluate the effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana.
3. To explore the challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation.

4. To propose potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana.

1.5 Research Questions

1. What is the current state of hand embroidery skills acquisition as a viable source of job creation in the contemporary Ghanaian economy?
2. How effective are the current training programs, if any, in promoting skill acquisition in hand embroidery in Ghana?
3. What are the challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation?
4. Are there potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana?

1.6 Significance of the Study

The study will be relevant in the following ways:

1. **Economic Implications:** It provides insights on how skills acquisition, particularly in the field of hand embroidery which can lead to job creation and economic growth in Ghana. This can help policymakers formulate strategies to boost the economy and alleviate unemployment. Investing in skills acquisition in the field of hand embroidery can have far-reaching economic implications for Ghana. It can lead to job creation, entrepreneurship opportunities, increased exports, rural development, skills upgrading, and a reduction in unemployment. Moreover, it can contribute to economic diversification and guide policymakers in making informed decisions to boost the nation's economy.

2. **Skill Development:** The study sheds light on the importance of traditional skills such as hand embroidery, potentially leading to initiatives that promote such skills among the younger generation. This can preserve cultural heritage while providing new livelihood options. The promotion of traditional skills, such as hand embroidery, not only preserves cultural heritage but also offers a range of economic and social benefits. It provides the younger generation with opportunities for livelihood, fosters a sense of pride and identity, and contributes to the overall cultural richness and economic well-being of Ghana. By shedding light on these aspects, the study can pave the way for initiatives that recognize the value of traditional skills in a modern context.
3. **Policy Formulation:** The findings from this study serve as a basis for policy decisions related to vocational training and education. It can guide efforts to incorporate more skills training into the educational curriculum. The study's findings can serve as a valuable foundation for policymaking related to vocational training and education. By incorporating more skills training into the curriculum and aligning education with the economic needs of the country, policymakers can better prepare the younger generation for the workforce, promote economic development, and foster a more skilled and adaptable workforce for the future.
4. **Entrepreneurship Development:** By demonstrating the potential for job creation in hand embroidery, the study inspires entrepreneurial initiatives in this and other traditional arts. This can lead to the establishment of more small businesses, which are crucial for local economies. The study's findings also serve as a powerful motivator for entrepreneurship development in hand embroidery and other traditional arts. These entrepreneurial initiatives can stimulate job creation, economic growth, cultural preservation, and

community engagement. By nurturing small businesses in this sector, local economies can become more diverse, resilient, and prosperous.

5. **Cultural Preservation:** Hand embroidery is a part of Ghana's rich cultural heritage. Promoting skill development in this area not only creates jobs but also aids in preserving and promoting this traditional craft both nationally and internationally but promote skill development in hand embroidery in Ghana which goes beyond job creation; it's a multifaceted strategy for preserving and promoting the country's rich cultural heritage. It safeguards traditional knowledge, fosters national pride, attracts cultural tourism, and allows Ghana to share its cultural identity with the world. This preservation effort ensures that the artistic traditions and narratives woven into hand embroidery continue to flourish and contribute to Ghana's cultural legacy.
6. **Sustainable Development:** The promotion of handcrafts aligns with global efforts towards sustainable development. Encouraging local, traditional industries can reduce the environmental impact of mass-produced goods and promote self-reliance. The promotion of handcrafts like hand embroidery aligns closely with the principles of sustainable development. It supports environmentally friendly practices, preserves cultural heritage, empowers local communities, and contributes to economic, social, and cultural sustainability. Encouraging traditional industries can play a significant role in fostering sustainable and resilient communities while reducing the negative environmental impacts of mass-produced goods.
7. **Social Implications:** The research may reveal social benefits of skill acquisition in hand embroidery, such as increased self-esteem, empowerment, particularly for women, and strengthened community bonds. Skill acquisition in hand embroidery carries significant

social implications. It can boost self-esteem, empower women, strengthen community bonds, and contribute to gender equality and cultural preservation. These social benefits extend beyond economic considerations and play a crucial role in enhancing the overall well-being and social fabric of communities and societies.

1.7 Delimitation

The study will concentrate on the impact of skill development in hand embroidery on job creation in contemporary Ghana. The study will be limited to Seamstresses, Tailors and Fashion designers in Ashanti-Mampong. In summary, this research study will concentrate on the influence of skill development in hand embroidery on job creation among seamstresses, tailors, and fashion designers in the specific location of Ashanti-Mampong, Ghana. It acknowledges the importance of considering the unique characteristics of this context and profession while examining the contemporary impact of hand embroidery skills on employment opportunities.

1.8 Limitations

- i. Target group accessibility: The research covers a wide range of Seamstress and Fashion designers' that are situated in different locations in the metropolitan.
- ii. Data Collection Challenges: Respondents with their schedule were be busy with filling out the instrument for data collection. However, the researcher will reduce the effect by relaying on research intent and also giving ample time to respondents to complete the items on the instrument.
- iii. The researcher in spite of the above limitations made every effort to ensure that the number of seamstress and fashion designers selected were fair representation of the entire

seamstresses and fashion designers in the region. This was achieved through scientific sample size determination and sampling. Moreover, every effort will be made to assure respondents strict confidentiality and anonymity for accurate data collection.

1.9 Definition of key terms

Hand embroidery: involves attaching yarn or thread to fabric with a needle in order to decorate it. Hand embroidery is a manual, creative process involving the use of yarn or thread, a needle, and fabric to decorate textiles. It is a versatile and artistic form of expression with cultural, historical, and contemporary significance, valued for its craftsmanship and ability to enhance the visual appeal of various items.

Entrepreneurship: is the ability and desire to establish, administer and succeed in a startup venture along with risk entitled to it, to make profits. Entrepreneurship is a multifaceted concept that encompasses the ability and desire to create and manage new ventures with the expectation of making profits. It involves taking risks, being innovative, and actively contributing to economic and social development. Entrepreneurs are the driving force behind these activities, and they play a vital role in shaping business landscapes and economies around the world.

Skill development: is the process of identifying your skill gaps, and developing and honing these skills.

Job Creation development: is the process of strengthening an entrepreneur's skills in the conception, execution, and management of a business venture while taking risks into account.

Seamstress: a professional who makes clothes using designs or patterns.

Fashion designer: a professional who creates clothing, accessories, and other fashion items.

1.10 Organization of the study

The first chapter of this study covers the introductory section. It spells out the background of the study, statement of the problem, aim of the study, research questions, significance of the study, delimitation, limitation and organization of the study.

Chapter two deals with review of related literature which consists of on the current state of hand embroidery skills acquisition in Ghana. The potential of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy. The effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana. The challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation. Potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana.

Chapter three, which is the methodology, entails the research design, population, sample and sampling technique, instrumentations, data collection procedure and data plan.

Chapter four is presents results. Chapter five presents findings identified, interpreted and discussed. Chapter six is the conclusive part of the research which consists of summary of findings, conclusion and recommendations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviews the literature related to the study so as to establish what is known both theoretically and empirically and the knowledge gap that needs to be filled and thus warrants the study. To make it easy to read and understand the substantial issues, the subject matter has been divided into the following subheadings: History of Embroidery; concept of embroidery; types of embroidery; scope of hand embroidery; The impact of Hand Embroidery on the Industry; Developmental stages of Hand Embroidery; The current state of hand embroidery skill acquisition in Ghana Entrepreneurship development; The potential of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy; The effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana; The challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation; Potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana, and Conceptual framework.

2.2 History of Embroidery

The craft of embroidering entails using a needle to sew yarn or thread to cloth to embellish it. The word embroidery first emerged in the word broderie, which is French for ornamentation. There have been many variations of embroidery since the invention of fabric. Despite being used all throughout the world, embroidery has its beginnings in China and the Near East. Actually, the first evidence of needlework comes from the Cro-Magnon people, who lived around 30,000 B.C.

Archaeological discoveries from this ancient time period sometimes contain traces of intricately hand-stitched and adorned clothing (Batchelor, & Larkin, 2020; Spielberg, 2015).

Animal skins and hides were utilized by prehistoric man to create clothes. The clothing was sewn together with tools made of ivory or bone, and the fibres were produced from plants. The process of sewing the skins together evolved through time into a method of ornamentation that incorporated stones, bones, and beads to make it more aesthetically pleasing. Humanity is seen wearing clothing with thread embroidery across ancient civilizations in historical paintings, sculptures, vases, and murals (Disha, 2019).

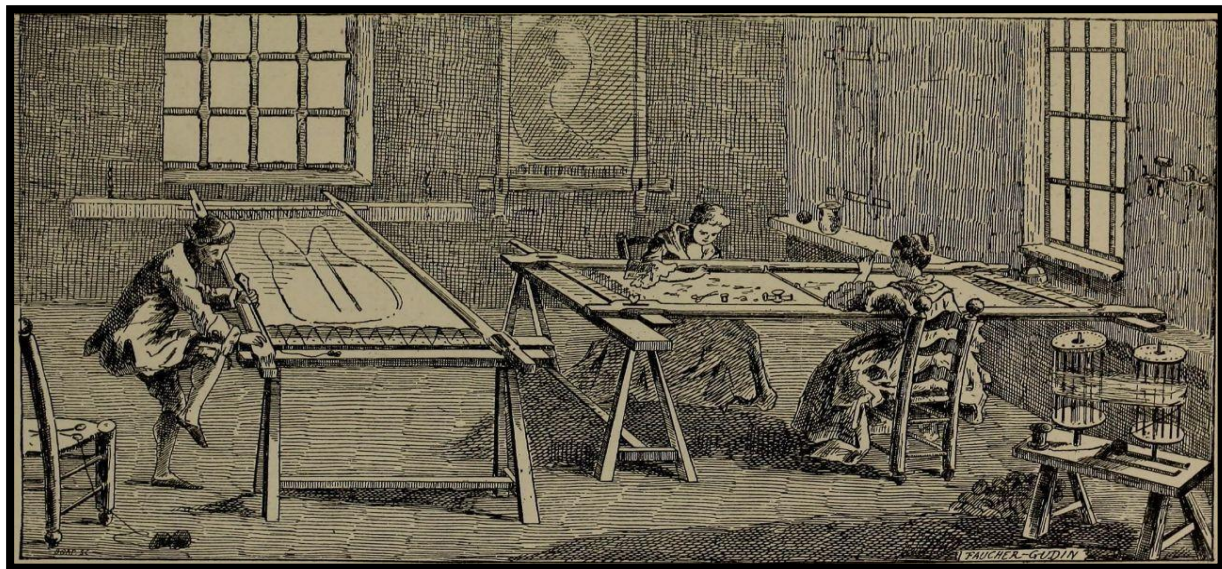


Plate 2.1. Historical display of embroidery

Between the fifth and third centuries B.C., during the Warring States period, more early examples of needlework may be found in China. The first embroidered artifacts discovered in Sweden date to the so-called Viking Age, which took place between the ninth and tenth centuries. With the expansion of the Christian church and the rise of the aristocracy in Europe about the year 1000,

embroidery became more popular. In order to demonstrate riches and power, elaborately designed tablecloths and wall hangings were ordered (Kipfer, 2021; Andrä, 2022).

Additionally, because needlework was a sign of great social standing in Muslim nations, it was significant in the mediaeval Islamic world. Embroidery can be found on handkerchiefs, banners, uniforms, robes, horse trappings, pouches, and covers, among other items, in places like Damascus, Istanbul, and Cairo. Later, in the 18th century, stitching was a skill that symbolized a girl's transition into womanhood as well as prestige and social standing in England and her colonies (Rashidi, 2018). But soon after, the Industrial Revolution brought forth the development of the embroidery machine and stable mass production. The oldest machine embroidery was created by merging hand embroidery and machine looms, and it was uncovered in France in the middle of the 1800s. Around 1900, pattern sheets and mail-order catalogues contributed to the increased popularity of needlework (Ahmed, 2019).



Plate 2.2. Needle for embroidery

Due to the availability of cheaper materials, embroidery was no longer exclusively leisure for the wealthy. Additionally, although women had traditionally executed embroidery, men were suddenly taking an interest in the craft. Henry Fonda, an actor, admitted in an interview that his favorite pastime was embroidering. Gustaf V, King of Sweden from 1907 to 1950, is another well-known male embroiderer. The needlework of today is very different from the embroidery of the past. The majority of modern embroidery is stitched with a computerized embroidery machine utilizing "digitized" computer software patterns. Although modern needlework may differ from its ancient origins in terms of form and technique, most of its uses and purposes are still applicable today. People have traditionally decorated their homes and themselves with personalized brands and logos using embroidery, and this trend will continue (Han, & Cong 2023).

2.3 Concept of Embroidery

Embroidery is a decorative craft that involves stitching designs and patterns onto fabric or other materials using a needle and thread. It is a versatile technique that can be applied to various types of fabric, including clothing, home decor items, accessories, and even artwork. The art of embroidery dates back thousands of years and has been practiced in cultures all around the world. It has been used for both practical and decorative purposes throughout history (Jones et al., 2021). In ancient times, embroidery was often employed to embellish clothing, signify social status, or convey symbolic meaning. It was also used to adorn religious vestments, tapestries, and ceremonial items (Van, 2019).

The process of embroidery typically involves transferring a design onto the fabric and then stitching over the design with needle and thread. The design can be pre-drawn or transferred using

methods like tracing or iron-on transfers. The stitches can vary in complexity and style, depending on the desired effect and the skill level of the embroiderer (Ahmed, & Hassan, 2021). There are numerous types of stitches used in embroidery, each with its own unique characteristics and applications. Some common stitches include:

1. **Running Stitch:** This is a basic stitch where the needle is passed in and out of the fabric in a straight line. It creates a dashed or solid line effect and is often used for outlining or simple designs.
2. **Backstitch:** This stitch creates a solid line by stitching backward, then forward, and repeating the process. It is often used for outlining and creating fine details.
3. **Satin Stitch:** This stitch creates a smooth, flat, and solid area by stitching side by side in a horizontal or vertical direction. It is commonly used for filling shapes or creating text.
4. **French Knot:** This stitch creates a small, raised knot on the fabric surface. It is often used to add texture or create small dots or accents.
5. **Chain Stitch:** This stitch forms a series of looped stitches that create a chain-like effect. It can be used for outlines, borders, or to fill shapes (Goswami, 2018).

Embroidery can be done by hand, using a needle and thread, or by machine, where computerized embroidery machines automate the stitching process. Machine embroidery offers precise and intricate designs with greater speed and efficiency (He, & Adar, 2020).

In addition to thread, other materials like beads, sequins, ribbons, and even metal threads can be incorporated into embroidery to add texture, dimension, and visual interest. Different types of fabric, such as cotton, silk, or even synthetic materials, can also be used as the base for embroidery (Jones, & Nabil, 2022).

Today, embroidery is not only a traditional craft but also a popular hobby and a means of artistic expression. Many people enjoy creating their own embroidered designs or patterns, while others prefer to follow existing patterns or templates. There are various embroidery techniques and styles, including cross-stitch, crewelwork, stumpwork, and blackwork, among others, each offering its own unique aesthetic and level of complexity. Embroidery continues to evolve with contemporary design trends and technology, making it an enduring and versatile craft that combines skill, creativity, and the joy of creating beautiful stitched artwork (Dillon, & Kokko, 2017).

Embroidery is a decorative art form that involves the use of needle and thread to create designs and patterns on various types of fabric or other materials. It is a technique that has been practiced for centuries and is found in cultures around the world. The basic concept of embroidery is to add decorative stitches to a base fabric, enhancing its visual appeal and creating intricate designs. The process typically involves manipulating threads with a needle to form stitches and patterns on the fabric's surface. Embroidery can be done by hand, using a variety of stitches, or by machine, where computerized equipment controls the stitching process (Ratten, 2022).

Embroidery allows for a wide range of creative possibilities. It can be used to embellish clothing, such as adding intricate designs to garments, creating monograms, or decorating accessories like bags and hats. It is also commonly used in home decor, such as on curtains, pillows, and table linens. Embroidery can even be applied to artwork and craft projects, such as framed embroidery pieces or stitched designs on canvas. Different types of stitches are used in embroidery to achieve different effects and textures. Some common stitches include the running stitch, backstitch, satin

stitch, French knot, and chain stitch, among many others. These stitches can be combined and layered to create intricate patterns, borders, and motifs (Snodgrass, 2015).

Embroidery can incorporate various materials apart from thread, such as beads, sequins, ribbons, and even metal wires, to add further dimension and texture to the design. Different threads, like silk, cotton, or metallic threads, can also be used to achieve different visual effects. With the advancement of technology, machine embroidery has become increasingly popular. Computerized machines allow for precise and intricate designs to be stitched quickly and efficiently. Digital files containing the design can be loaded into the machine, which then automatically stitches the pattern onto the fabric (Pile, 2018). Embroidery has both practical and artistic applications. It serves as a means of personal expression, as well as a way to preserve cultural heritage and traditions. Whether done by hand or with modern machinery, embroidery continues to be a beloved craft that combines creativity, skill, and the beauty of needlework (Goggin, 2017).

A possible method for creating repeatable, dependable, portable, and reusable antenna shapes is embroidery. For precise and complex designs, an electronic embroidery machine is employed. The fundamental benefit of using an embroidery technique over a weaving or knitting approach is that the sheet resistance may be changed by adjusting the stitch spacing (the space between two stitches), stitch length, thread pattern, stitch direction (horizontal, diagonal, vertical, etc.), and stitch pattern. Stitch length and spacing for both parallel and perpendicular stitching (Sabiescu et al., 2017).

Additionally, embroidery designs can be directly transferred to the fabric's surface without the need for additional assembly. Additionally, by using CAD (Computer-aided design) software to create sophisticated designs, a uniform sheet resistance can be obtained without having to handle complicated parameters. The most popular method for securing conductive yarn to the backing fabric in embroidery is the lock stitch. a lock stitch-embedded microstrip patch antenna. Two distinct threads, a top thread and a looper thread, are interlocked during the embroidery process to create the lock stitch. The conductive thread (top thread), which passes through a tension system and the embroidery needle's eye, is used to embroider the conductive layer. Through the fabric's needle holes, the conductive thread and the nonconductive thread (looper thread) are intertwined. The embroidery machine's lower half contains a bobbin case, which is where the non-conductive thread is coiled onto a bobbin and inserted (Glynn, & Sheil, 2017).

A cloth surface is embellished by stitching strands of thread onto it in the embroidery process. Manual or numerical embroidery is also possible. The ability of embroidery machines to produce almost arbitrary patterns on knitted, non-woven, and woven materials, including customized textiles and apparel, is a benefit. Compared to weaving looms, embroidery machines require minimal setup. The possibility exists to produce printed circuit boards (PCBs) on fabric using an embroidery machine. In order to make resistors, capacitors, data and power buses, and capacitive keypads, Post and Orth (2000) invented the technique of sewing and embroidering conductive thread. Other researchers illustrated the stitching of stretch sensors, antennae, and touch sensors (Stoner et al., 2016). A commercial manufacturing technique was created by the Swiss company Forster Rohner¹ to sew LEDs and circuit traces onto fabric. To enable end users to build fabric

circuits and include touch sensors and circuit trace shielding into embroidery patterns, we employ an embroidery machine (Libanori et al., 2022).

2.4 Scope of Hand Embroidery

Hand embroidery is a versatile and enduring craft that has been practiced for centuries across cultures worldwide. Its scope is wide-ranging and encompasses various aspects, including art, fashion, home decor, and personal expression (Sabiescu et al., 2017). Here are some key areas where hand embroidery finds its scope:

1. **Artistic Expression:** Hand embroidery is often regarded as a form of artistic expression, allowing individuals to create intricate designs, patterns, and images using needle and thread. Artists and crafters use embroidery as a medium to convey their ideas, emotions, and narratives (Okeke, 2023).
2. **Fashion and Textiles:** Hand embroidery plays a significant role in the fashion industry. Embroidered garments, accessories, and textiles are highly valued for their unique, intricate designs and the craftsmanship involved. Embroidery can be found on clothing items such as dresses, jackets, shirts, and even shoes. It adds a touch of elegance, individuality, and cultural heritage to fashion (Snodgrass, 2015).
3. **Home Decor:** Embroidery is widely used to enhance home decor items, such as tablecloths, napkins, pillowcases, curtains, and wall hangings. It can add a personalized touch, create intricate patterns, and elevate the overall aesthetics of interior spaces.
4. **Personalization and Customization:** Hand embroidery allows for customization and personalization of various items. People often choose to embroider names, initials, or

meaningful symbols on garments, towels, bags, and other personal belongings to make them unique and special.

5. **Traditional and Cultural Preservation:** Hand embroidery is deeply rooted in many traditional and cultural practices around the world. It serves as a means of preserving and celebrating cultural heritage by passing down traditional stitching techniques, motifs, and designs from generation to generation.
6. **Therapeutic and Mindfulness Practice:** Embroidery can be a therapeutic and meditative practice that promotes relaxation, mindfulness, and stress relief. The repetitive motions of stitching can help calm the mind and provide a sense of focus and achievement (Matthews, 2023).
7. **Education and Skill Development:** Hand embroidery is often taught as a craft and art form, both in formal educational settings and through community workshops. It helps individuals develop manual dexterity, creativity, and an appreciation for craftsmanship.

In summary, the scope of hand embroidery is broad and diverse, ranging from artistic expression to fashion, home decor, personalization, cultural preservation, therapeutic practice, and education. Its versatility and enduring appeal continue to inspire people to explore and innovate within this traditional craft (Poon, 2017).

2.5 Types of Embroidery

Embroidery is a decorative craft that involves stitching designs or patterns onto fabric using various types of stitches and threads. There are several different types of embroidery techniques,

each with its own unique characteristics and styles (He, & Adar, 2020). Here are some popular types of embroidery:

1. Cross-stitch: Cross-stitch is one of the most well-known and widely practiced forms of embroidery. It involves making X-shaped stitches to create a design. Cross-stitch patterns often feature intricate details and are commonly used for creating samplers, decorative items, and pictures. Cross-stitch embroidery is a popular form of needlework that involves creating decorative designs on fabric using colored threads. It is a versatile craft that allows you to create intricate and detailed patterns by stitching small X-shaped stitches (Zaharieva, 2022).

Here are some key aspects of cross-stitch embroidery:

- i. Supplies: To get started with cross-stitch, you will need a few basic supplies, including fabric, embroidery threads (usually six-stranded cotton floss), embroidery needles, an embroidery hoop or frame to keep the fabric taut, and embroidery scissors (Montano, 2016).
- ii. Fabric: Cross-stitch can be done on various types of fabric, such as Aida cloth, linen, or even weave. Aida cloth is a popular choice for beginners because it has an even weave and visible holes, making it easier to count stitches (Ahsan et al., 2021).
- iii. Patterns: Cross-stitch patterns can be found in books, magazines, or online. They typically consist of a grid-like chart where each square represents a stitch. The chart indicates the color of thread to use and where to place the stitches on the fabric.

- iv. Stitches: The basic stitch in cross-stitch embroidery is the "X" stitch, formed by making two diagonal stitches that cross in the middle. The stitches are usually worked from left to right and top to bottom, following the pattern chart.
- v. Color and Design: Cross-stitch offers a wide range of possibilities for color and design. You can create intricate pictures, landscapes, floral patterns, monograms, or even personalized designs. The color and arrangement of stitches determine the final result (Mamdouh et al., 2022).
- vi. Finishing: Once you have completed your cross-stitch design, you can finish it in various ways. Some common finishing techniques include framing the fabric, turning it into a pillow, or incorporating it into other craft projects like bags or ornaments (Mireku, 2016).

Cross-stitch embroidery can be a relaxing and rewarding hobby. It allows you to unleash your creativity while creating beautiful and personalized handmade pieces. Whether you're a beginner or an experienced stitcher, cross-stitch offers endless possibilities for creating unique and memorable works of art (Shercliff, 2015).

2. Crewel embroidery: Crewel embroidery uses wool yarn and a variety of stitches to create intricate designs on fabric. It originated in the Jacobean era in England and is characterized by its textured appearance and the use of bold, vibrant colors. Crewel embroidery is often seen on pillow covers, wall hangings, and curtains. Crewel embroidery is a form of decorative stitching that has been practiced for centuries. It involves the use of wool thread on a fabric background to create intricate designs. The word "crewel" comes from the Old English word "cruell," which means a fine, curly wool thread (Sarkar et al., 2021).

In crewel embroidery, the designs are typically created using a variety of stitches, including stem stitch, satin stitch, chain stitch, and French knots, among others. These stitches are used to outline and fill in the design, creating a textured and three-dimensional effect. Traditionally, crewel embroidery was used to embellish household items such as curtains, bedspreads, and cushions. It was particularly popular in the Jacobean era in England during the 17th century, where it was often used to adorn clothing and furnishings (Higgin, 2022). The distinguishing feature of crewel embroidery is the use of wool thread. The wool is known for its thickness and natural curl, which adds depth and texture to the embroidered designs. However, modern interpretations of crewel embroidery also incorporate other types of threads, such as silk or cotton, to achieve different effects. Crewel embroidery designs can range from traditional floral motifs to more contemporary and abstract patterns. The choice of colors is usually vibrant and varied, allowing for creative expression and visual impact. The designs can be pre-drawn on the fabric, or the embroiderer can create them freehand (Batchelor, & Larkin, 2020).

Today, crewel embroidery continues to be practiced as a traditional craft and a form of artistic expression. Many artisans and hobbyists enjoy creating their own designs or working from patterns to produce unique and beautiful embroidered pieces. It is also not uncommon to see crewel embroidery used in contemporary fashion, accessories, and home decor items, blending traditional techniques with modern aesthetics.

3. Satin stitch: Satin stitch is a basic embroidery stitch that is used to fill in designs or create smooth, solid lines. It involves closely spaced straight stitches that lie next to each other, creating a satin-like effect. Satin stitch is commonly used for creating floral motifs, lettering, and intricate borders. Satin stitch embroidery is a popular technique used in hand

embroidery to create smooth and shiny surfaces on fabric. It is characterized by closely spaced straight stitches that completely cover an area, giving it a satin-like appearance (Ingham, & Lindisfarne, 2014).

To create satin stitch embroidery, follow these steps:

- i. Choose a design: Select a design or pattern that you want to embroider. It can be a simple shape or a more intricate motif (Hamdan et al., 2018).
- ii. Prepare the fabric: Place your fabric in an embroidery hoop to keep it taut and prevent it from puckering. You can use any type of fabric, but it's best to use a tightly woven fabric like cotton or linen.
- iii. Thread the needle: Choose an embroidery thread or floss in the desired color. Separate the thread into the desired number of strands. For satin stitch, it's typically best to use all strands of the floss for full coverage (Van, 2018).
- iv. Start stitching: Bring the threaded needle up from the back of the fabric to the front at one end of the shape you want to fill. Hold the thread tail at the back to secure it.
- v. Make a stitch: Insert the needle back into the fabric, slightly to the side of the starting point, creating a straight stitch. Bring the needle up again on the opposite side, parallel to the first stitch, and insert it back into the fabric on the starting side (Hiatt, 2012).
- vi. Repeat the stitches: Continue making parallel stitches side by side, ensuring they are close together and covering the desired area. Keep the stitches neat and even.

- vii. Fill the shape: Continue stitching until the entire shape is filled with satin stitches. Pay attention to the direction and alignment of the stitches for a smooth and even appearance.
- viii. Finish the embroidery: Once you have filled the shape, secure the thread by making a small stitch on the back of the fabric. Cut off any excess thread (Draper, 2022).
- ix. Add details: If desired, you can add additional embroidery stitches or details to enhance your design. For example, you can use backstitch or French knots for outlines or accents.

Satin stitch embroidery can be used to embellish various projects, such as clothing, home decor items, or accessories. Practice and patience are key to achieving smooth and even stitches. Experiment with different thread colors and stitch lengths to create beautiful and personalized embroidery designs (Guler et al., 2016).

- 4. Stump work: Stump work embroidery is a three-dimensional technique that involves creating raised elements on the fabric. It often incorporates padding, wires, and beads to add depth and texture to the design. Stump work is known for its realistic and detailed motifs, such as flowers, insects, and animals. Stump work embroidery, also known as raised or padded embroidery, is a form of three-dimensional needlework that creates raised designs on fabric. It originated in the 17th century and was popular during the Elizabethan and Jacobean eras in England (Draper, 2022).

In stump work embroidery, various techniques are used to create raised areas and add dimension to the design. This is achieved by building up layers of padding materials, such as felt, wool, or cotton, underneath the stitched surface. These layers give the design a

raised or "stump" effect. The embroidery stitches used in stump work can vary, including techniques like satin stitch, chain stitch, stem stitch, and couching. Metal threads, beads, sequins, and other embellishments are often incorporated into the design to add further texture and sparkle (Kelly, 2016).

Stump work embroidery can be used to create intricate and highly detailed designs, often featuring flowers, animals, figures, and decorative motifs. It is typically worked on a tightly woven fabric such as linen or silk. To create stump work embroidery, one typically begins by transferring the design onto the fabric. Then, the padding materials are shaped and attached to the fabric using small stitches or a glue-like adhesive. Once the padding is secured, the surface embroidery stitches are worked over it to create the desired design. The final step involves adding any additional embellishments or decorative elements to enhance the overall effect (Triston, & Lombard, 2015).

Stump work embroidery requires patience, skill, and attention to detail, as it involves a combination of stitching, layering, and embellishing techniques. It is often used in creating decorative items such as pictures, panels, boxes, and even wearable accessories like brooches or pendants. Today, stump work embroidery continues to be practiced by artisans and needlework enthusiasts, both as a traditional craft and as a means of artistic expression. It offers a unique way to bring depth, texture, and dimension to embroidered designs, showcasing the beauty of this intricate and time-honored needlework technique (Davidson, 2019).

5. **Black work:** Black work is a monochromatic embroidery style that originated in the Tudor period in England. It uses black thread to create intricate geometric patterns and designs on white or light-colored fabric. Black work embroidery is characterized by its repeating

motifs, delicate fillings, and fine outlines. Black work embroidery is a traditional form of embroidery characterized by intricate and geometric black stitches on a white or light-colored fabric. It originated in the 16th century in Europe, particularly in England, and was popularized during the Tudor period.

The technique of black work embroidery involves creating patterns using various stitches, typically worked in black silk thread on even-weave fabric. The most common fabric used is linen, but cotton and other fabrics can also be used. The stitches used in black work include the backstitch, running stitch, double running stitch, and occasionally, the stem stitch (Kelly, 2016).

Black work designs often feature repeating geometric patterns, such as interlocking squares, rectangles, or intricate floral motifs. The contrast between the black thread and the white fabric creates a striking and visually appealing effect. Sometimes, additional colors may be incorporated, but the primary focus remains on the black stitching (Draper, 2022). Historically, black work embroidery was associated with the upper class and was used to embellish clothing, accessories, and household items. It was particularly popular during the Elizabethan era and was often used to adorn collars, cuffs, and elaborate costume accessories (Guler et al., 2016).

In contemporary times, black work embroidery has seen a revival in popularity, both as a traditional craft and as a modern form of artistic expression. Many embroidery enthusiasts and artists explore black work techniques to create intricate and visually striking designs. Black work is also often combined with other embroidery styles or used as a background for more colorful stitches and embellishments.

6. Gold work: Gold work embroidery involves the use of metal threads, such as gold or silver, to create opulent and luxurious designs. The threads are typically couched onto the fabric using silk or cotton threads. Gold work is often used for creating embellishments on ceremonial garments, religious vestments, and decorative items. Gold work embroidery, also known as gold work or metal thread embroidery, is a decorative technique that involves using metallic threads, such as gold or silver, to embellish fabric. It is a form of embroidery that has been practiced for centuries and is known for its luxurious and opulent appearance (Bhandari, 2015).

Gold work embroidery typically involves stitching metallic threads onto fabric to create various patterns, motifs, and designs. The threads used in gold work embroidery can be made of real precious metals, such as gold or silver, or they can be imitation metallic threads made from other materials, such as copper or aluminum, coated with gold or silver-colored finishes.

The process of gold work embroidery requires specialized techniques and tools. Some common techniques used in gold work embroidery include couching, where the metallic thread is laid on the fabric and stitched down with another thread, and padding, where layers of felt or other materials are used to create a raised effect under the metal threads. Gold work embroidery can be seen in a variety of applications, including garments, accessories, home decor items, and religious or ceremonial textiles. It has been traditionally used in the embellishment of royal and ceremonial garments, ecclesiastical vestments, and decorative textiles for wealthy patrons (Davidson, 2019).

Today, gold work embroidery continues to be practiced by artisans and enthusiasts around the world. It requires skill, precision, and attention to detail, as working with metallic

threads can be challenging. The end result, however, is a stunning display of intricate and shimmering designs that add a touch of luxury and elegance to any fabric or garment.

7. **White work:** White work refers to a group of embroidery techniques that use white thread on white fabric to create delicate and intricate designs. It includes techniques like pulled thread work, drawn thread work, and cutwork. White work is often associated with traditional and elegant designs, such as fine linens, wedding accessories, and heirloom pieces (Fuhrmann, 2012).

White work embroidery, also known as white-on-white embroidery, is a traditional form of needlework that involves creating intricate designs using white thread on a white fabric. It is characterized by the use of various stitches, including satin stitch, French knots, eyelet stitch, and shadow work, to create patterns, textures, and motifs. Historically, white work embroidery has been practiced in many cultures around the world, including Europe, Asia, and the Americas. It has been particularly popular in regions such as England, Italy, Portugal, China, and Mexico, each with its unique style and techniques.

The choice of white thread on a white fabric creates a subtle and delicate effect. The designs often feature floral motifs, geometric patterns, or intricate borders. The use of different stitches and techniques allows for the creation of raised or textured areas, adding depth and dimension to the embroidery. White work embroidery can be done on various fabrics, including cotton, linen, silk, or even synthetic materials. The choice of fabric depends on the desired effect and the specific project. Some common items that feature white work embroidery include clothing, table linens, handkerchiefs, christening gowns, and bridal accessories (Fuhrmann, 2012).

To create white work embroidery, one typically begins by transferring or tracing the design onto the fabric. Then, the embroiderer uses a hoop or frame to keep the fabric taut while stitching. The stitches are carefully worked over the design, following the outlines and filling in the areas with intricate patterns. One notable technique used in white work embroidery is shadow work. This technique involves stitching on the backside of the fabric, creating a shadow or silhouette effect on the front. It is commonly used to create delicate and ethereal designs.

White work embroidery requires patience, precision, and attention to detail. It is often considered a labor-intensive form of needlework, but the end results can be truly stunning. Today, white work embroidery continues to be practiced both as a traditional craft and as a contemporary art form, with embroiderers incorporating modern designs and techniques into their work.

8. **Brazilian embroidery:** Brazilian embroidery is a type of surface embroidery that originated in Brazil. It uses rayon threads and incorporates a wide range of stitches to create highly textured and dimensional designs. Brazilian embroidery often features bold colors, floral motifs, and a variety of stitches like bullion knots, cast-on stitches, and drizzle stitches. Brazilian embroidery, also known as "ponto russo," is a type of surface embroidery that originated in Brazil. It is a unique and vibrant style of embroidery that incorporates a variety of stitches, textures, and materials to create three-dimensional designs (Sabiescu et al., 2017).

Unlike traditional embroidery, which typically uses flat stitches, Brazilian embroidery emphasizes raised and padded stitches to give a sculptural effect. This technique involves using a variety of threads, such as rayon, silk, or wool, to create rich and textured designs.

Brazilian embroidery often features floral motifs, foliage, animals, and other nature-inspired elements. The designs are usually stitched on a closely woven fabric, such as linen or cotton, and the stitches are worked from the back of the fabric, resulting in a smooth and neat front surface. Common stitches used in Brazilian embroidery include bullion knots, cast-on stitches, stem stitches, satin stitches, and French knots. These stitches are often combined and layered to create intricate patterns and textures (Schwarz, & Schwarz, 2021).

Brazilian embroidery gained popularity in the 1970s and has since spread internationally. It is appreciated for its vibrant colors, unique texture, and versatility in creating decorative pieces such as wall hangings, tablecloths, clothing embellishments, and accessories. Today, there are numerous books, patterns, and tutorials available for those interested in learning Brazilian embroidery. It has become a popular form of needlework for both experienced embroiderers and beginners alike, allowing individuals to express their creativity and create beautiful and dimensional works of art (Trentmann, 2016).

2.5.1 Common Traditional Embroidery

Wang (2019), noted some common embroidery techniques as follows:

- a. Satin stitch embroidery:** embroidery technique that straight lines take up the whole area neatly and side by side. Satin embroidery has an advantage in small designs or details. Satin stitch embroidery is a technique used in the art of embroidery where straight lines of stitching are used to fill in an area neatly and closely side by side. This technique creates a smooth, shiny, and solid surface that resembles satin fabric, hence the name "satin stitch" (Phipps, 2011).

- i. Technique Overview:** Satin stitch is a basic yet versatile embroidery technique. It involves tightly spaced, parallel stitches that cover the entire area within the design. These stitches are typically worked in a straight line, following the contours of the design (Bao et al., 2021).
- ii. Smooth and Solid Surface:** Satin stitch creates a smooth and solid surface that resembles the sheen and texture of satin fabric. This makes it an excellent choice for filling in larger areas where a polished and even appearance is desired (Gisario et al., 2022).
- iii. Detail and Precision:** One of the primary advantages of satin stitch is its ability to capture intricate details. Since the stitches are closely packed, this technique is ideal for adding fine lines, curves, and small, precise elements within a design. It allows for intricate shading and a high level of realism in embroidery (Cui et al., 2017).
- iv. Small Designs:** Satin stitch is particularly well-suited for small designs and motifs. Its ability to provide a clean, solid surface is advantageous when working with limited space, such as monograms, logos, or delicate floral patterns.
- v. Text and Lettering:** Satin stitch is often used for embroidering text and lettering. The precise nature of this technique allows for the creation of crisp, legible letters and numbers, making it a popular choice for personalizing garments, accessories, and items like towels and linens (Sobreira et al., 2020)
- vi. Versatile Use:** Satin stitch can be employed in various embroidery styles, including hand embroidery, machine embroidery, and digital embroidery. It's a staple in many types of needlework, from traditional handcrafted embroidery to modern computerized embroidery machines.

- vii. Materials and Threads:** Satin stitch can be executed using a variety of materials, including different types of fabric, thread, and even specialty embroidery materials like silk, satin, or metallic threads. The choice of materials can enhance the visual impact of the satin stitch work (Hamdan et al., 2018).
- viii. Blending and Gradients:** While satin stitch is often associated with solid colors, it can also be used to create shading, blending, and gradients by varying the color or thickness of the threads. This versatility makes it a valuable technique for achieving a wide range of visual effects (Jakica, 2018).
- ix. Practical Applications:** Satin stitch embroidery is used in a wide range of applications, including fashion design (e.g., embellishing clothing and accessories), home decor (e.g., decorative pillowcases and table linens), and commercial branding (e.g., corporate logos on uniforms).
- x. Challenges:** While satin stitch offers precision and detail, it can be more challenging than some other embroidery techniques, particularly for beginners. Achieving a smooth and consistent surface requires careful attention to stitch placement and tension (Pile, 2018).

In summary, satin stitch embroidery is a versatile and widely used technique in the world of embroidery. Its ability to create a smooth and solid surface makes it ideal for adding intricate details and working on small designs. Whether in traditional handcrafted embroidery or modern machine embroidery, satin stitch remains a valuable tool for achieving precision and visual appeal in textile artistry (Crowther, 2019).



Plate 2.3 Satin Stitch

- b. Chain embroidery** is another name for chain embroidery. It has a chain-like design. Chain embroidery can be used to fill in patterns on its own with a single thread. Because the parallel lines are the same length, the embroidery is primarily sturdy and even. Chain embroidery, also known as chain stitch embroidery, is a type of decorative needlework technique that creates a chain-like or linked design on fabric. This traditional form of embroidery is characterized by its unique stitch, which resembles a series of loops or chains (Nosan, 2020).
- i. Chain-Like Design:** Chain embroidery derives its name from the characteristic chain-like appearance it imparts to the fabric. This is achieved by creating a series of interconnected loops or chains using a single continuous thread.
- ii. Single Thread Usage:** One of the distinguishing features of chain embroidery is that it typically uses a single thread for the entire design. This thread is usually threaded through a needle and then manipulated to create the chain stitch (Edlich et al., 2010)

- iii. **Filling Patterns:** Chain embroidery is versatile and can be used for a variety of purposes in embroidery work. One of its common uses is to fill in patterns or shapes on fabric. By carefully aligning and interlocking the loops, intricate patterns and designs can be formed (Jiang et al., 2021).
- iv. **Sturdiness and Evenness:** Chain embroidery produces results that are known for their durability and evenness. This is because the parallel lines created by the chain stitches are of consistent length, ensuring a uniform and stable appearance. This evenness is especially desirable when working on larger embroidery projects or when aiming for a clean and professional finish (Alshehri & Attia, 2023).
- v. **Variations:** While the basic chain stitch is a simple looped stitch, there are variations of chain embroidery that add complexity and texture to the designs. For example, the twisted chain stitch, heavy chain stitch, and detached chain stitch each offer unique textures and effects.
- vi. **Applications:** Chain embroidery is used in various applications, including fashion design, home decor, and traditional crafts. It can be found on clothing, accessories, household items like curtains and tablecloths, and even in fine art embroidery pieces.
- vii. **Materials:** Chain embroidery can be done on a wide range of fabrics, including cotton, silk, wool, and even canvas. The choice of fabric and thread color can greatly influence the final appearance of the embroidery.
- viii. **Hand vs. Machine:** While traditional chain embroidery is done by hand, modern technology has made it possible to replicate chain stitch patterns using embroidery machines. Machine embroidery allows for precision and speed in producing intricate chain stitch designs (Goveia et al., 2020).

In summary, chain embroidery is a timeless and versatile form of needlework that creates a chain-like pattern using a single thread. Its evenness and durability make it a popular choice for both decorative and functional embroidery work, and it can be found in various applications across different cultures and art forms. Whether done by hand or with the help of machines, chain embroidery continues to be a beloved and enduring craft (Settingington, 2018).



Plate 2.4 picture of Chain embroidery

c. Appliqué: also known as affixed cloth embroidery, is a form of embroidery in which other material is cut and sewn into clothing. Cut the desired pattern, then put it on the surface of the embroidery, and finally fix it with serging stitch. It is not cumbersome, based on the pattern on the piece of fabric. Appliqué, also known as affixed cloth embroidery, is a versatile and creative form of decorative needlework that involves the attachment of pieces of fabric onto a base fabric. This technique has been used for centuries across different cultures to embellish garments, accessories, home decor items, and more (Bray, 2023).

a. Materials and Tools:

Base Fabric: This is the primary fabric onto which the appliqué pieces are attached. It can be any fabric, from cotton to silk, depending on the intended use.

Appliqué Fabric: This is the material from which the decorative shapes or patterns are cut. Appliqué fabric can be of various colors, textures, and patterns to create visual interest.

Thread: High-quality embroidery thread is typically used to attach the appliqué pieces to the base fabric.

Needle: A fine, sharp needle is essential for precision when sewing the appliqué in place.

Scissors: Sharp fabric scissors are used to cut out the appliqué shapes.

b. Creating Appliqué Shapes:

The first step in appliqué is to select a design or pattern for the decorative element. This design can be anything from flowers and animals to geometric shapes and letters.

Once the design is chosen, it is typically transferred onto the appliqué fabric using various methods such as tracing, templates, or freehand drawing (Laury, 2010).

Carefully cut out the shapes from the appliqué fabric. These shapes can be as intricate or simple as desired.

c. Attaching the Appliqué:

Position the cut-out appliqué shapes onto the base fabric in the desired arrangement. This can involve intricate placement to create a specific design or scene.

To attach the appliqué pieces to the base fabric, use a sewing technique called a serging stitch or satin stitch. A serging stitch is a tight, zigzagging stitch that secures the edges of the appliqué fabric to the base fabric. This stitch can be done by hand or using a sewing machine (Lee, 2018).

d. Finishing Touches:

Once the appliqué pieces are securely attached, any additional embroidery or embellishments can be added to enhance the design further. This might include adding fine details, such as veins in leaves or intricate patterns on an animal (Cope et al., 2012).

e. Variations and Styles:

Appliqué can take on various styles, from traditional and folk art-inspired to contemporary and abstract.

Different cultures have their own unique approaches to appliqué, often using regional fabrics, motifs, and stitching techniques.

f. Applications:

Appliqué is used in a wide range of applications, including quilts, clothing, home decor items (like pillows and tablecloths), flags, and banners.

It allows for endless creativity, making it a popular choice for adding personalized touches to various items.

In summary, appliqué is a form of embroidery that involves attaching pieces of fabric onto a base fabric to create decorative designs and patterns. It offers a wonderful blend of artistic expression and craftsmanship, allowing individuals to infuse their creativity into a wide array of textile projects (Peppler, & Wohlwend, 2018).



Plate 2.5 Picture of Applique embroidery

d. **Bead embroidery**, originated in Tang Dynasty, developed on the basis of traditional embroidery. It exhibits the creative qualities of magnificence, vibrant color, a transparent layer, and a strong three-dimensional sensation. It combines native charm, Eastern culture, and romantic styles from Europe and America. Sashiko is a type of traditional Japanese needlework. It mixes a basic needle movement with a detailed design in a rustic setting (Sekules, 2020).

Bead Embroidery:

- a. **Origin and History:** Bead embroidery has a rich history dating back to the Tang Dynasty in China, making it a centuries-old technique. Over time, it spread to different parts of the world and evolved, incorporating elements from various cultures (Norenzayan et al., 2016).
- b. **Technique:** Bead embroidery involves sewing beads onto fabric, creating intricate patterns and designs. Beads can be of various sizes, shapes, and materials, including

glass, crystal, metal, and even gemstones. Embroiderers use specialized needles and thread that can pass through the bead holes.

c. **Characteristics:**

Magnificence: Bead embroidery is known for its opulent and luxurious appearance due to the shimmering quality of the beads. It often adds a touch of glamour and extravagance to textiles.

Vibrant Color: The use of colorful beads allows for a wide range of color choices, resulting in vibrant and eye-catching designs.

Transparent Layer: When beads are densely applied, they can create a transparent layer, giving depth and dimension to the embroidered surface.

Three-Dimensional Sensation: The beads add texture and dimension, making the design appear raised or three-dimensional.

d. **Cultural Influence:** Bead embroidery combines elements of native charm with Eastern culture and sometimes incorporates romantic styles from Europe and America. This blending of influences results in unique and diverse designs (Neo et al., 2020).

e. **Applications:**

Bead embroidery is often used for special occasions, such as bridal wear, evening gowns, and accessories like handbags and jewelry. It can also be found in home decor items like wall hangings and decorative cushions.

Sashiko:

f. **Origin and History:** Sashiko is a traditional form of Japanese needlework that originated in rural Japan. Historically, it was used for functional purposes, such as reinforcing and repairing textiles like clothing and quilts.

g. **Technique:** Sashiko involves simple running stitches using a white or contrasting thread on an indigo-dyed fabric (Takano, 2015). The patterns are often geometric and repetitive, creating a rustic and utilitarian aesthetic.

h. **Characteristics:**

Basic Needle Movement: Sashiko primarily uses a basic running stitch, making it accessible to beginners.

Detailed Design: Despite its simplicity, Sashiko designs can be quite intricate, with patterns that range from simple lines and grids to more complex motifs inspired by nature and culture.

Rustic Setting: Sashiko's origins in rural Japan give it a down-to-earth, rustic quality that emphasizes functionality.

i. **Cultural Significance:** Sashiko is deeply rooted in Japanese culture and has historical ties to the concept of "mottainai" (the regret of wasting something useful). It reflects the Japanese values of frugality and sustainability.

j. **Applications:** Sashiko is commonly used to mend and reinforce clothing and textiles, extending their lifespan. It's also employed decoratively, featuring prominently in items like tablecloths, curtains, and wall hangings.

In summary, bead embroidery and Sashiko are both forms of embroidery with distinct histories and characteristics. Bead embroidery is known for its opulence, vibrant colors, and three-

dimensional effects, often incorporating influences from different cultures. On the other hand, Sashiko is a traditional Japanese needlework technique with a focus on functionality, simple stitching, and rustic charm, deeply embedded in Japanese culture and values (Falick, 2019).



Plate 2.6. Bead embroidery

f. Ribbon embroidery originated from France, with ribbon as the raw material. Strong effect is its biggest characteristic. It is not limited to traditional stitching and graphic presentation, but can be flexibly matched according to the individual (Wang, 2019).



Plate 2.7 Ribbon embroidery

- g. French knot embroidery** presents the ultimate luxury: lots of jewelry is decorated with delicate embroidery techniques, and every piece is an art. **Knots** stitch has a three-dimensional sense. Its appearance marked the embroidery moves from plane to the three-dimensional, promoting the embroidery to complete the transformation from two-dimensional to three dimensional space (Yu, 2022).



Plate 2.8. French Knot embroidery

- h. Computerized embroidery:** Machine embroidery is a method of replacing manual work with machine. The biggest advantage of machine embroidery lies in high efficiency, and various changes. Some machine embroidery is also supplemented by printing, spraying and other processes, saving time with high efficiency. The distinctive qualities of each type of needlework give the pieces a distinctive aesthetic flavor, giving them artistic significance beyond their function as carriers of material and making them a priceless work of human creation (May, 2020). Unfortunately, the conventional stitching technique is difficult, expensive, and can only provide a flat impression, which causes its slow development into

a problem. The government and society have started to pay attention to the inheritance and protection of such intangible cultural assets in order to investigate and uncover the development potential of handmade embroidery art and innovate its development mode (Wang, 2019; Ojo, 1997).



Plate 2.9 Computerized embroidery

2.6 Developmental stages of Hand Embroidery

2.6.1 Materials and Equipment for Embroidery

Fabrics: According to Oguntona (1986), fabrics are produced from fibers. Knitted and woven textiles are used in textile materials. Fibers are used to make textiles, which are continuous manipulations of a single thread used to weave a design. Fabrics with a fine texture, like silk and linen, which can be utilized for large, bold stitching, are taken into consideration when making delicate works. All fabrics should be arranged on a frame for simple handling and due to the fabric's slick nature (Olugbenga et al., 2021).

a. Types of Fabric

1. **Brocade:** - This is a pattern weave using several metal threads for dresses. Brocade is not specifically a pattern weave using metal threads for dresses. Brocade is actually a type of richly decorative fabric characterized by raised patterns or motifs woven into the fabric. It is typically made using silk, but can also be made with other fibers such as polyester or metallic threads. Brocade fabrics often feature intricate designs, floral patterns, or geometric motifs that give them a luxurious and elegant appearance. The patterns are created by using a supplementary weft technique, where additional threads are woven into the fabric to create the desired design (Glynn, & Sheil, 2017).

While brocade fabrics can incorporate metallic threads in some cases, it is not a defining characteristic of brocade. The use of metal threads in weaving is more commonly associated with other types of textiles, such as metallic brocade or metallic jacquard fabrics. In summary, brocade refers to a type of fabric with raised decorative patterns, and while it can sometimes include metal threads, it is not exclusively defined by their use.



Plate 2.10. Picture of a Brocade

2. **Damask:** - A pattern produced by dull and shiny thread for household fabrics.

Damask is a type of pattern commonly used in the production of household fabrics. It is characterized by a design created using a combination of dull and shiny threads, which results in a contrasting effect. The pattern typically features intricate motifs or floral designs, often with a slightly raised texture. Traditionally, damask patterns were woven into fabrics using a Jacquard loom, a mechanical loom that allowed for complex patterns to be created. The dull and shiny threads used in damask fabrics are usually made of different materials, such as cotton, silk, or synthetic fibers, which contribute to the contrasting appearance (He, & Adar, 2020).

Damask fabrics are commonly used for upholstery, drapery, table linens, and bedding. Due to their elegant and decorative nature, they are often seen in formal settings or for special occasions. Damask patterns can be found in a wide range of colors and designs, offering versatility in matching various interior design styles (Chemerys & Ponomarenko, 2022).

In addition to household fabrics, damask patterns have also been adapted for other purposes, such as wallpaper, stationery, and even fashion textiles. The term "damask" can also be used to describe a specific type of fabric that exhibits the damask pattern.

Overall, damask is a classic and timeless pattern that adds sophistication and visual interest to household fabrics and other related products (King, 2019).



Plate 2.11. Picture of Damask

3. **Organdie:** - It is dull surface cotton used for blouses. Organdie is actually a lightweight and sheer fabric made from cotton. It has a crisp and stiff texture, often characterized by a slightly wiry feel. Organdie is known for its transparent or semi-transparent appearance and is commonly used for making delicate and feminine garments such as blouses, dresses, skirts, and trimmings. It can also be used for other decorative purposes like curtains, tablecloths, and crafts. The fabric is typically smooth and can be either plain or feature embroidered or printed patterns (Zhu et al., 2020).



Plate 2.12. Picture of Organdie

b. Types of Thread

Yarn is another name for threads, which are available in a variety of sizes and hues. Every color has a different impact on cloth. Crewel wool is an example of fine wool that can be used for embroidery, although other threads, such as 2-ply knitting wool, can also be used. When the right thread is used for a particular pattern, there is a great chance to create textile delight in embroidery that is based on the texture look (He, & Adar, 2020).

- i. **Raffia:** It is like a rope but having shinny and dull version, which are available from craft shop. They are very strong and easily used with a big needle.

Raffia is a natural fiber that is commonly used for various crafting purposes. It is derived from the leaves of the raffia palm tree, native to tropical regions such as Africa and Madagascar. Raffia fibers are long, thin, and flexible, making them suitable for weaving, braiding, and other crafting techniques (Mateko, 2021).

Raffia can be obtained in different forms, including both shiny and dull versions. The shinier raffia is often treated or coated to give it a glossy appearance. Craft shops usually carry raffia in a range of colors, allowing for creativity and customization in craft projects. One of the advantages of raffia is its strength. Despite its thinness, raffia fibers are quite durable, making them ideal for projects that require sturdiness, such as basket weaving or creating structural elements in crafts (Ballou, 2018).

Working with raffia typically involves using a large needle or other similar tools. The flexibility of raffia makes it relatively easy to manipulate and thread through materials, enabling you to create intricate designs or add decorative elements to your crafts.

Overall, raffia is a versatile and strong material that can be used in a variety of craft projects. Whether you're making baskets, hats, bags, or adding decorative accents to your

creations, raffia offers a unique texture and appearance that can enhance your designs (Pearlman, 2019).

- ii. **Knitting Wool:** It is used when doing canvas work for chair seats. An example of these is tapestry wool, which is much cheaper. Knitting wool, also known as yarn, is indeed commonly used in various types of needlework and handicrafts, including canvas work for chair seats. While tapestry wool is often mentioned as a more affordable option, it's worth noting that tapestry wool specifically refers to a type of yarn used in tapestry and needlepoint projects (Wang, 2019).

Canvas work for chair seats typically involves creating a woven or stitched pattern on a canvas base to cover the seat area. The choice of yarn or wool can vary depending on personal preference, the desired effect, and the specific requirements of the project. Knitting wool can be suitable for canvas work if it meets the necessary criteria, such as being durable, easily manageable, and providing the desired texture and color range.

When selecting knitting wool for canvas work, it's essential to consider the weight or thickness of the yarn, as it can affect the overall look and feel of the finished piece. Thicker yarns may result in a more textured and substantial seat cover, while finer yarns can produce a more delicate appearance. Additionally, the type of fiber used in the yarn, such as wool, acrylic, or cotton, can influence its characteristics, including warmth, softness, and ease of care (Novaković et al., 2020).

While tapestry wool is commonly used in tapestry and needlepoint projects, it may not be the ideal choice for chair seat canvas work due to its thinner nature. Tapestry wool is often designed for finer needlework, where the goal is to create intricate, detailed designs. However, if you prefer a more affordable option or want to experiment with different

textures, you could consider using tapestry wool in combination with other yarns or in specific design elements within your canvas work project (Wang, 2019).

Ultimately, the choice of knitting wool for canvas work depends on your preferences, budget, and the desired outcome of your project. Exploring different types of yarns and fibers can lead to exciting and unique chair seat designs.

- iii. **Machine Thread:** These threads produce a very fine handwork. Example of it is zigzag machine. The term "machine thread" can have different meanings depending on the context. However, based on the description you provided, it seems that you are referring to a type of sewing machine stitch known as the zigzag stitch (Ruppert & Balasubramanian, 2018).

A zigzag stitch is a common type of machine stitch that creates a zigzag pattern by alternating between forward and backward movements of the needle while stitching. It is often used for various purposes, such as reinforcing fabric edges, preventing fraying, attaching elastic, and creating decorative effects (Langdon, 2017).

When you mention that machine threads produce a very fine handwork, it could mean that the zigzag stitch produced by a sewing machine can resemble or imitate the appearance of fine hand stitching. The zigzag stitch is generally more durable and efficient than hand stitching, as it allows for quicker sewing and a stronger bond between fabric layers.

In summary, the zigzag stitch is an example of a machine thread that can produce a versatile and fine-quality stitch, which is commonly used in sewing for both practical and decorative purposes (Bainbridge, 2023).

- iv. **Button Hole or Twist on a Reel:** It is used on thin lines of hand embroidery.

A buttonhole or twist on a reel refers to a technique used in hand embroidery to create decorative stitches on thin lines. This technique is commonly used to add intricate details and embellishments to embroidery projects (Pile, 2018).

To create a buttonhole or twist on a reel, you will need a thin embroidery thread or floss and a small hand embroidery hoop or frame. Here's a step-by-step guide on how to execute this technique:

1. Secure your fabric in the embroidery hoop or frame to ensure it remains taut and stable while you work.
2. Thread your needle with the desired embroidery thread or floss. You can use a single strand or multiple strands, depending on the desired thickness of the stitch.
3. Bring the needle up through the fabric at the starting point of your design.
4. Hold the thread taut with your non-dominant hand, keeping it parallel to the fabric surface.
5. With your dominant hand, wrap the working thread around the needle multiple times (usually 8 to 12 times) in a clockwise direction. The number of wraps can vary depending on the desired thickness and appearance of the stitch (Akter, & Khan, 2015).
6. Hold the wraps in place with your non-dominant hand, ensuring they don't unravel.
7. Insert the needle back into the fabric close to the starting point, slightly away from the wraps. Make sure the wraps stay in place while you insert the needle.
8. Gently pull the needle and thread through the fabric, allowing the wraps to slide down the thread and form a compact coil or twist on the surface.
9. Continue the stitch by repeating steps 3 to 8, working along the desired path or pattern. Maintain consistent tension on the thread to create even, well-formed twists.

10. When you reach the end of your design or section, secure the thread on the back of the fabric using a knot or by weaving it through nearby stitches.

The buttonhole or twist on a reel stitch is versatile and can be used to create various decorative effects, such as borders, outlines, and intricate fillings. Experiment with different thread colors, stitch lengths, and densities to achieve different visual effects in your embroidery work (Yang et al., 2016).

c. Equipment for Embroidery

Equipment is needed for embroidery creation in order to produce flawless and distinctive designs or patterns. Here are some examples of the equipment:

- i. **Frame:** Used to determine the precise size of the cloth, the frame has a rectangular shape similar to that of a picture frame. After the task is finished, the needlework will remain permanently, preserving its shape and tension. According to Arekta (2006), there must be tension while working with fabrics; hence, a frame is required to hold the cloth so that the stitches are precise and the liners are straight without wavering (Oladipto, 2011).
- ii. **Needle:** In order to create designs in embroidery, needles are crucial. These needles should have a wider eye so they can go through fabric and thread without yanking on smaller needles, which are ideal for handling knots. Also useful for stitching are scissors and pins (Ágreda, 2022). To successfully complete the task, the scissors must be robust, sharp, and have a pointed edge. For the purpose of avoiding leaving stains on the materials, steel pins and rust-proofing are also employed.

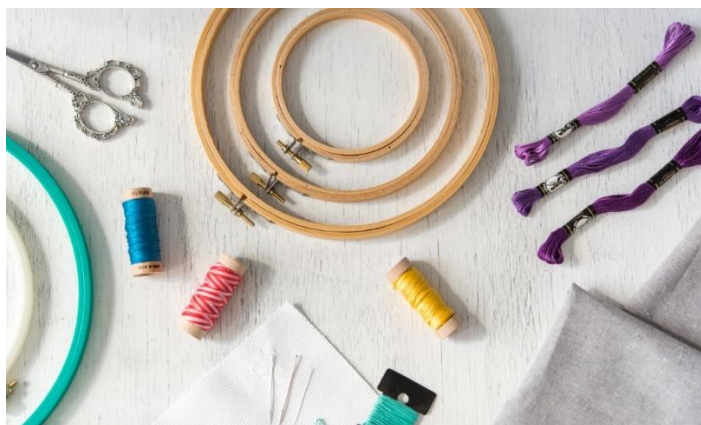


Plate 2.13 Equipment for Embroidery

d. Types of Stiches

According to Ojo (1997), hand stitching is still the most efficient method for creating high-quality products, particularly when creating gifts or decorative things. He added that the ideal way to embellish cloth is to start by picking the right fabric for the backdrop, the right thread color, and the right stitches for the design. The following step is to work on the fabric after picking it up. According to him, the stitches listed below are excellent for embroidery (Bawa, 2021).

i. Buttonhole Stitch: This is an upright stitch with a knot at the top worked over single of double materials. The space between each stitch should be the thickness of the thread used.

The buttonhole stitch is a type of decorative stitch used in sewing and embroidery. It is often used to create a finished edge on fabric or to secure and reinforce buttonholes.

ii. Overcast Stitch: This is stitch used for kneading edges with tend to fray. This stitch is something like sewing except that the needle is put in at an acute angle and not at right angles to the fold. The overcast stitch is a sewing technique used to finish raw

fabric edges and prevent them from fraying. It creates a neat and clean edge by encasing the raw edges with thread (Oladipto, 2011).

To perform the overcast stitch, follow these steps:

- a. Thread your needle with a matching thread color. Knot the end of the thread.
- b. Start by bringing the needle up from the backside of the fabric, near the raw edge.
- c. Insert the needle into the fabric, a short distance away from the starting point, and bring it out on the raw edge.
- d. Loop the thread over the raw edge and insert the needle back into the fabric, slightly ahead of the previous stitch. The needle should go through both layers of fabric.
- e. Continue making closely spaced stitches along the raw edge, repeating the looping motion. The stitches should be small and even.

When you reach the end of the fabric edge, make a small backstitch or knot to secure the thread. The overcast stitch is particularly useful for finishing seams in garments that don't have lining, for hemming fabric edges, or for reinforcing areas prone to fraying, such as the edges of curtains or tablecloths (Holmes, 2015). It provides a clean finish while also preventing the fabric from unraveling.

- iii. Hemming Stitch:** This is done on the wrong side of the material from right to left. The hemming stitch is a hand sewing technique used to create a secure and neat edge on fabric. It is commonly used for hemming garments, securing appliques, or finishing raw fabric edges (Ellen, 2015). The stitch is nearly invisible on the right side of the fabric, making it a popular choice for creating clean and professional-looking hems.

Here's how to do the hemming stitch:

- i. Start by folding the fabric edge over to the desired hem length. The folded edge should be facing the wrong side of the fabric.
- ii. Thread a needle with a thread that matches the fabric or a color that blends well with it. Tie a knot at the end of the thread.
- iii. Bring the needle up from the folded edge of the fabric, hiding the knot between the folded layers (Shaker et al., 2016). Insert the needle into the folded fabric, about 1/8 inch (3 mm) away from the starting point.
- iv. Take a small stitch on the folded edge of the fabric, about 1/8 inch (3 mm) away from the initial entry point. This stitch should only catch a small amount of fabric on the folded edge.
- v. Bring the needle back up through the folded fabric, directly above the starting point, creating a small loop.
- vi. Insert the needle into the fabric again, about 1/8 inch (3 mm) away from the previous stitch. This stitch should go through the fabric layers, securing the folded edge (Rivera et al., 2017).
- vii. Repeat steps 4 to 6, creating evenly spaced stitches along the folded edge. Keep the stitches small and close together to ensure a neat hem.
- viii. Continue stitching until you reach the end of the hem.
- ix. To finish, take a small stitch on the folded edge, close to the last stitch. Insert the needle through the loop created by the last stitch.
- x. Pull the thread gently to tighten the loop, creating a small knot. Repeat this step once or twice to secure the thread.
- xi. Trim the excess thread, leaving a small tail.

The hemming stitch creates a secure and tidy hem, with the stitches hidden on the right side of the fabric (Shercliff, 2015). With practice, you can achieve a nearly invisible finish, giving your garments a professional look.

iv. Running Stitch: This is a horizontal stitch, worked on the right or wrong side of the material, from right to left. The stitches and spaces are equal.

Running stitch is a basic and commonly used hand sewing stitch. It is characterized by a series of evenly spaced, straight stitches that run in a continuous line. The running stitch is simple to execute and is often used for basting, gathering fabric, or basic decorative purposes (Ahsan et al., 2021). Here's how to create a running stitch:

- i. Start by threading a needle with a suitable thread. Choose a thread color that matches or complements your fabric.
- ii. Knot the end of the thread to secure it.
- iii. Bring the needle up from the backside of the fabric to the front at the starting point of your stitch (Stroud, & Hartl, 2023).
- iv. Insert the needle back into the fabric a short distance away (about 1/4 inch or desired stitch length) and bring it up again at an equal distance.
- v. Continue stitching in this manner, creating a line of evenly spaced stitches. The length of each stitch can be consistent or vary depending on your project's requirements.
- vi. Ensure that the stitches lie flat against the fabric without pulling or puckering it excessively.
- vii. When you reach the end of your stitching line or need to secure the thread, make a small knot on the backside of the fabric.

The running stitch is versatile and can be used for various applications. It is often used for temporary stitching, such as basting pieces of fabric together before final sewing. The running stitch is also useful for gathering fabric by creating parallel rows of stitches, which can be pulled to gather the fabric evenly. Additionally, it can serve as a decorative stitch, especially when done with contrasting thread or multiple lines of stitching (Colovic, 2015).

Experimenting with different thread colors, stitch lengths, and arrangements can create unique effects and enhance the visual appeal of your sewing projects.

- v. **Blanket Stitch:** This is a stitch worked on the right side of the material from left to right, it is generally worked over a raw edge, but some time it is done over a folded edge. The blanket stitch is a basic embroidery stitch that is often used to create decorative borders or secure the edges of fabric layers together. It is called the "blanket stitch" because it was traditionally used to stitch the edges of blankets, but it can be used on various projects, including clothing, accessories, and crafts (Wellesley, 2015).

Here's a step-by-step guide on how to do a basic blanket stitch:

- i. Start by threading a needle with your desired thread color. You can use embroidery floss, thread, or yarn depending on the thickness you want (He & Adar 2020).
- ii. Bring the threaded needle up from the backside of the fabric at the starting point of your stitching.
- iii. Insert the needle back into the fabric, a short distance (about 1/4 inch or 0.6 cm) to the right of the starting point. The needle should come up on the edge of the fabric.

- iv. Without pulling the thread all the way through, leave a small loop of thread on the surface of the fabric.
- v. Insert the needle back into the fabric, coming up on the edge, just to the right of the first stitch.
- vi. Pass the needle through the loop of thread you left in step 4.
- vii. Pull the needle and thread gently to tighten the stitch. Be careful not to pull too tightly, as it may pucker the fabric.
- viii. Repeat steps 5-7 to create subsequent stitches. Each stitch should be the same length and evenly spaced.
- ix. Continue stitching along the edge of the fabric until you reach the desired length or complete the entire edge (Yuksel, 2012).
- x. To finish the stitch, insert the needle through the loop of the last stitch, and pull it tightly to secure it.

The blanket stitch creates a distinctive pattern of diagonal stitches on the fabric edge, with small gaps between each stitch. It not only adds a decorative touch but also helps prevent the fabric from fraying. You can experiment with different thread colors, stitch lengths, and spacing to achieve different effects and variations of the blanket stitch (Gurarda, 2019).

- vi. **Stem Stitch:** This is a line stitch where the needle will be inserted into the fabric in about one stitch length to the right to make a slightly slanted stitch. The second stitch will be directly above the first, but shifted slightly to the left of the first stitch. The stem stitch is a popular embroidery stitch that is commonly used for creating outlines, stems, and borders in hand embroidery. It is known for its neat and rope-like appearance,

making it ideal for creating fine lines and adding dimension to your embroidery projects (Oladipto, 2011).

Here's a step-by-step guide on how to do the stem stitch:

- i. Start by bringing the threaded needle up through the fabric at the desired starting point of your line. Pull the thread through, leaving a small tail at the back.
- ii. Reinsert the needle back into the fabric, a short distance away from the starting point, and bring it up again slightly to the left or right of the initial point, forming a small stitch.
- iii. As you bring the needle up, make sure the thread is below the needle.
- iv. Now, insert the needle back into the fabric at a point that is in line with the end of the previous stitch but slightly to the left or right of it, depending on the direction you want the line to go. The distance between each stitch can be adjusted based on the desired look (Wu et al., 2019).
- v. As you bring the needle up, make sure the thread passes below the needle again.
- vi. Repeat steps 4 and 5 to continue stitching along the line, always keeping the thread below the needle as you bring it up and go down.
- vii. Continue stitching until you reach the end of the line or complete your design.

Stem stitch creates a line that has a twisted appearance, resembling the outline of a rope. By adjusting the length of the stitches and the angle at which you insert the needle, you can create different effects and variations in your embroidery work (Yang & Sun 2018).

Stem stitch can be used not only for outlining but also for creating lettering, filling small areas, or adding texture to your embroidery projects. It is a versatile stitch that

can be combined with other stitches to create beautiful and intricate designs (Draper, 2022). With practice, you can achieve smooth and even lines with the stem stitch, enhancing the overall aesthetic of your embroidery work.

- vii. Rope Stitch:** By drawing the thread up through the cloth, the rope stitch can create a thick line or a thin shape. Bring the needle to the surface one more time, twist the thread once around it, and pull the needle and thread through the twist a little below the guideline and a little above the line.

The Rope Stitch is a decorative embroidery stitch that creates the appearance of twisted ropes or cords. It is commonly used in hand embroidery to add texture and dimension to various designs (Hamdan et al., 2018). The stitch is worked by twisting and looping the thread to create a coiled rope-like effect.

Here's a step-by-step guide on how to work the Rope Stitch:

- i. Start by bringing the threaded needle up through the fabric from the back to the front at the starting point of your design.
- ii. Insert the needle back into the fabric slightly to the side of the starting point and bring it up again a short distance away to create a small straight stitch.
- iii. Hold the working thread (the thread connected to the needle) with your thumb on the fabric surface, making sure the thread is taut.
- iv. Bring the needle up through the fabric next to the straight stitch, close to where it went down in step 2. Make sure the needle passes under the working thread, forming a loop (Latona et al., 2018).

- v. Keeping the working thread taut, insert the needle back into the fabric at the end of the loop and bring it up again a short distance away to create another straight stitch parallel to the first one.
- vi. Repeat steps 4 and 5, working your way along the desired path, always passing the needle under the working thread and creating a loop with each stitch.
- vii. Continue the process until you reach the end of your design or the desired length.
- viii. To finish the stitch, bring the needle to the back of the fabric and secure the thread by making a small knot or weaving it through nearby stitches on the back.

The Rope Stitch can be varied by adjusting the spacing between the straight stitches and the tension of the working thread. Experimenting with different thread thicknesses and colors can also produce interesting effects (Christiansen & Skands 2015).

viii. Speckling Stitch: Speckling does not describe a particular stitch but indicates an area covered by tiny stitches to give a textured effect. It could be arranged randomly or at regular intervals. This technique is similar to stippling, which involves creating a pattern or texture by using small, repetitive dots or stitches. However, while stippling typically consists of evenly spaced dots, speckling allows for a more irregular placement of stitches, resembling scattered specks or dots (Beaney, 2014).

The speckling stitch can be employed in various forms of embroidery or textile arts to add depth, visual interest, or a unique texture to a design. It allows for creativity and experimentation in the placement and density of stitches, giving the finished piece a distinct and personalized look (Benford et al.,2017).

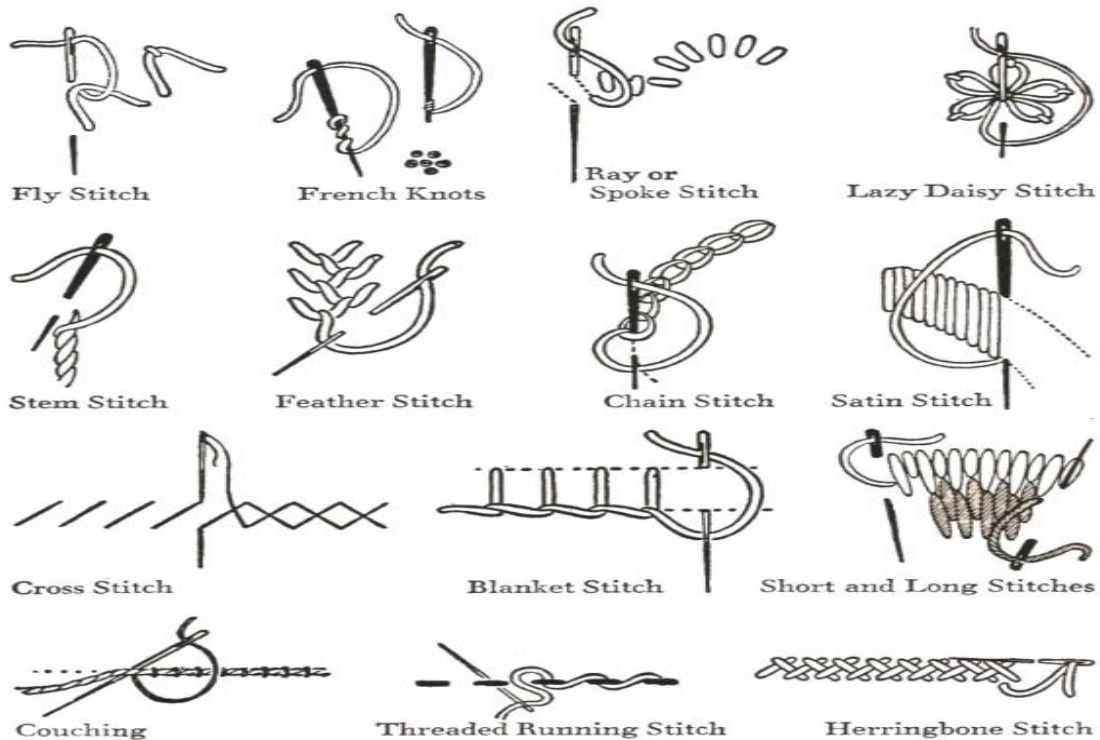


Plate 2.14. Diagram of Stitches

2.7 The impact of Hand Embroidery on the Industry

No longer was embroidery just used by the wealthy because it can now be done using less expensive materials. Additionally, while historically, women were the ones who predominantly executed needlework, men are now beginning to appreciate the craft. Henry Fonda, a well-known actor, admitted in an interview that his favorite pastime was embroidering. Gustaf V, the Swedish king from 1907 to 1950, was another well-known male embroiderer. The most well-known Indian fashion designers contribute significantly to the nation's economy and embroidery industry (Hardin, 2021; Rosner, & Fox, 2016).

They are creating the most exquisite bridal attire for the brides. Wearing clothing by the most well-known designers is the wonderful dream of every Indian bride. Indian fashion has been impacted

by designers' use of various fabrics, colors, and embroidery. The embroidery of the past does not resemble the embroidery of the present. The majority of modern embroidery is created using computerized embroidery machines and patterns that have been "digitized" using software. While the design and execution of contemporary needlework are the same. People have and always will use embroidery to decorate their houses and selves with distinctive brands and logos. India is undoubtedly a place of wonders, blessed with a wide variety of cultures, customs, and faiths (Karinkurayil, 2019).

The nation's art and workmanship are among its greatest treasures. This melting pot of cultures has produced some of the best art and craft forms that are admired worldwide, whether it is dance, music, or paintings. (Sulthana, 2021). The art of embroidery enhances and adds beauty and richness to the fabric when it is combined with colors, patterns, and history. A new generation of designers may carry on the legacy with enthusiasm and responsibility while maintaining the fundamentals of the art in order to keep this distinctive form of expression of the human spirit alive in the face of modernization and changing lifestyle patterns. The findings of this study make this necessity and the upcoming trends abundantly plain, demonstrating the integration of needlework in contemporary clothing (Sulthana, 2021). It is seen in the study that although there are various methodologies, techniques and raw material used in different categories of embroidery used to make fashionable and rich in culture. Pearls, beads, quills, and sequins are a few other materials that can be incorporated into embroidery. In the present era, embroidery can be found on hats, coats, blankets, dress shirts, jeans, stockings, and golf shirts, among other items. There are many different threads or yarn colors available for embroidery. Chain stitch, buttonhole or blanket stitch, running stitch, satin stitch, and cross stitch are a few of the fundamental embroidery techniques or

stitches. The basic methods of hand embroidery are still those stitches (Rajinder & Jashanjeet, 2018). The study demonstrates that it is feasible and creative to use different textile craft skills into the creation of garments in order to broaden the scope of fashion designing. The study concluded that it is possible to include all sources of flexible media, both within and outside of textile, into the creation of clothing in order to enhance the aesthetics of race (Ozdamar et al., 2015).

2.8 The Cultural impact of Hand Embroidery in Ghana: A Tapestry of Tradition and Modernity

Hand embroidery in Ghana is far more than a mere craft; it is a profound cultural phenomenon that has woven itself into the very fabric of Ghanaian society. This intricate art form, deeply rooted in the nation's history, transcends its utilitarian origins, serving as a powerful symbol of Ghana's cultural identity. Over centuries, it has evolved, carrying with it stories, values, and traditions that resonate with Ghanaians. This comprehensive exploration delves into the intricate cultural impact of hand embroidery in Ghana, tracing its historical significance, examining its economic implications, and unraveling its role in preserving traditional narratives, values, and societal structures (Rice, 2020).

2.8.1 Historical Significance of Hand Embroidery in Ghana

The roots of hand embroidery in Ghana run deep into the annals of the nation's history. This art form has a profound connection to the cultural tapestry of the country, particularly among the Ashanti, Fante, and other indigenous groups. Initially, embroidery served pragmatic purposes, adorning clothing and textiles for utilitarian use. However, as time progressed, it transformed into a potent means of communication and storytelling (Gardi, & Gilbert, 2021).

The vibrant colors, intricate designs, and motifs in Ghanaian embroidery hold historical significance. They often mirror the wearer's lineage, social status, and even spiritual beliefs. Each meticulously placed stitch tells a story, reflecting the values, customs, and history of the Ghanaian people. Hand embroidery thus plays a pivotal role in preserving the cultural heritage of the nation, functioning as a visual archive of Ghana's past and present (Ankora, 2022).

2.8.2 Economic Implications of Hand Embroidery

Beyond its cultural importance, hand embroidery holds significant economic implications in Ghana. It has emerged as a vital source of income for many Ghanaians, particularly women in rural areas. These women, often the primary providers for their families, have honed their skills over generations, crafting intricate, marketable pieces that are highly sought after both domestically and internationally (Kusi-Mensah, 2019).

Moreover, the economic significance of hand embroidery extends to the broader fashion and textile industry. Ghanaian designers and brands frequently incorporate embroidered textiles into their collections, not only promoting the art form but also providing a platform for local artisans to showcase their work. This synergy between traditional hand embroidery and modern fashion has not only created job opportunities but has also contributed to the global recognition of Ghana's fashion industry (Pozzo, 2020).

2.8.3 Preservation of Traditional Narratives and Values

One of the most profound aspects of hand embroidery in Ghana is its ability to preserve traditional narratives and values. Each embroidered piece serves as a medium for storytelling, whether through the choice of colors, symbols, or patterns. These stories often celebrate significant life events, such as weddings, births, and rites of passage, or convey messages of love, unity, and spirituality (Calefato, 2021).

Ghanaian embroidery relies heavily on symbolism, often incorporating Adinkra symbols—a system of pictorial representation. These symbols convey specific messages and serve as a form of written language, enabling people to communicate through their clothing and textiles. Thus, hand embroidery helps preserve and propagate Ghana's rich oral traditions, ensuring that these stories endure for future generations (Ankora, 2022).

Moreover, hand embroidery plays a pivotal role in safeguarding the narratives of Ghana's past, including tales of resistance against colonialism and the struggle for independence. Many embroiderers use their craft to commemorate historical events and figures, ensuring that these stories remain etched in the collective memory of the nation (Joy, 2016).

2.8.4 Cultural Exchange and Global Recognition

Ghanaian hand embroidery has transcended geographical boundaries, gaining recognition on the global stage. The exquisite craftsmanship and distinctive aesthetics of Ghanaian embroidery have captured the attention of art collectors, designers, and enthusiasts worldwide. This global

appreciation has not only provided economic opportunities for Ghanaian artisans but has also fostered cultural exchange (Boampong, 2015).

Through exhibitions, workshops, and collaborations with international artists and designers, Ghanaian embroiderers have had the opportunity to showcase their skills and share their cultural narratives with a global audience. This exchange of ideas and techniques has enriched the craft and brought international attention to the cultural richness of Ghana (Nagy, & Jordan, 2018).

2.8.5 Challenges and Opportunities for Hand Embroidery in Ghana

Despite its many positive aspects, hand embroidery in Ghana faces challenges in the modern era. Rapid urbanization and the proliferation of machine-made textiles pose threats to the livelihoods of traditional embroiderers. Additionally, the transfer of skills from one generation to the next is at risk due to the allure of alternative livelihoods among younger generations (Mwaura, 2017).

However, there are also opportunities for the revitalization and sustainability of hand embroidery in Ghana. Initiatives aimed at preserving and promoting traditional craftsmanship, along with support from the government and non-profit organizations, can help ensure that this cultural treasure continues to thrive. Furthermore, the global demand for handmade, culturally rich products presents an opportunity for Ghanaian artisans to reach new markets and expand their businesses (Shafi, et al., 2021).

2.8.6 The Interplay of Tradition and Modernity

Hand embroidery in Ghana exists at the intersection of tradition and modernity. It seamlessly weaves together ancient techniques and contemporary aesthetics, creating a unique and vibrant cultural tapestry. This interplay is evident in the evolving styles and designs of Ghanaian embroidery (Flahault, 2020).

While traditional motifs and symbols remain central to Ghanaian embroidery, contemporary embroiderers often infuse their work with modern elements, catering to changing tastes and market demands. This fusion of tradition and modernity has allowed hand embroidery to remain relevant and adaptable in the face of evolving cultural dynamics.

The cultural impact of hand embroidery in Ghana is profound and multifaceted. It serves as a bridge to the nation's history, a source of economic empowerment for its people, a medium for preserving traditional narratives and values, and a symbol of Ghana's rich cultural heritage on the global stage. While challenges persist, the resilience and creativity of Ghanaian embroiderers offer hope for the continued growth and preservation of this cherished art form. Hand embroidery in Ghana is not just a craft; it is a testament to the enduring spirit of a nation, where tradition and innovation intertwine, and every stitch is a thread in the vibrant tapestry of Ghanaian culture (Schulz, 2021).

2.9 Exploring the Cultural Beauty of Hand Embroidery Over Computerized Embroidery

Hand embroidery is a centuries-old craft that has not only stood the test of time but has also thrived in an age of automation and digitalization. In contrast, computerized embroidery, a relatively recent technological advancement, offers speed and precision but often lacks the depth and soul

that hand embroidery embodies. This essay delves into the cultural beauty of hand embroidery, celebrating its rich history, artistic expression, and the unique connection it maintains with different cultures around the world (Phillips, 2021). Hand embroidery has a storied history dating back thousands of years, with roots in various civilizations and cultures. From the intricate silk embroideries of ancient China to the opulent gold work of the Byzantine Empire, the art of hand embroidery has always been closely intertwined with cultural expressions (Johnstone, 2023).

1. **Chinese Embroidery:** The Chinese have been practicing embroidery for over 2,500 years, with techniques such as Suzhou embroidery and Xiang embroidery being passed down through generations. These traditions reflect Chinese culture, mythology, and aesthetics in their designs.
2. **Indian Embroidery:** India boasts a diverse range of hand embroidery styles, including the vibrant and intricate Phulkari from Punjab, the dazzling Zardozi from Lucknow, and the delicate Chikankari from Uttar Pradesh. Each of these styles reflects the cultural diversity and traditions of India.
3. **European Embroidery:** In Europe, the Middle Ages witnessed the emergence of elaborate ecclesiastical embroidery, and the Renaissance brought forth opulent techniques like goldwork and stumpwork. These European styles were closely tied to religious and cultural narratives.

2.9.1 Artistic Expression Through Hand Embroidery

Hand embroidery is not merely a craft; it is a form of artistic expression. Unlike computerized embroidery, where patterns are programmed and executed mechanically, hand embroidery relies on the skill and creativity of the artisan (Twigg et al., 2021). This section explores how hand embroidery allows for a deeper connection to cultural identity and artistic expression.

1. **Individuality and Artistry:** Hand embroidery enables artisans to infuse their unique style and personality into each piece. The choice of stitches, colors, and motifs reflects the individual's artistic sensibilities, making each creation a work of art.
2. **Cultural Narratives:** Hand embroidery often tells stories and conveys cultural narratives. For example, the Otomi embroidery of Mexico features animals, plants, and symbols that hold deep cultural significance for the indigenous Otomi people.
3. **Connection to Tradition:** Hand embroidery keeps cultural traditions alive. Artisans learn techniques and motifs passed down through generations, preserving cultural heritage and connecting with their roots.
4. **Emotional Investment:** The process of creating hand embroidery requires time, patience, and emotional investment. This emotional connection is palpable in the finished piece, evoking a sense of cultural pride and heritage.

2.9.2 Computerized Embroidery vs. Hand Embroidery

While computerized embroidery has undeniable advantages in terms of speed and precision, it often falls short in capturing the cultural beauty and authenticity that hand embroidery offers. This section explores the differences between the two techniques and why hand embroidery remains culturally significant (Attfield, 2020).

1. **Lack of Artistic Depth:** Computerized embroidery relies on pre-programmed designs and lacks the depth of artistic expression found in hand embroidery. It cannot capture the intricate nuances of cultural motifs or the emotional connection of the artisan.

2. **Mass Production vs. Craftsmanship:** Computerized embroidery is often associated with mass production and uniformity, while hand embroidery emphasizes craftsmanship, individuality, and the human touch.
3. **Cultural Appropriation:** Computerized embroidery can sometimes lead to cultural appropriation, as it may replicate cultural designs without an understanding of their significance. Hand embroidery, on the other hand, respects cultural traditions and narratives.
4. **Sustainability:** Hand embroidery promotes sustainability by using traditional techniques and materials, whereas computerized embroidery often relies on synthetic threads and energy-intensive machinery.

In a world increasingly dominated by technology, it is essential to celebrate and preserve the cultural beauty of hand embroidery. This timeless art form serves as a testament to human creativity, cultural identity, and the power of tradition. Hand embroidery tells stories, connects generations, and fosters a profound appreciation for the richness of our cultural heritage. While computerized embroidery has its merits, it can never replace the depth, artistry, and emotional resonance of hand embroidery in celebrating the diverse cultures of our world. As we continue to evolve, let us ensure that the cultural beauty of hand embroidery remains an enduring legacy, cherished for generations to come.

2.10 Unraveling the Cultural Beauty of Hand Embroidery Versus Machine Embroidery

Hand embroidery and machine embroidery are two distinct art forms that have coexisted for centuries. While machine embroidery offers efficiency and precision, hand embroidery carries with it a cultural richness and artistic depth that is unparalleled. This extensive essay aims to delve

deep into the cultural beauty of hand embroidery, examining its historical significance, artistic expression, and its unique place in various cultures worldwide when compared to the mechanical precision of machine embroidery (Joseph, & Henderson, 2022).

2.10.1 The Historical Significance of Hand Embroidery

Hand embroidery boasts a rich history that stretches back thousands of years, connecting diverse cultures across time and space (Hannigan, 2015). Throughout history, hand embroidery has played a pivotal role in various societies, and this section explores its historical significance:

1. **Ancient Embroidery Traditions:** Hand embroidery has deep roots in the ancient civilizations of China, India, Egypt, and Persia. These traditions reflect the cultural values, religious beliefs, and aesthetic preferences of their respective societies.
2. **Medieval and Renaissance Europe:** During the Middle Ages and the Renaissance, Europe witnessed the emergence of opulent ecclesiastical embroidery and royal courts that patronized this art form. These intricate works of hand embroidery showcased the power and prestige of European monarchies.
3. **Colonial and Indigenous Embroidery:** In colonial contexts, hand embroidery often served as a means of resistance and cultural preservation. For example, the vibrant textiles of indigenous peoples in the Americas and Africa are imbued with cultural symbols and stories.
4. **Continuation of Tradition:** Hand embroidery has been passed down through generations, preserving cultural heritage and fostering a sense of continuity with the past.

2.10.2 Artistic Expression Through Hand Embroidery

Hand embroidery is not just a craft; it is a form of artistic expression. Artisans, through their individuality and creativity, infuse life into their creations (Velis et al., 2020). This section explores how hand embroidery allows for a deeper connection to cultural identity and artistic expression:

1. **Unique Artistry:** Hand embroidery allows artisans to imbue their unique styles and personalities into each piece. The choice of stitches, colors, and motifs reflects individual artistic sensibilities, making each creation a work of art.
2. **Cultural Narratives:** Hand embroidery often tells stories and conveys cultural narratives. Symbols, motifs, and designs embedded in the embroidery often hold deep cultural significance and convey historical or mythological tales.
3. **Preserving Traditions:** Hand embroidery serves as a medium to preserve and celebrate cultural traditions. Artisans learn techniques and motifs passed down through generations, thereby connecting with their cultural roots.
4. **Emotional Investment:** The process of creating hand embroidery requires time, patience, and emotional investment. This emotional connection is palpable in the finished piece, evoking a profound sense of cultural pride and heritage.

2.10.3 Machine Embroidery vs. Hand Embroidery

Machine embroidery, a product of technological advancement, offers speed, precision, and consistency. However, it often lacks the depth and cultural richness associated with hand embroidery (Chen et al., 2022). This section explores the differences between these two techniques and why hand embroidery retains its cultural significance:

1. **Mechanical Precision vs. Artistic Depth:** Machine embroidery relies on pre-programmed designs and lacks the depth of artistic expression found in hand embroidery. It cannot capture the intricate nuances of cultural motifs or the emotional connection of the artisan.
2. **Mass Production vs. Craftsmanship:** Machine embroidery is often associated with mass production and uniformity, while hand embroidery emphasizes craftsmanship, individuality, and the human touch.
3. **Cultural Authenticity:** Machine embroidery can sometimes lead to cultural appropriation, as it may replicate cultural designs without understanding their significance. Hand embroidery, on the other hand, respects cultural traditions and narratives.
4. **Sustainability:** Hand embroidery promotes sustainability by using traditional techniques and materials, whereas machine embroidery often relies on synthetic threads and energy-intensive machinery.

2.10.4 The Global Impact of Hand Embroidery

Hand embroidery transcends geographical boundaries and has a profound global impact, as it celebrates cultural diversity and fosters intercultural dialogue (Pedro et al., 2022). This section explores how hand embroidery has left an indelible mark on the world:

1. **Cross-Cultural Influences:** Hand embroidery has influenced and been influenced by various cultures. For example, the intricate beadwork of Native American tribes and the silk embroidery of Chinese culture have inspired artisans worldwide.
2. **Economic Empowerment:** Hand embroidery often serves as a source of income for marginalized communities, particularly women. This economic empowerment contributes to poverty reduction and community development.

3. **Cultural Diplomacy:** Hand-embroidered textiles and artworks serve as cultural ambassadors, promoting cultural exchange and understanding between nations. These objects become symbols of diplomacy and goodwill.
4. **Preservation of Endangered Crafts:** Hand embroidery plays a pivotal role in preserving endangered crafts and traditional techniques. Artisans dedicated to reviving these crafts ensure their continued existence.

In a world increasingly driven by automation and technology, the cultural beauty of hand embroidery remains a testament to the enduring power of human creativity, cultural identity, and tradition. Hand embroidery is not merely a craft; it is an art form that weaves together stories, connects generations, and fosters a profound appreciation for the richness of our cultural heritage. While machine embroidery offers efficiency and precision, it can never replicate the depth, artistry, and emotional resonance of hand embroidery. As we navigate the complexities of the modern world, let us ensure that the cultural beauty of hand embroidery continues to be cherished and celebrated for generations to come, a true embodiment of our shared human cultural tapestry.

2.11 The current state of hand embroidery skills acquisition

In China, Yan & Chiou (2021) noted that hand embroidery is a traditional craft that has been practiced for centuries and continues to be valued for its artistic and cultural significance. The acquisition of hand embroidery skills varies across different regions and cultures, influenced by factors such as tradition, accessibility to resources, and economic development.

Traditional embroidery centers in some countries have a rich history and strong tradition of hand embroidery, where skills are often passed down through generations. These regions include countries like India, China, Japan, Iran, Mexico, and many countries in Europe (Zhang et al., 2021; Su et al., 2023). In these places, hand embroidery is often deeply embedded in the cultural heritage, and training programs, workshops, and institutions are available to preserve and teach the craft.

Skill Preservation is an effort worldwide to preserve and promote traditional hand embroidery skills. Organizations, museums, and cultural institutions often play a vital role in documenting, teaching, and promoting the craft. Various initiatives focus on reviving traditional embroidery techniques and providing opportunities for artisans to showcase their skills (Zhang et al., 2021). Modern adaptation in hand embroidery has also evolved with contemporary design trends and technological advancements. Many people are now exploring embroidery as a form of art and self-expression, creating innovative designs and incorporating embroidery into fashion, interior decoration, and mixed media artworks. This has led to the emergence of modern embroidery styles and techniques (Creangă, 2020).

Online learning and communities have significantly impacted the accessibility of embroidery knowledge and skills. Online platforms, websites, and social media provide resources, tutorials, and communities where enthusiasts can learn and share their work. Online courses and video tutorials have made it easier for people to acquire embroidery skills from the comfort of their homes, irrespective of their geographical location (Kouhia, 2020). Varied Skill Levels of hand embroidery skills vary among individuals, ranging from beginners to advanced practitioners. Some people learn embroidery as a hobby, while others pursue it as a profession or a means of livelihood.

Skill levels and techniques can differ widely depending on personal dedication, training, and exposure to different styles (Yadav, 2022).

Hand embroidery skill acquisition in Ghana has been steadily growing and gaining recognition. Embroidery, both handcrafted and machine-based, has been a traditional craft in Ghana for many years, and it has recently seen increased interest and appreciation both locally and internationally.

In Ghana, there are various avenues for individuals to acquire hand embroidery skills. Art and Design Institutions in Ghana offer courses and programs that include hand embroidery as part of their curriculum (Arthur & Arthur, 2020). Motivations, Entrepreneurial Engagements, and Challenges among Recent Graduates of Visual Arts Academic Programs in Ghana These institutions provide formal training in various aspects of embroidery techniques, design, and creativity.

Skill Development Initiatives by NGOs and organizations are actively involved in promoting traditional crafts and skills in Ghana (Antwi, 2012; Shafi et al., 2021). They often organize workshops, training programs, and skill development initiatives that focus on hand embroidery. These initiatives aim to preserve traditional techniques while also exploring contemporary design elements. Entrepreneurship and empowerment have become viable avenues for entrepreneurship and income generation in Ghana. Many individuals, particularly women, are acquiring embroidery skills to start their own businesses or work in the fashion and textile industries.

Cultural preservation has Hand embroidery is deeply rooted in Ghanaian culture and heritage. There is a growing recognition of the importance of preserving traditional crafts, including embroidery, as a way to maintain cultural identity and promote cultural tourism. Ghanaian hand embroidery products have gained popularity in the international market, especially in the fashion and home decor sectors. This has led to an increased focus on developing high-quality embroidery skills to meet the demand (Chen et al., 2022; Mohammed et al., 2022).

There are only a few available Ghanaian studies at the time this proposal was being written, that exclusively focused on the current state of hand embroidery skill development in Ghana. Therefore, research objective 1 shall aid in filling this knowledge gap.

2.12 Entrepreneurship Development among the Youth

Entrepreneurship development is the process of improving entrepreneurs' skills and expertise in the development, management, and organization of a company venture while keeping the risks in mind. This is accomplished through training programs and workshops focused at improving entrepreneurial aptitude. If you choose a career in this industry, you will be enabling skill development among aspiring entrepreneurs and assisting them in overcoming challenges in creating their enterprises (Anyadike et al., 2012).

Entrepreneurship development is a planned process that includes a variety of instruments that focus on the individual's skill development in a variety of methods. A number of key ideas have influenced the evolution of entrepreneurship. These include taking risks, innovating, being

creative, and being environmentally conscious. To be successful in business, people must comprehend each of these concepts.

"Entrepreneurship development," according to the African Development Report (2011), is the process of improving entrepreneurial skills and knowledge through structured training and institution-building programs. It seeks to broaden the pool of entrepreneurs in order to accelerate the creation of new ventures. The emphasis is on the individual who wants to start or build a business, with an emphasis on growth potential and innovation. Through market innovations, entrepreneurship promotes economic growth and development, and there is a bidirectional relationship between entrepreneurship and economic growth and development.

2.13 The potential of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy

Hand embroidery has the potential to be a viable source of job creation in the contemporary Ghanaian economy (Quarcoo et al., 2022; Forster et al., 2017). Cultural heritage in Ghana has a rich tradition of textile arts and embroidery, such as Kente cloth and Adinkra symbols. Hand embroidery allows artisans to preserve and promote these cultural heritage practices while creating employment opportunities.

Tourism and the craft market in Ghana also attract a significant number of tourists interested in experiencing its diverse cultural traditions. Hand-embroidered products, such as clothing, accessories, and home decor, can cater to this market and generate income for artisans. The rising

demand for unique, handmade items contributes to the potential success of hand embroidery in the crafts industry (Pandey et al., 2022; Seidu et al., 2022).

Global market potential in hand embroidery is not limited to local markets. The rise of e-commerce platforms and social media allows artisans to reach a global audience. Ghanaian embroidery, with its unique patterns and designs, can capture the attention of international buyers, leading to export opportunities and foreign exchange earnings.

Skill Development and Empowerment in Hand Embroidery requires specialized skills that can be developed through training programs and workshops (Dana et al., 2022). By investing in training initiatives, the Ghanaian government or non-governmental organizations can empower individuals, especially women and marginalized communities, by providing them with a marketable skill set that can lead to economic independence. Job diversification in Ghana's economy relies heavily on agriculture and extractive industries. Promoting hand embroidery as a viable source of job creation can help diversify the economy, reduce dependency on traditional sectors, and provide alternative employment opportunities for individuals (Eastin & Dupuy, 2021; Adhikari, 2020).

Sustainable and ethical Production of hand embroidery is often associated with sustainable and ethical practices. Artisans typically use locally sourced materials and engage in environmentally friendly production processes (Gasparin et al., 2020). This aligns with the growing consumer demand for eco-friendly and socially responsible products, further enhancing the market potential of hand-embroidered items.

To realize the potential of hand embroidery as a viable source of job creation, it is essential to address certain challenges. These may include access to capital, marketing support, infrastructure development, and fostering collaborations between artisans, designers, and businesses. By taking a holistic approach and implementing supportive policies and programs, hand embroidery can contribute significantly to job creation, economic growth, and cultural preservation in the contemporary Ghanaian economy (Pathak & Mukherjee, 2020).

The main empirical lacuna observed is the fact that many of the erstwhile empirical works that analyzed the potential of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy mainly focused on machine and computerized embroidery (Quarcoo et al., 2022; Pathak, & Mukherjee, 2020; Gasparin et al., 2020). Therefore, there are only a few available Ghanaian studies at the time this thesis was being written, that exclusively focused on potential of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy. Therefore, research objective 2 shall aid in filling this knowledge gap.

2.14 Training Programs Promoting Skill Acquisition in Hand Embroidery

Training programs can be effective in promoting skill acquisition in hand embroidery when they are well-designed and cater to the needs of the participants (Islam, 2022). Curriculum and Structure: A well-structured curriculum that covers the fundamentals of hand embroidery and progresses to advanced techniques is essential. The curriculum should include both theoretical knowledge and practical hands-on training to ensure a comprehensive learning experience. Experienced and knowledgeable instructors who possess expertise in hand embroidery are crucial

for effective training. They should have the ability to teach various techniques, provide guidance, and offer constructive feedback to learners (Tiwari, 2023; Memon et al., 2022).

Practical training, which involves hands-on practice, is crucial for skill acquisition in hand embroidery. Training programs that offer ample opportunities for participants to practice their embroidery skills under the guidance of instructors can be more effective. Again, the availability of quality materials, tools, and resources required for hand embroidery is essential for effective training. It is important that participants have access to these resources during the training program and learn about their proper usage and maintenance (Davies et al., 2023).

The duration and frequency of training sessions can impact skill acquisition. Longer and more frequent training programs can allow participants to practice and refine their skills over time, leading to better proficiency in hand embroidery. Creating a supportive and encouraging learning environment can foster motivation and engagement among participants. Peer interaction, group activities, and opportunities for sharing ideas and experiences can enhance the effectiveness of training programs (Makri et al., 2021; Vlachopoulos & Makri, 2019). It is important to note that the effectiveness of training programs can vary based on their implementation, resources available, participant engagement, and ongoing support (Memon et al., 2022).

However, it must be emphasized that the results of Memon et al. (2022), Memon et al. (2022), and Davies et al. (2023) might not accurately represent all existing training programs, if any, designed to support skill acquisition in hand embroidery in Ghana. Therefore, it is necessary to investigate further the present training programs that support the development of hand embroidery skills.

2.15 Challenges to skill acquisition in hand embroidery and their impacts on job creation

Hand embroidery is a traditional craft that involves creating decorative designs on fabric using a needle and thread. While hand embroidery offers creative and employment opportunities, there are several challenges and barriers to skill acquisition that can impact job creation in this field (Elbyaly & Elfeky, 2022).

According to Ngware et al. (2022), a lack of accessible training, which is access to quality training and educational resources, is crucial for skill acquisition in hand embroidery. However, in many regions, there may be limited opportunities for individuals to learn the craft. Lack of accessible training institutes or qualified instructors can hinder the development of embroidery skills.

Cost of training for Formal training in hand embroidery often comes at a cost, including tuition fees, material expenses, and the cost of equipment. These expenses can be prohibitive for individuals with limited financial resources, making it difficult for them to acquire the necessary skills for embroidery (Pitou et al., 2020).

Time and Patience: Hand embroidery is a labor-intensive craft that requires patience, precision, and practice. Acquiring proficiency in embroidery techniques can be time-consuming and challenging, and individuals may need to invest a significant amount of time to develop their skills. This can deter some individuals from pursuing hand embroidery as a viable career option (Bix, 2022; Antoine, 2020).

Limited economic opportunities in hand embroidery, particularly in traditional or artisanal forms, face challenges in terms of market demand and economic viability. Mass production, machine embroidery, and cheaper alternatives have reduced the demand for hand-embroidered products.

As a result, job opportunities in this field may be limited, making it difficult for skilled embroiderers to find sustainable employment (Pathak & Mukherjee, 2020). Technological advancements, according to Chen et al. (2022), are a challenge to hand embroidery in China. The advent of embroidery machines and computerized embroidery has revolutionized the industry. While these technologies have made embroidery faster and more efficient, they have also reduced the demand for hand embroidery skills. As a result, hand embroiderers may face challenges in finding job opportunities that utilize their specialized skills.

According to Yadav et al. (2022), the impacts of these challenges and barriers on job creation in hand embroidery can be significant. They can limit the number of skilled embroiderers entering the field, reducing the overall supply of artisans. This, in turn, can lead to a decline in the availability of hand-embroidered products and services, impacting the market for traditional embroidery.

Additionally, the limited economic opportunities and reduced demand for hand embroidery may discourage individuals from pursuing embroidery as a career. This can result in a loss of traditional knowledge and skills, leading to a decline in the cultural heritage associated with hand embroidery. To mitigate these challenges and barriers, it is important to promote and support hand embroidery as a valuable craft. This can be achieved through initiatives such as establishing training programs, providing affordable or subsidized training opportunities, creating market access for hand-embroidered products, and raising awareness about the cultural significance of hand embroidery (Tong, 2019). By addressing these challenges, it is possible to foster skill acquisition, preserve traditional craftsmanship, and create employment opportunities in hand embroidery (Jardine &

Tsang, 2021). There are only a few available Ghanaian studies at the time this thesis proposal was being written, that exclusively focused on the challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation. Therefore, research objective 4 shall aid in filling this knowledge gap.

2.16 Strategies to Bolster Skill Development in Hand Embroidery

Establish vocational training programs that will collaborate with local organizations, vocational schools, or community centers to create structured training programs specifically focused on hand embroidery. These programs should offer comprehensive training on various embroidery techniques, design principles, color theory, and business skills (Patil, 2020). Cheng (2019) noted that to promote hand embroidery, one must encourage apprenticeships by connecting experienced hand embroiderers with aspiring individuals. This allows for hands-on learning, skill transfer, and the preservation of traditional techniques. Provide access to resources and materials to ensure that aspiring embroiderers have access to quality materials, threads, needles, and embroidery hoops. Establish partnerships with suppliers or set up resource centers where trainees can easily access these materials (Koons, 2019).

Foster entrepreneurship and business skills through technical training and offer workshops or courses that teach essential business skills such as marketing, pricing, branding, and product development. This equips individuals with the knowledge and confidence to start their own embroidery businesses or work as freelancers (Bhatti et al., 2021). By investing in skill development and providing a conducive environment for hand embroidery, Ghana can harness its potential for job creation and economic empowerment. There are only a few available Ghanaian

studies at the time this thesis proposal was being written, that exclusively focused on potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana. Therefore, research objective 5 shall aid in filling this knowledge gap.

2.17 Theoretical Framework

Human Capital Theory was developed by economists Gary Becker and Theodore Schultz. Gary Becker introduced the concept in the 1960s, and Theodore Schultz contributed to its development around the same time. Becker's seminal work on human capital, "Human Capital: A Theoretical and Empirical Analysis," was published in 1964, and Schultz's ideas were presented in his paper "Investment in Human Capital" published in 1961 (Becker, 2023). Both scholars played key roles in formulating and popularizing the theory during the mid-20th century. It is a framework that conceptualizes education, training, and skill development as investments in human beings, akin to investments in physical capital like machinery or equipment. The theory emphasizes the idea that individuals can increase their productive capacity and earning potential by acquiring and enhancing their skills and knowledge (Anosa, 2021).

In the context of hand embroidery in Ghana, the concept of investment in skills can be further elucidated. Skill development represents a deliberate allocation of resources, including time, effort, and often financial investment, to acquire and refine the specific techniques and knowledge associated with hand embroidery. This investment goes beyond mere training; it encompasses the cultivation of a unique set of artistic and technical abilities that form the core of an artisan's human capital.

- a. **Technical Expertise:** Hand embroidery demands a mastery of intricate stitching, color coordination, and design composition. The investment in these technical skills equips

artisans with the ability to create aesthetically pleasing and culturally resonant products (Sasaki et al., 2021).

- b. **Artistic Creativity:** Beyond technical proficiency, the investment extends to nurturing artistic creativity. Artisans develop an understanding of cultural motifs, symbolism, and design innovation, contributing to the uniqueness and market appeal of their creations (Khaire, 2021).
- c. **Cultural Knowledge and Heritage:** Skill development in hand embroidery often involves the transmission of cultural knowledge. Artisans invest in understanding the historical and cultural significance of specific embroidery styles, ensuring the preservation and celebration of Ghanaian heritage through their craft (Ankora, 2022).

Labor Market Outcomes:

Human Capital Theory posits that the acquisition of skills translates into tangible outcomes in the labor market, and this holds true for hand embroidery in Ghana.

- a. **Higher Productivity:** Skilled artisans, armed with a deep understanding of embroidery techniques and cultural context, exhibit higher productivity. Their ability to produce intricate, high-quality products contributes to a competitive advantage in the market (Panarello et al., 2018).
- b. **Better Job Opportunities:** The theory suggests that increased skill levels enhance employability. In the context of hand embroidery, skilled artisans are more likely to access diverse job opportunities, including collaboration with fashion designers, participation in craft exhibitions, and engagement with the global market through e-commerce platforms (Emmett, 2022).

- c. **Entrepreneurial Ventures:** Skill development in hand embroidery empowers individuals to venture into entrepreneurship. Artisans may establish their own workshops, cooperatives, or small businesses, creating job opportunities not only for themselves but potentially for others within the community.
- d. **Earning Potential:** The theory asserts that increased skill levels lead to higher earning potential. Skilled hand embroiderers may command higher prices for their unique and well-crafted products, contributing to improved income levels and economic well-being (Joubert, 2022).

Influence on Job Creation:

The study will explore how the acquisition of hand embroidery skills directly influences job creation, both at the individual and community levels.

- a. **Small Business Formation:** Skilled artisans may transition from being wage laborers to entrepreneurs, establishing small businesses that contribute to job creation. This entrepreneurial aspect becomes a key mechanism through which individual skill development translates into broader economic impacts (Nambisan et al., 2019).
- b. **Community-Based Initiatives:** Skill development programs in hand embroidery can lead to the establishment of community-based initiatives, such as cooperative workshops or training centers. These initiatives, driven by skilled individuals, have the potential to create a ripple effect, generating employment opportunities for others in the community (Jagosh et al., 2015)
- c. **Sustainable Employment:** The study will investigate the sustainability of employment created through hand embroidery. This includes exploring factors such as market demand,

the adaptability of artisans to changing trends, and the role of supportive policies and infrastructure in ensuring ongoing job creation (Stringer et al., 2020).

In the context of the "The Impact of Skill Development in Hand Embroidery On Job Creation in Contemporary Ghana," applying Human Capital Theory allows for an understanding of how the acquisition of hand embroidery skills represents an investment in the human capital of artisans, influencing their productivity, employability, and potential for job creation

In summary, the investment in skills in hand embroidery, guided by Human Capital Theory, not only enhances the individual's productive capacity and employability but also has far-reaching implications for job creation, entrepreneurship, and the broader socio-economic landscape in contemporary Ghana.

2.18 Conceptual Framework

The following describes correlation between independent, dependent, and intervening factors.

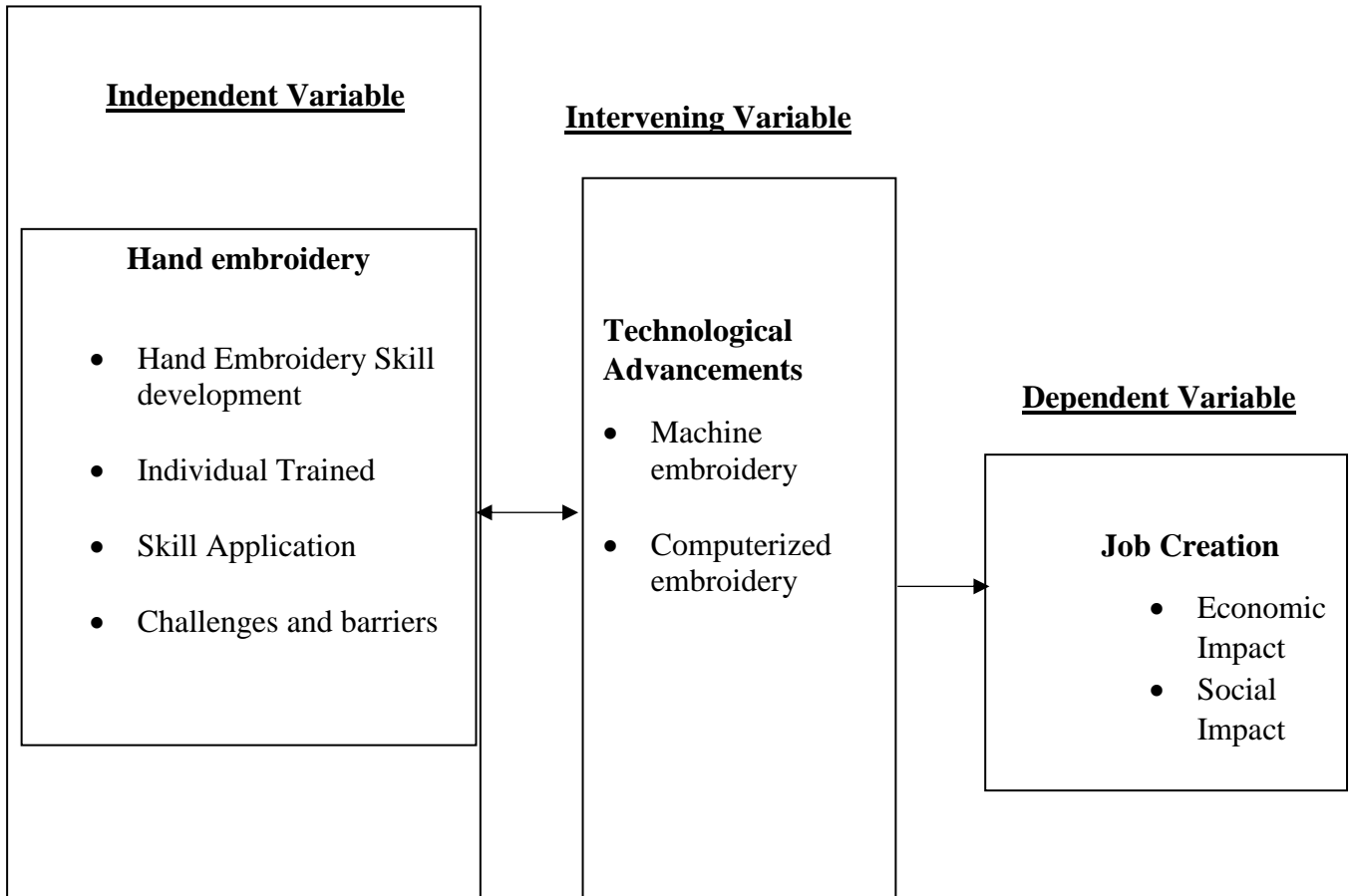


Figure 2.1. Pictorial view of how variables under study influence each other

Source: Authors Construct

the intervening variables (machine and computerised embroidery) which influence the dependent variable, Job creation (economic and social impact). Overall, the model suggests that the development of hand embroidery skills, individual training, skill application, and overcoming challenges and barriers play a role in influencing the use of machine and computerized embroidery techniques, which in turn affect job creation and its economic and social impacts. This model could

be used to study and understand how investments in hand embroidery skills and related technology can lead to positive outcomes in terms of employment and societal benefits.

CHAPTER THREE

METHODOLOGY

3.1 Overview

This study attempts exploring the impact of skill development in hand embroidery on job creation in contemporary Ghana. The study's methodology is covered in this chapter. The chapter touches on pertinent topic areas such as research design, study area (organization), population, sampling, data gathering procedures, data collection methods, data analysis, and ethical consideration.

3.2 Research Philosophy

The research philosophy underpinning this study is pragmatism. The pragmatist paradigm recognizes that different research methods and approaches have their strengths and limitations, and there is no one-size-fits-all solution. It encourages researchers to use a combination of quantitative and qualitative methods, depending on the nature of the research objectives and the specific research questions being addressed (Jain & Khare, 2022). Pragmatism is a philosophical perspective that focuses on the practical consequences of ideas, beliefs, and actions. It emerged in the late 19th and early 20th centuries, primarily in the United States, and is associated with philosophers such as Charles Sanders Peirce, William James, and John Dewey (McGrath, 2020).

At its core, pragmatism rejects the notion of absolute truths and instead emphasizes the importance of practicality, usefulness, and experiential knowledge. Pragmatists believe that the value of an idea or belief lies in its ability to solve problems, guide action, and lead to desirable outcomes. They emphasize the importance of context, experience, and experimentation in understanding and shaping reality (Magrizos et al., 2021). Pragmatism encourages individuals to test and evaluate

ideas based on their practical consequences. It promotes a flexible and adaptive approach to knowledge, recognizing that beliefs and theories should be subject to revision and refinement in light of new evidence and changing circumstances (Edwards & Meagher, 2020).

In the realm of research, pragmatism advocates for an interdisciplinary and problem-solving orientation. It encourages researchers to select methods and approaches that are most suitable for addressing specific research questions and achieving practical outcomes. Pragmatist researchers prioritize the application and impact of their findings, aiming to produce knowledge that can inform and improve real-world situations.

3.3 Research Design

A research design, also called a research strategy, is a plan to answer a set of questions (McCombes, 2019). It is a framework that includes the methods and procedures to collect, analyze, and interpret data. In other words, the research design describes how the researcher will investigate the central problem of the research and is thus part of the research proposal. Research design also defines all other constituent parts of a study, such as variables, hypotheses, experiments, methodology, and statistical analysis (Hirose, & Creswell, 2023; Creswell et al., 2018). A descriptive survey and explanatory design was employed in the study. The study's method is based on both qualitative and quantitative methods (Creswell, 2014). Descriptive survey design is a scientific approach for monitoring and describing subject behaviour without altering it in any manner (Bosire, 2021; Mitchell & Jolley, 2013).

Explanatory research design is a type of research methodology used to explore causal relationships between variables. Its primary purpose is to investigate why and how certain phenomena occur. This design seeks to provide explanations and understand the underlying factors and mechanisms that influence the relationship between variables. Explanatory research typically involves collecting and analyzing both qualitative and quantitative data. It often utilizes a combination of methods, such as surveys, experiments, observations, interviews, and literature reviews, to gather comprehensive information. Explanatory research design is valuable in exploring complex phenomena, understanding causal relationships, and providing insights into the underlying mechanisms of observed phenomena.

The study would be a mixed method research. The study's design is also mixed, involving the application of both quantitative and qualitative methods. Mixed methods research is defined by Gupta & Chauhan (2021) as the use of both quantitative and qualitative data in one study at the same time (parallel) or one after the other (sequential). This form of study has been praised for achieving integration by combining quantitative and qualitative data (Anand, 2022). The convergent parallel design will be used in this thesis. This design requires the use of both quantitative and qualitative approaches at the same time. In a convergent parallel design, the researcher processes the approaches in the same way and keeps them separate during data analysis, then combines the results to interpret them as a whole. A quantitative and qualitative research approach would be employed for the study.

3.4 Population

The study was carried out in the Mampong-Ashanti Municipality area in the Ashanti Region because of its cosmopolitan nature. The municipality hosts ninety-two (92) seamstresses, sixty (60) tailors, seven (7) Fashion Designers and (3) fashion institution (Ghana National Tailors, and Dressmakers Association of Mampong-Ashanti, 2023). The population of this research embodied the Fashion designers, Tailors, and Seamstress in the Mampong-Ashanti Municipality area. Thus, the study targeted seven (7) fashion designers with thirty (30) workers, sixty (60) Tailor with 380 apprentices, and ninety-two (92) Seamstresses with 513 apprentices (Ghana National Tailors, and Dressmakers Association of Mampong-Ashanti, 2023).

3.5 Sample technique and sample size

3.5.1 Sampling technique

Purposive sampling, and stratified sample are the two types of sampling that will be used in the study. The respondents for this study was selected using a purposive sampling method. The respondents were purposively made up of Fashion Designers, Tailors, and Seamstresses. Stratified sampling was used to group participants into zones as specified by the organisation (zone one and zone two based on their geographical location). The zone was made up of Fashion Designers, Tailors, and Seamstresses.

3.5.2 Sample Size

The statement underscores the importance of selecting a sample that accurately represents the characteristics and diversity of a larger population in research. A well-chosen and representative

sample is essential for making valid and reliable inferences about the population as a whole, which is a fundamental aspect of scientific research and data analysis.

Table 3.1 Sample Size

S/No	Description	Population	Sample Size	Percentage Sample Size
Zone One				
1	Fashion designers	3	3	100%
2	Seamstresses	37	37	100%
3	Tailors	30	30	100%
Zone Two				
1	Fashion Designers	4	4	100%
2	Seamstress	45	45	100%
3	Tailors	30	30	100%
	Total	149	149	100%

Source: Mampong-Ashanti Fashion designers, Tailors, and Seamstresses Association, 2023

The sample size should be as large as possible, claim Mugenda and Mugenda (2003), in order to prevent sampling error and ensure that study findings from the sample are as close to those from the general population as possible. This study used census sampling. Census sampling is a method of data collection used in statistical surveys and studies. In census sampling, data is collected from every individual or item in the entire population of interest. The primary goal of a census is to gather comprehensive and accurate information about all members of the population, leaving no room for sampling error (Hiebl, & Richter, 2018). A census is a sample of 100% of the population. It is enticing to believe that higher-quality findings are obtained from a complete enumeration of

a population than from a sample. Yet, limited resources must be distributed more thinly over collection, organization, and analysis of data from a full census than data from a survey (Gray et al., 2023). Table 3.1 thus provides a comparison of the study's samples and the population.

3.6 Research Instruments

Data collection instruments

The choice of data collection instrument depends on the research objectives, the type of data required, the target population, and the available resources. Instruments used in this study include questionnaire, focused group discussion and observation checklist.

3.6.1 Questionnaire

The study used structured questionnaires to gather information. The questionnaire was being given to the tailors and seamstresses. This is due to the fact that this kind of questionnaire will assist in the collection of standardized data, thereby making data entry into statistical software and supporting quantitative analysis easier. There were six sections in the questionnaire. The first section collected information on the characteristics of the respondents; the second will collect information on the current state of hand embroidery skills acquisition in Ghana. The third part dealt with the potential of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy. The fourth section will be to evaluate the effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana. The fifth part will explore the challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation. Lastly, to propose potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana.

3.6.2 Focused Group Discussion

Additionally, the researcher conducted focus group discussion with the fashion designers to be considered in this study. The focus group discussion among fashion designers is important because they play key roles to the making of hand embroidery. This information from the focus group discuss will help validate the responses from the seamstresses and tailors. The focus group discussion will focus on the potential of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy. Evaluate the effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana. Explore the challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation. Lastly, to propose potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana. Participant were given codes such as FG 1 for Participant in Focused Group One.

3.6.3 Observation Checklist

The researcher created an observation schedule/checklist with scales for grading the seamstresses and tailors in order to ensure objective keying of observable activities in practice of hand embroidery skill. The elements in the observation schedule emphasized the use of the hand and mind to create embroidery on given stitches. An observation is the methodical gathering of data about the natural world (Kawamata, et al., 2019). A methodology for measuring the behaviour and a precise definition of the goal behaviour must both be taken into account when using this approach. According to Attakuma (2011), the researcher can gradually narrow their observation focus as the study progresses and then start looking at potential connections between the setting and its environs. He believes that one of the many tried-and-true methods for acquiring information

is observation. As per Neuman (2006), observation is also a comprehensive strategy, with researchers gathering information on a wide range of elements of the research environment and its subjects. Researchers observe the actors or players in a situation while gathering data, gathering socio-demographic (such as age, gender, education, and class) and descriptive (creative skills) information in an effort to identify the individuals. To find out what people do and with whom, what is happening, and if there are any trends or patterns visible in these activities, acts, activities, and events are observed and documented.

3.7 Procedure

The source of data for the study would be gathered from two main sources; primary and secondary sources. Secondary sources are economical because they save efforts and expenses, help to make primary data collection more specific since with the help of secondary data, one would be able to make out what the gaps and deficiencies are, and what additional information is needed to be collected. On the other hand, the disadvantage of secondary data is that the accuracy of secondary data is not known while data may be outdated. Specifically, the secondary source of data would be obtained from books, journals, articles, internet, among other publications.

Primary data collection methods provide original data directly from the study population and unbiased information although the method is time consuming in gathering data. Also is that the method requires direct and personal intervention to enhance the validity of the data obtained? Primary sources of data would be obtained during the field work directly from the study's unit of analysis using the questionnaires. Permission will be taken from the various departments in each zone. After the researcher with research assistants will go to Ashanti - Mampong to administer

questionnaires, observe, and create focused group discussion. The duration of the data collection was three (3) weeks.

3.8 Validity and Reliability

3.8.1 Validity

Validity is the precision with which a research tool measures the variables it is intended to (Gokce, 2022). The instruments were validated for face, content, and concept validity. Assuring that the data obtained from the sampled respondents appropriately represents the findings of the entire target population is the aim of the instrument's validity. Research instruments were verified for face validity by making sure that all the questions are related to them, in order to confirm that certain items measure the desired study components as stated in the goals (Ndungi, 2022). Additionally, content validity was attained by making sure that all of the categorized items and questions cover every subject the researcher intended to explore.

For the purpose of proving validity, several pieces of evidence were utilised, particularly a quantitative analysis. Triangulation, according to Cohen et al. (2011), is a successful method for proving concept validity in qualitative and quantitative design. Triangulation is the use of several research techniques to examine a single problem. It entails putting the topics under study into practice. Triangulation is the process of using two or more data collection methods in a single study. By using various strategies to collect data on the challenges, including a variety of sample types and data collection methodologies, the goal is to ensure the validity of the study. The best method for demonstrating concurrent validity in qualitative and quantitative design is triangulation (Katz et al., 2022).

3.8.2 Reliability

The consistency with which a research tool assesses what it was designed to measure is known as reliability. Although it may be impacted by a random error, it is meant to show the extent to which comparable or identical instruments offer analogous responses to the same instruments at different periods (Lindsey et al., 2020). Internal consistency was therefore used on the devices to assure reliability. In accordance with Coakes and Ong's (2011) recommendations, a reliability analysis using Cronbach's Alpha was conducted to ascertain the scales' internal consistency. According to Fraenkel and Wallen (1996), the Cronbach's Alpha has the following mathematical relationship:

$$r_{kk} = \left(\frac{k}{k-1} \right) \left(1 - \frac{s_i^2}{s_x^2} \right)$$

Where,

r_{kk} = estimated Cronbach's Alpha coefficient value

k = number of items in the questionnaire

s_i^2 = sum of item variance

s_x^2 = factor variances

From the pilot study, the questionnaire for Tailors and Seamstresses yielded an alpha of $r = 0.86$, the Observation Checklist yielded $r = 0.78$, and the Focused Group Discussion yielded 0.73 , which were within the acceptable standard and were employed to gather the data for the research. According to George and Malley (2003), an alpha coefficient of larger than 0.9 is regarded as exceptional, greater than 0.8 as good, and greater than 0.7 as acceptable. A score of more than 0.6 is seen as suspect, while one of less than 0.5 is subpar and unsatisfactory (Santos et al., 2018).

3.9 Data Analysis

Data was collected using various research instruments: Instruments included questionnaire, focused group discussion and observation checklist. Qualitative data was analyzed as follows: The researcher established categories to analyze data from open-ended questions by placing information in their respective categories. After that, the researcher established the themes, relationships, and patterns on the various objectives. After that, all data was put into the Statistical Package for Social Science (SPSS) software version 22, and the researcher then conducted a descriptive analysis by relating the research findings to the objectives. Descriptive statistics were presented in Frequency distribution and Central tendency. Quantitative data thus Central tendencies and Simple T-Test.

3.10 Logistical and Ethical Consideration

It is important to emphasis that participant of the research should know the research aims, research methods and processes, research topics, the usage of data to be collected and extent of their participation in the research work. The study will therefore inform all participants the purpose of the study, the extent to which the data will be use, the research methods and processes and extent of their participation. The disclosure of this information to the participants will help encourage their participation in the study.

Moreover, the study fully fulfills all the requirements of privacy of all the respondents. The study did not diverge into private life or personal issues of the respondents. Moreover, data was being collected on one-on-one basis such that no other respondent had an idea of what information a colleague teacher provided.

Confidentiality means that data must be stored where it cannot be read by anyone other than the person (Hasal et al., 2021). Detailed of raw data, participants and location must never be revealed to the media. Therefore, publication of any information about the participants should be consented by the participants before publication; else it renders the publication unethical.

Anonymity is where the names of the participants are not disclosed to any third party. The study will ensure anonymity by not collecting names of the respondents at all during the data collection exercise. Moreover, the study will assure the participants that the information given will be confidential and none of it will be released to the media or anyone who is not connected and related to the research.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the results based on the data gathered from 149 respondents (142 Tailors and Seamstresses and 7 Fashion designers). In analysing the data to answer the four research questions, tables showing frequencies and their corresponding percentages for each item, mean, standard deviations were constructed. The analysis is in one section which focuses on the impact of skill development in hand embroidery on job creation in contemporary Ghana.

4.2 General and Demographic Information

In this section, the demographic information of the respondents was analysed and presented. This demographic information includes the age, gender, highest education qualification, work experience and area of specialization.

4.2.1 Demography of Tailors and Seamstress

Table 4.1: Age Information of Seamstresses and Tailors

Age (in years)	Frequency (n)	Percentage (%)
21-30	40	28
31-40	35	25
41-50	45	32
50-Above	22	15
Total	142	100

Source: Field Survey, 2023

The majority of respondents were aged between 41 and 50 (32%), 25% of the respondents were aged between 31 –40 and above 50 had 15%, while 28% were aged between 21 – 30.

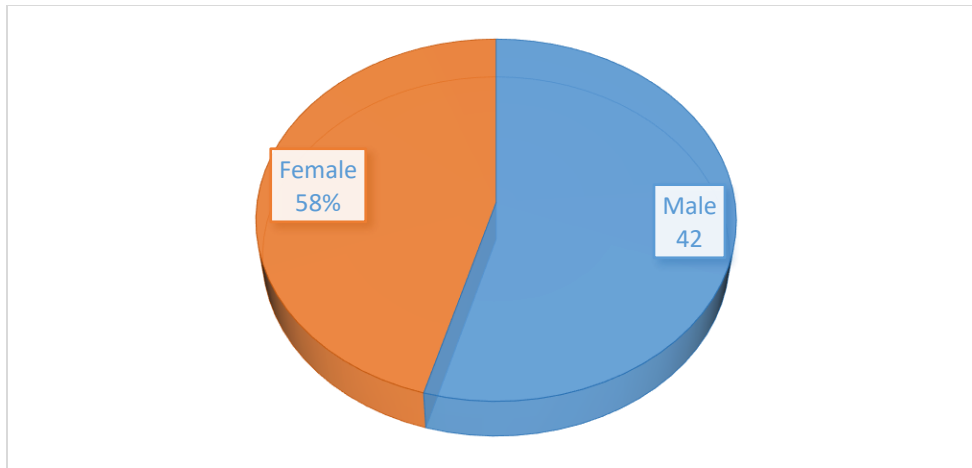


Figure 4.1. Gender of Tailors and Seamstress

Source: Field Survey, 2023

It was found that more than half of the respondents representing majority (58%) were female while the rest were male (42%). This is evident from Figure 16.

Table 4.2: Highest Educational Qualification of Seamstress and Tailors

Educational Qualification	Frequency (n)	Percentage (%)
None	20	14
Basic	67	47
Secondary	28	20
Diploma	20	14
Others (NVTI/TVET)	7	5
Total	142	100

Source: Field Survey, 2023

As indicated, 47% of the respondents who represent the majority asserted that they had basic qualification from Junior High School, 20% of the respondents responded that they have secondary/Senior High education while 14% have No qualification and Diploma respectively.

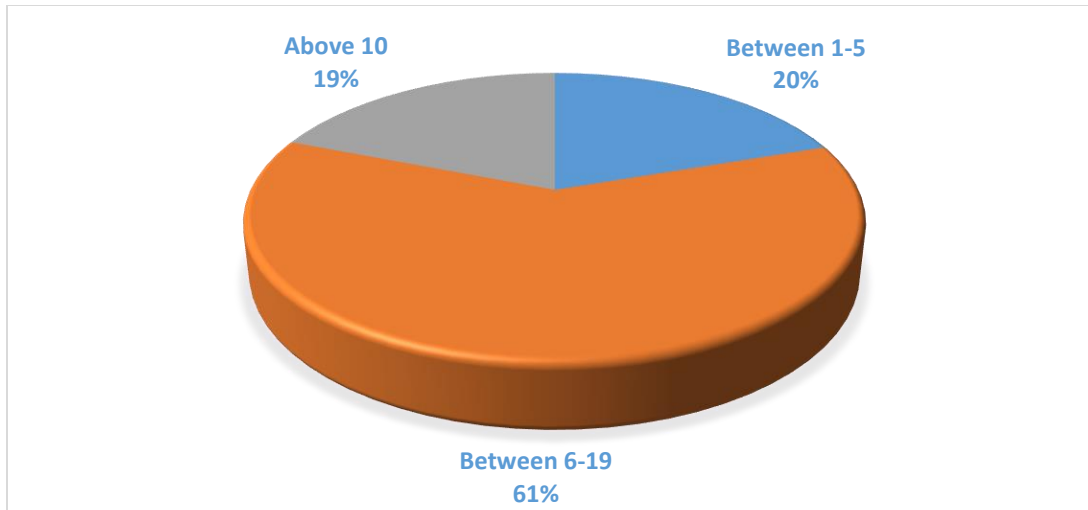


Figure 4.2. Work experience of Seamstress and Tailors

Source: Field Survey, 2023

As indicated, 61% of the respondents who represent the majority asserted that they had between 6 – 10 years’ work experience, 20% of the respondents responded that they have had 1 – 5 years of work experience while 19% had above 10 years of work experience.

4.2.2 Demography of Fashion Designers

Table 4.3 Age Information of Fashion Designers

Age (in years)	Frequency (n)	Percentage (%)
21-30	0	0
31-40	3	43
41-50	2	29
50-Above	2	29
Total	7	100

Source: Field Survey, 2023

The table shows most respondents were aged between 31 and 40 years (43%), 29% of the respondents were aged between 41 –50 years and above 50 years had 29%.

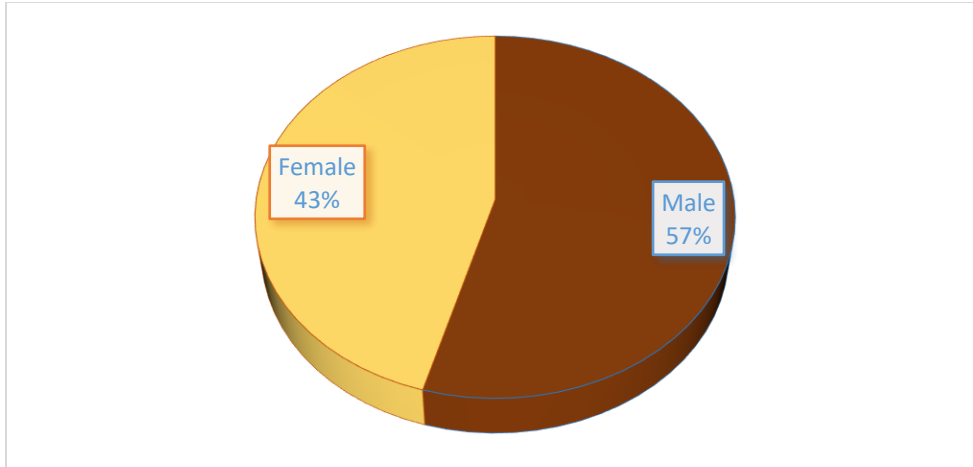


Figure 8 Gender of Fashion Designers

Source: Field Survey, 2023

This is evident from the above figure that more than half of the respondents representing majority (57%) were male while the rest were female (43%).

Table 4.4 Highest Educational Qualification Fashion Designers

Educational Qualification	Frequency (n)	Percentage (%)
None	0	0
Basic	0	0
Secondary	0	0
Diploma	4	57
1 st Degree	3	43
Total	7	100

Source: Field Survey, 2023

As indicated, 57 % of the respondents who represent the majority asserted that they had Diploma in Fashion, 43% of the respondents responded that they have First Degree in Fashion.

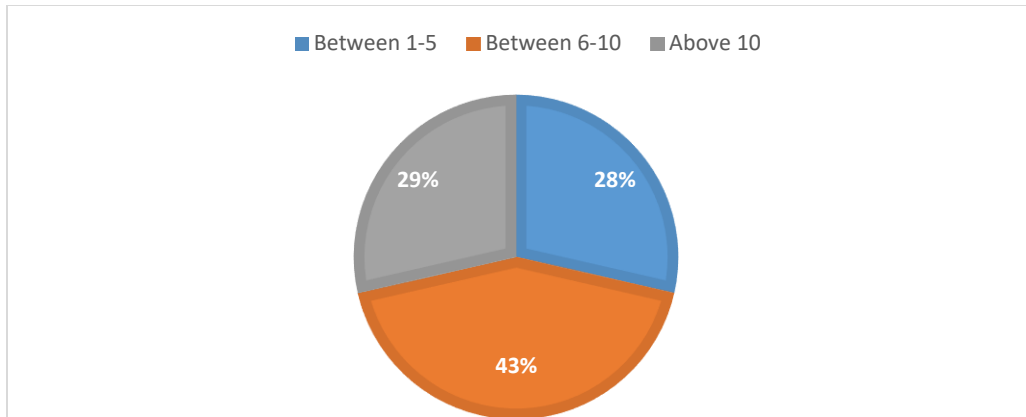


Figure 4.3. Work experience of Fashion Designers

Figure 4.4 Work experience of Fashion Designers

Source: Field Survey, 2023

The respondents who represent majority (43%) have had between 6-10 years' work experience, (28%) of the respondents have between 1-5 years' work experience, (29%) of the respondents have had 10 years and above work experience. This is evident from figure 4.3.

4.2.3 Area of Specialization of Fashion Designers, Seamstresses and Tailors

Table 4.5: Area of Specialization of Fashion Designers, Seamstresses and Tailors

Area of Specialization	Frequency (n)	Percentage (%)
Children Dresses	30	20
Male wear	25	17
Female Wear	75	50
Traditional Kaba and slit	19	13
Total	149	100

Source: Field Survey, 2023

The respondents who represent majority (50%) have specialized in female wear, (20%) of the respondents have specialized in children dresses, (17%) of the respondents have specialized in Male wear while 13% have specialized in traditional Kaba and Slit.

4.3 Objective One: To analyze the current state of hand embroidery skills acquisition as a viable source of job creation in the contemporary Ghanaian economy.

Hand embroidery skills in Ghana potentially contribute to job creation.

Table 4.6: The current state of hand embroidery skills acquisition in Ghana

Items	<i>Strongly Agree</i> <i>n (%)</i>	Agree <i>n (%)</i>	Neutral <i>n (%)</i>	Disagree <i>n (%)</i>	<i>Strongly disagree</i> <i>n (%)</i>
Hand embroidery skills are commonly taught in Ghana.	-	-	35(25)	50(35)	57(40)
Adequate resources are available for individuals seeking to learn hand embroidery in Ghana.	-	-	-	82(58)	60(42)
The government supports and promotes hand embroidery skills acquisition in.	-	-	-	52(37)	90(63)
Traditional hand embroidery techniques are being preserved in modern Ghanaian practices.	-	35(25)	20(14)	37(26)	50(35)
Modern technology is well-integrated into hand embroidery training in Ghana.	-	-	-	92(65)	50(35)
Hand embroidery skills acquisition leads to entrepreneurial opportunities.	100(71)	40(28)	2(1)	-	-
There is a strong demand for skilled hand embroidery professionals in the Ghanaian market.	90(64)	50(35)	2(1)	-	-
Hand embroidery is considered a prestigious and well-respected skill in Ghana.	52(37)	80(56)	10(7)	-	-

The program for hand embroidery in Ghana is up-to-date with global standards.	-	-	-	92(65)	50(35)
Individuals with hand embroidery skills have an easy time finding employment	-	-	-	54(38)	88(62)
Hand embroidery is recognized as a valuable part of Ghana's cultural heritage.	102(72)	40(28)	-	-	-

Source: Field Survey, 2023

It was seen that 40% of respondents strongly disagreed that a Hand embroidery skills are commonly taught in Ghana, 35% of respondents disagreed, while 25% of respondents are neutral. It was also realised that 58% of respondents disagreed and the other 42% of the respondents strongly disagreed that Adequate resources are available for individuals seeking to learn hand embroidery in Ghana. Sixty-three percent (63%) of the respondents strongly disagreed that the government supports and promotes hand embroidery skills acquisition in, 37% of the respondents disagreed that the government supports and promotes hand embroidery skills acquisition in. Twenty-Six (26%) respondents disagreed that Traditional hand embroidery techniques are being preserved in modern Ghanaian practices, 14% of the respondents are neutral, 35% strongly disagreed and 25% agreed that Traditional hand embroidery techniques are being preserved in modern Ghanaian practices.

Sixty-five percent (65%) of the respondents disagreed that Modern technology is well-integrated into hand embroidery training in Ghana, 35% of the respondents strongly disagreed. Seventy-one percent (71%) of the respondents strongly agreed that Hand embroidery skills acquisition leads to entrepreneurial opportunities, 28% of the respondents agreed while 1% is neutral. Sixty-four percent (64%) strongly agreed that there is a strong demand for skilled hand embroidery

professionals in the Ghanaian market, 35% of respondents agreed while 1% is neutral that there is a strong demand for skilled hand embroidery professionals in the Ghanaian market.

It was also seen that 37% of respondents strongly agreed that Hand embroidery is considered a prestigious and well-respected skill in Ghana, 56% agreed and the other 7% of the respondents are neutral that hand embroidery is considered a prestigious and well-respected skill in Ghana. Sixty-five percent disagreed that the program for hand embroidery in Ghana is up-to-date with global standards while 35% strongly disagreed. Sixty-two percent strongly disagreed that Individuals with hand embroidery skills have an easy time finding employment and 38% of respondents disagreed. Seventy-two percent of the respondents strongly agreed that Hand embroidery is recognized as a valuable part of Ghana's cultural heritage while the remaining 28% agreed.

Table 4.7: The potential of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy

Items	N	Mean	Std. Deviation
Hand embroidery has significant potential as a source of employment in Ghana.	142	4.5070	.50172
Skill development in hand embroidery can contribute to the growth of the Ghanaian economy.	142	4.4225	.49571
Government support is essential for promoting hand embroidery as a viable profession in Ghana.	142	4.6056	.49044
Traditional hand embroidery techniques contribute to the uniqueness of the Ghanaian textile industry.	142	4.3028	.46110
Developing hand embroidery skills among the youth would reduce unemployment rates in Ghana.	142	4.4859	.50157

Hand embroidery requires more recognition and support from local communities for sustained growth.	142	4.5423	.49998
Hand embroidery can be a major source of income for women and disadvantaged groups in Ghana.	142	4.6338	.48347
The market for hand-embroidered products in Ghana is sufficient to sustain a growing workforce.	142	3.5845	.49455
Investment in skill development for hand embroidery will lead to increased quality and global competitiveness.	142	4.2535	.43657
Hand embroidery businesses can be successfully integrated into the larger textiles and fashion industry.	142	4.1549	.45031
Eco-friendly practices in hand embroidery will enhance its appeal and create more opportunities in Ghana	142	4.5070	.50172

Source: Field Survey, 2023

On a five-point Likert scale, the participants were asked to indicate their levels of agreement or disagreement with statements concerning the potential of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy. A mean score of 3.0 and above indicates positive responses, while a mean of 2.99 and below indicate negative responses. The test value was computed by adding all the scores on the Likert scale. That is, strongly agree was scored as 5, strongly agree, agree as 4, neutral as 3, disagree as 2, and strongly disagree as 1. The test value was obtained by adding all the scores together ($5+4 + 3 + 2+ 1 = 15$) and dividing by the five-point Likert scale ($15/5 = 3.0$).

The responses to the item " Hand embroidery has significant potential as a source of employment in Ghana" produced a (mean =4.5070, SD =.50172, n = 142) that is greater than the test value of 3.0. On the issue of Skill development in hand embroidery can contribute to the growth of the Ghanaian economy, the data (mean =4.4225, SD =.49571, n = 142) shows that indeed Skill development in hand embroidery can contribute to the growth of the Ghanaian economy. The

results further gave evidence that Government support is essential for promoting hand embroidery as a viable profession in Ghana. The data (mean=4.6056, SD=.49044, n=142) showed that students' Government support is essential for promoting hand embroidery as a viable profession in Ghana. Again, on how traditional hand embroidery techniques contribute to the uniqueness of the Ghanaian Fashion industry.

The data (mean=4.3028, SD=.46110, n=142) affirms that hand embroidery can contribute to the Ghanaian textile industry. The results gave evidence that developing hand embroidery skills among the youth would reduce unemployment rates in Ghana. The data (mean=4.4859, SD=.50157, n=142) showed that Developing hand embroidery skills among the youth would reduce unemployment rates in Ghana. The data (mean=4.5423, SD=.49998, n=142) affirms that Hand embroidery requires more recognition and support from local communities for sustained growth. The data (mean=4.6338, SD=.48347, n=142) shows that hand embroidery can be a major source of income for women and disadvantaged groups in Ghana. The market for hand-embroidered products in Ghana is sufficient to sustain a growing workforce.

The data (mean=3.5845, SD=.49455, n=142) shows that the market for hand-embroidered products in Ghana is sufficient to sustain a growing workforce. Furthermore, on how Investment in skill development for hand embroidery will lead to increased quality and global competitiveness. The data (mean=4.2535, SD=.43657, n=142) affirms that investment in skill development for hand embroidery will lead to increased quality and global competitiveness. The result (mean=4.1549, SD=.45031, n=142) shows that Hand embroidery businesses can be successfully integrated into the larger textiles and fashion industry. Finally, Eco-friendly practices

in hand embroidery will enhance its appeal and create more opportunities in Ghana, the results show that Eco-friendly practices in hand embroidery will enhance its appeal and create more opportunities in Ghana. The (mean=4.4070, SD=.50172, n=142) which is more than the test value of 3.0 gives evidence to these effects.

Table 4.8: Current state of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy

Items	Mean	Standard error
Machine and Computerised	3.39 ^a	0.202
Hand Embroidery	18.87 ^b	0.202
Contrast	15.87	0.285

Note: Margins sharing a letter in the group label are not significantly different at the 5% level.

Source: Field Survey, 2023

The current awareness of hand embroidery resulted in a significantly higher mean as compared to the Machine and Computerised embroidery in terms of bridging the gap of unemployment. The results as displayed in Table 4.8 reveals that the equality of mean of job creation between the Machine and Computerised embroidery and hand embroidery is rejected at the 5% level of significance. Thus, there is enough statistical evidence to suggest that the hand embroidery has a significant influence on job creation both economically and socially.

4.3.1 Qualitative Results on Focused Group Discussions

Findings from the focus group discussions demonstrated that the hand embroidery is a viable source of job creation in the contemporary Ghanaian economy. The participants noted their concerns about the current state of hand embroidery as a skill which has shown great development in Ghana and the global world as well. This explains the demand for hand-embroidered products locally and internationally

“Hand embroidery skills in Ghana have shown remarkable growth and development in recent years, with local artisans creating intricate and culturally rich designs. This can enhance the demand for these products, especially among those who value unique, culturally-rooted items.” (Participant, FG 2).

“There's a growing appreciation for locally-made, hand-embroidered products. This could positively impact the livelihoods of artisans, creating economic opportunities and preserving traditional craft skills within the community. There is room for improvement, more resources and training could elevate the quality of hand embroidery even further” (Participant, FG 1).

Skills have gained prominence as a valuable cultural and economic asset, contributing to artisan livelihoods. There is a need for increased support and preservation efforts to ensure the continued flourishing of this art form.

“The revival and renewed interest in traditional craftsmanship, leading to a resurgence of hand embroidery expertise” (Participant, FG 2).

Additionally, they reported that the hand embroidery skills have generated a revenue for them. Most depend on skills no matter how minimal to survive. They have thrived in the realm of hand

embroidery, even though a modest attachment. This experience, though on a small scale, illuminated the intricate artistry and entrepreneurial spirit within the craft.

“I have personally survived through hand embroidery even though it was a small scale business attachment I did with one man in Kejetia” (Participant, FG 2)

“...working with one tailor around Ejisu in hand embroidery exposed me to some job opportunities and that placed food on my table even though not on a regular basis but something small for the boys” (Participant, FG 1)

Further discussion on hand embroidery as a viable source of job creation gave the participants chances to express their joy if there are opportunities created. This explains the income potential and growth prospects in the hand embroidery sector. Proficiency in hand embroidery has been a boon to financial independence

“The dress am currently wearing was designed by a friend of mine who charged me Ghana cedi's 70” (participant, FG 2)

“I was able to pay for my NVTI exams because of hand embroidery skill. The fusion of creativity and resourcefulness within embroidery not only enriched my craft but also paved the way for my educational aspirations.” (Participant, FG 1).

4.4 Objective Two: To evaluate the effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana.

Table 9: The effectiveness of current training programs aimed at promoting skill acquisition in hand embroidery in Ghana

Items	N	Mean	Std. Deviation
The training programs in hand embroidery are easily accessible in my locality.	142	1.7394	.44050
The training programs is comprehensive and relevant.	142	1.8521	.35624
Instructors in the training programs are well-qualified and experienced.	142	1.8310	.37609
The training programs provide enough hands-on practice for skill development.	142	1.8592	.34909
There are enough resources and tools available in the training programs.	142	1.4437	.49857
The training programs in hand embroidery meet international standards.	142	1.4507	.49933
The training programs have positively impacted the local hand embroidery business.	142	1.8380	.36973
I feel the training programs are value for money.	142	1.5634	.49772
Graduates of these programs have shown significant improvement in their skills.	142	1.7324	.44428
There is continuous monitoring and assessment in the training programs.	142	1.5070	.50172

The researcher sought to know the effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana. The mean and standard deviation were used to analyze the data. Using a scale of “VLE = Very Large Extent, LE = Large Extent, SE=

Some Extent, ASE = A Small Extent, NA= Not at All”, a cut-off of 3.0 was set. This means that, mean scores of 3.0 and above were deemed to be high while mean scores below 3.0 were deemed to be low. A higher mean implies that the respondents were in agreement with the description. The results of the responses from the respondents were analyzed and presented in the table 10.

It is evident from the mean scores that participants in the study generally rated the effectiveness of current training programs aimed at promoting skill acquisition in hand embroidery in Ghana as not satisfactory. These areas may require further attention to ensure optimal training for effective hand embroidery.

4.4.3 Focused Group discussion on the effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana.

Scrutinizing these programs' efficiency in imparting relevant techniques and nurturing local talent can shed light on their impact. This assessment is crucial to refine and elevate the proficiency of future embroidery artisans in the country. Participants were asked about their awareness of existing hand embroidery training programs.

“Frankly, there are several trainings we attend as fashion designers, at times we even organize it for tailors and seamstresses at a fee but all these trainings do not have anything to do with hand embroidery” (Participant, FG 1).

Before I assumed the role as a fashion designer, I attended several programs as a tailor then but none was on hand embroidery. Training programs do not adequately address the fusion of traditional hand embroidery with modern design trends, impacting artisans' market relevance”. (Participant, FG 2).

Most participants expressed their thought on the strengths and weaknesses of these programs based on participants' experiences or knowledge. They noted that even though these programs are not in the area of hand embroidery, they are not accessible especially in deprived areas.

“There are limited accessibility of these programs, especially in rural areas, depriving potential artisans of skill development opportunities (Participant, FG 1)

Aside it not being accessibility, insufficient resources, such as materials and tools, hinder the effectiveness of training programs, limiting hands-on learning” (Participant, FG 2)

4.5 Objective Three: To explore the challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation.

Table 4.10: The challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation

Items	<i>Very Large Extent</i> n (%)	<i>Large Extent</i> n (%)	<i>Some Extent</i> n (%)	<i>A Small Extent</i> n (%)	<i>Not at All</i> n (%)
Lack of proper training facilities hinders skill development in hand embroidery.	52(36)	55(39)	35(25)	-	-
Traditional embroidery methods are not adequately taught in vocational schools.	80(56)	62(44)	-	-	-
Financial constraints limit the acquisition of skills in hand embroidery.	50(35)	92(65)	-	-	-
Cultural perceptions discourage individuals from pursuing careers in hand embroidery.	87(61)	35(25)	20(14)	-	-
Focusing on modern technology in education diminishes the emphasis on hand embroidery skills.	92(65)	50(35)	-	-	-
Limited market access for hand-embroidered products affects job creation in this field.	100(70)	20(15)	20(15)	-	-

Government support and policies are inadequate for the promotion of hand embroidery.	102(72)	40(28)	-	-	-
Gender biases affect the participation in and growth of the hand embroidery sector.	40(28)	42(30)	60(42)	-	-
Skills in hand embroidery do not translate into sustainable employment opportunities.	93(65)	49(35)	-	-	-
The importation of machine-made embroidery affects local job creation.	62(44)	80(56)	-	-	-
Continuous skill development and innovation are essential for job creation in hand embroidery.	107(75)	35(25))	-	-	-

Source: Field Survey, 2023

It was seen that 36% of respondents agreed to a very large extent with lack of proper training facilities hinders skill development in hand embroidery, 39% of respondents agreed to a large extent, while 25% of respondents agreed to some extent. It was also realised that 56% of respondents agreed to a very large extent and the other 44% of the respondents agreed to a large extent that traditional embroidery methods are not adequately taught in vocational schools. Sixty-five percent (65%) of the respondents agreed to a large extent that Financial constraints limit the acquisition of skills in hand embroidery, 35% of the respondents agreed to a very large extent. Sixty-one percent (65%) respondents agreed in a very large extent that Cultural perceptions discourage individuals from pursuing careers in hand embroidery, 25% of the respondents agreed to a large extent, 14% to some extent and 14% agreed that Cultural perceptions discourage individuals from pursuing careers in hand embroidery. Sixty-five percent of the respondents agreed that focusing on modern technology in education diminishes the emphasis on hand embroidery skills while 35% of the respondents agreed to a large extent. Seventy percent of the respondents to a very large extent agreed that limited market access for hand-embroidered products affects job creation in this field, fifteen percent (15%) of the respondents to a large extent and some extent

agreed that limited market access for hand-embroidered products affects job creation in this field. Seventy-two percent agreed that Government support and policies are inadequate for the promotion of hand embroidery, 28% of respondents to a large extent agreed. It was also seen that 28% of respondents to a very large agreed that Gender biases affect the participation in and growth of the hand embroidery sector, 30% to a large extents agreed and the other 42% of the respondents to some extent agreed. Sixty-five percent (65%) agreed that Skills in hand embroidery do not translate into sustainable employment opportunities while 35% agreed to a large extent. Forty-four percent (45%) agreed that the importation of machine-made embroidery affect local job creation and 56% of respondents to a large extent agreed. Seventy-five percent (75%) of the respondents agreed to a very large extent that Continuous skill development and innovation are essential for job creation in hand embroidery while the remaining 25% to a large extent agreed.

4.5.1 Exploring Challenges and Barriers to Skill Acquisition (Focused group Discussion)

Participants shared their thought on the how hand embroidery require much time to practice.

“Time constraints could be an issue. Learning hand embroidery demands patience and practice. People might find it hard to dedicate sufficient time due to work, education, or other commitments” (Participant, FG 2)

They expressed their concerns on Financial barriers, Limited awareness about the potential benefits of learning hand embroidery, and Technology distractions could hinder interest.

“Financial barriers play a role too. Quality materials can be expensive, and some individuals might struggle to afford them, along with the cost of enrolling in training programs” (Participant, FG 2)

“Limited awareness about the potential benefits of learning hand embroidery is a challenge. Many people might not realize the income-generation and cultural preservation opportunities it offers” (Participant, FG 1)

Technology distractions could hinder interest. Younger generations are more drawn to digital entertainment, making it difficult to engage them in a craft that demands focus and patience” (Participant, FG 1)

Insufficient support systems contribute as well. Without encouragement from families, schools, or communities, individuals might lack the motivation to embark on the journey of learning” (Participant, FG 2)

Gender play a role as one of the key challenges to hand embroidery promotion. The notion of the traditional saying it belonging to females deter males from participating in hand embroidery.

“Traditional gender roles can also deter men and boys from pursuing hand embroidery. There's a stigma attached to certain crafts being seen as 'feminine,' limiting opportunities for skill acquisition” (Participant, FG 1).

4.6 Objective Four: To propose potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana

Table 4.11: The potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana

Items	N	Mean	Std. Deviation
Introducing vocational training centres can enhance hand embroidery skills.	142	4.3451	.49172
Government funding for training programs in hand embroidery can lead to more job creation.	142	4.4789	.50132
Collaboration with international artisans can bolster the quality and diversity of embroidery skills.	142	3.8803	.32578
Technology integration in hand embroidery can lead to increased efficiency and marketability.	142	4.4718	.50097
Awareness campaigns about the economic potential of hand embroidery can boost local participation.	142	4.2746	.44792
Certification and standardization in hand embroidery can lead to greater international recognition.	142	4.6408	.48145
Establishing a hand embroidery cooperative can foster collaboration and innovation.	142	4.2183	.65359
Encouraging female entrepreneurship in hand embroidery can lead to empowerment and job creation.	142	4.4155	.61012
Enhancing raw material accessibility can improve production efficiency in hand embroidery.	142	4.3028	.68406
Tax incentives for hand embroidery businesses can stimulate growth and create more jobs.	142	4.4718	.50097
Integration of modern design techniques with traditional methods can innovate the embroidery sector.	142	3.9648	.74769
Fostering links between educational institutions and the embroidery industry can enhance skills.	142	4.4155	.49455

The researcher sought to know the potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana. The mean and standard deviation were used to analyze the data. Using a scale of “VLE = Very Large Extent, LE = Large Extent, SE= Some Extent, ASE = A Small Extent, NA= Not at All”, a cut-off of 3.0 was set. This means that, mean scores of 3.0 and above were deemed to be high while mean scores below 3.0 were deemed to be low. A higher mean implies that the respondents were in agreement with the description. It is evident from the mean scores that participants in the study generally rated the potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana as satisfactory. Introducing vocational training centres can enhance hand embroidery skills, government funding for training programs in hand embroidery can lead to more job creation, collaboration with international artisans can bolster the quality and diversity of embroidery skills, technology integration in hand embroidery can lead to increased efficiency and marketability among others are some potential strategies to bolster Hand embroidery skill development.

4.6.1 Focused group discussion on potential strategies to promote hand embroidery skills.

Participants noted their concerns about the need to establish team that can move around to train the youth no matter the location of interested people.

“We could establish mobile training units that travel to rural areas, bringing workshops and materials directly to communities that lack access (Participant, FG 1)

Collaborations with schools and community centers would be great. Introducing hand embroidery as an extracurricular activity or vocational training could spark interest among the youth” (Participant, FG 2).

Most participants also argued for a micro-finance to aid the low income people in deprived areas to begin something after these trainings are done.

“Setting up micro-financing options or scholarships for potential learners could alleviate financial barriers, making training and materials more accessible” (Participant, FG 1).

4.7 Descriptive analysis on Observation Checklist

The researcher prepared a training session to give participants the necessary hand embroidery skills, and an observation checklist was created to evaluate the participants.

Table 4.12: Observation Checklist

Observation Criteria	Participants able to Perform Task N(%)	Participants not able to Perform Task N(%)
Basic Stitch Proficiency	124(87)	18(13)
Advanced Stitch Proficiency	80(56)	62(44)
Thread and Color Management	114(80)	28(20)
Design Interpretation	97(68)	45(32)
Fabric Handling	109(77)	33(23)
Stitch Consistency and Evenness	101(71)	41(29)
Technical Skills	82(58)	60(42)

N=142

It was found that nearly all (87%) participants were able to use basic stitches such as Running Stitch, Backstitch, Satin Stitch, French Knot, and Chain Stitch. Five-six percent were able to do advance stitch such as Lazy Daisy Stitch, Feather Stitch, Bullion Knot, Couching Stitch and Fly Stitch to complement their designs. Eighty percent of participants’ selected appropriate thread

types (e.g., stranded cotton, silk, metallic), demonstrated Skill in blending and shading different thread colors and used contrasting and complementary colors for visual impact. Sixty-eight percent were able to interpret a provided design and creatively select appropriate stitches for different design elements. Seventy-seven percent choose appropriate fabric for the embroidery project and Proper stretching and securing of fabric in an embroidery hoop or frame. Seventy-one percent were consistent with stitch length and tension and they avoided loose or overly tight stitches. On the matter of Knotting and starting stitches neatly at the back of the fabric and handling thread tangles and knots effectively, 58% were able to prove their technical skills in this area.

In comparison to the number of participants who were able to, the percentage of those who were unable to complete these tasks was very low (see appendix D for sample work done by participants)

Table 4.13: One sample test result

Item	t-value	df	P-value	Mean Difference
To what extent are machines and computerised embroidery more preferable as compared to hand embroidery?	61.268	142	0.000	3.22

Source: Field Survey, 2023

A sample t-test was conducted to find out if the mean score was not equal to zero. The statistics for the test are in the table 4.13 above. The one sample t-test statistics is 61.268 and the p-value from this statistic is 0.000 and that is less than 0.05 (level of significance used for the test). Such a p-value indicates that the mean score of the sampled population is statistically significantly different from zero. The result shows that to large extent the machine and computerized

embroidery are more preferred to the hand embroidery. Simultaneously, interactions with participants indicates that most consumers prefer the machine and computerized embroidery but for originality they will prefer hand embroidery.

The results indicate a clear preference for machine and computerized embroidery, driven by factors such as efficiency. However, the acknowledgment of a preference for hand embroidery for its originality highlights the nuanced and multifaceted nature of consumer choices. This insight could be valuable for businesses and industries involved in the production and sale of embroidered products, guiding them in catering to the diverse preferences of their target audience.

CHAPTER FIVE

DISCUSSION

5.0 Overview

In this section, the findings are discussed in relation to:

1. What is the current state of hand embroidery skills acquisition as a viable source of job creation in the contemporary Ghanaian economy?
2. What is the effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana?
3. What are the challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation?
4. Are there potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana?

5.1 What is the current state of hand embroidery skills acquisition as a viable source of job creation in the contemporary Ghanaian economy?

The findings from Table 3 clearly shows current state of hand embroidery skills acquisition as a viable source of job creation in the contemporary Ghanaian economy. The study revealed that hand embroidery skills are hardly commonly taught in Ghana. This study is in agreement with Zhang et al., (2021) findings that traditional embroidery centers in some countries have a rich history and strong tradition of hand embroidery, where skills are often passed down through generations. These regions include countries like India, China, Japan, Iran, Mexico, and many countries in Europe. Ghana even though has its history of embroidery fails to live up to skill training in hand embroidery (Zhang et al., 2021).

The study further revealed that Hand embroidery is recognized as a valuable part of Ghana's cultural heritage. This finding aligns with Yan & Chiou (2021) who noted that hand embroidery is a traditional craft that has been practiced for centuries and continues to be valued for its artistic and cultural significance. Again, majority of participants disagree with Modern technology as it is well-integrated into hand embroidery training in Ghana.

Furthermore, the participants indicated that skill development in hand embroidery can contribute to the growth of the Ghanaian economy. The research findings in this study agree with Hardin, (2021) on how hand embroidery contribute significantly to the nation's economy and embroidery industry as a whole. This finding on investment in skill development for hand embroidery will lead to increased quality and global competitiveness agrees with Karinkurayil, (2019) that People have and always will use embroidery to decorate their houses and selves with distinctive brands and logos. India is undoubtedly a place of wonders, blessed with a wide variety of cultures, customs, and faiths. This aligns with the Human Capital theory which suggests that increased skill levels enhance employability. In the context of hand embroidery, skilled artisans are more likely to access diverse job opportunities, including collaboration with fashion designers, participation in craft exhibitions, and engagement with the global market through e-commerce platforms (Emmett, 2022). The study revealed that Hand embroidery requires more recognition and support from local communities for sustained growth. This outcome agrees with Antwi, (2012) and Shafi et al., (2021) that skill Development Initiatives by NGOs and organizations are actively needed in promoting traditional crafts and skills in Ghana. This can be done by organizing workshops, training programs, and skill development initiatives that focus on hand embroidery. These initiatives will preserve traditional techniques while also exploring contemporary design elements.

5.2 What is the effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana?

The results unambiguously show that, despite the industry's many training programmes, hand embroidery has not been addressed by any or very few of them. The study concurs that hand embroidery is taught in principle as part of the school curriculum but excludes individuals who cannot receive formal education and hands-on instruction in it. The findings agree with Islam, (2022) that training programs can be effective in promoting skill acquisition in hand embroidery when they are well-designed and cater to the needs of the participants. Tiwari, (2023) affirms this finding by stating that a well-structured curriculum that covers the fundamentals of hand embroidery and progresses to advanced techniques is essential. The curriculum should include both theoretical knowledge and practical hands-on training to ensure a comprehensive learning experience. Experienced and knowledgeable instructors who possess expertise in hand embroidery are crucial for effective training. They should have the ability to teach various techniques, provide guidance, and offer constructive feedback to learners.

The findings further agree with Davis et al, (2023) that practical training, which involves hands-on practice, is crucial for skill acquisition in hand embroidery. Training programs that offer ample opportunities for participants to practice their embroidery skills under the guidance of instructors can be more effective. Again, the availability of quality materials, tools, and resources required for hand embroidery is essential for effective training. It is important that participants have access to these resources during the training program and learn about their proper usage and maintenance. The finding reveals that there is no continuous monitoring and assessment in the training programs. Though, Makri et al., (2021) recommends that the duration, frequency of training sessions and

continues assessment can impact skill acquisition. Longer and more frequent training programs can allow participants to practice and refine their skills over time, leading to better proficiency in hand embroidery. Creating a supportive and encouraging learning environment can foster motivation and engagement among participants. Peer interaction, group activities, and opportunities for sharing ideas and experiences can enhance the effectiveness of training programs. These strategies when implemented will aid the hand embroidery industry.

5.3 What are the challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation?

The study revealed that there are numerous challenges and barriers relating to the hand embroidery industry. One of this key findings is the training programs in hand embroidery are not easily accessible in my locality. This agrees with Ngware et al. (2022) that a lack of accessible training, which is access to quality training and educational resources, is crucial for skill acquisition in hand embroidery. However, in many regions, there may be limited opportunities for individuals to learn the craft. Lack of accessible training institutes or qualified instructors can hinder the development of embroidery skills. This is evident in Table 4.11.

This study further revealed that limited market access for hand-embroidered products affects job creation in this field. This is consistent with Pathak & Mukherjee, (2020) that limited economic opportunities in hand embroidery, particularly in traditional or artisanal forms, face challenges in terms of market demand and economic viability. Mass production, machine embroidery, and cheaper alternatives have reduced the demand for hand-embroidered products. As a result, job

opportunities in this field may be limited, making it difficult for skilled embroiderers to find sustainable employment.

Again, focusing on modern technology in education diminishes the emphasis on hand embroidery skills. This conforms with Chan et al., (2022) that technological advancements are a challenge to hand embroidery. The advent of embroidery machines and computerized embroidery has revolutionized the industry. While these technologies have made embroidery faster and more efficient, they have also reduced the demand for hand embroidery skills. As a result, hand embroiderers may face challenges in finding job opportunities that utilize their specialized skills.

5.4 Are there potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana?

The findings of the study indicate that there are potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana. This is evident in table 12. The study revealed that introducing vocational training centres can enhance hand embroidery skills. This is consistent with Patil, (2020) that establish vocational training programs that will collaborate with local organizations, vocational schools, or community centers to create structured training programs specifically focused on hand embroidery. These programs should offer comprehensive training on various embroidery techniques, design principles, color theory, and business skills (Patil, 2020).

The study further revealed that encouraging female entrepreneurship in hand embroidery can lead to empowerment and job creation. This agrees with Hardin, (2021) that historically, women were the ones who predominantly executed needlework, men are now beginning to appreciate the craft.

Bhatti et al., (2021) also recommends that fostering entrepreneurship and business skills through technical training and offer workshops or courses that teach essential business skills such as marketing, pricing, branding, and product development. This equips individuals with the knowledge and confidence to start their own embroidery businesses or work as freelancers. By investing in skill development and providing a conducive environment for hand embroidery, Ghana can harness its potential for job creation and economic empowerment.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a summary of the research, draws some conclusion, and makes some recommendation concerning directions for future research and for policy. The general objective of the study was to explore the impact of skill development in hand embroidery on job creation in contemporary Ghana. This skill will help equip individuals with decorative hand embroidery skills which will help them get self or hired employment.

6.1 Summary of Key Findings

1. Hand embroidery skills have the potential to drive job creation within Ghana's economy. Again, Hand embroidery holds cultural significance within Ghana's heritage, aligning with previous research recognizing its enduring artistic and cultural value. Despite modern technological integration into many educational fields, participants in the study expressed resistance to its incorporation into hand embroidery training in Ghana, differing from trends in online courses and tutorials elsewhere.

The development of hand embroidery skills is seen by participants as a potential contributor to Ghana's economic growth, in line with previous studies linking embroidery to economic and industry advancement. The study supports the notion that investment in hand embroidery skill development can enhance product quality and global competitiveness, paralleling similar ideas in the literature. Recognition and support from local communities are crucial for the sustained growth of hand embroidery in Ghana, resonating with the need for skill development initiatives advocated by NGOs and organizations, echoing calls for

preserving traditional craftsmanship. The study suggests that workshops, training programs, and skill development initiatives focusing on hand embroidery could be effective strategies for promoting traditional crafts and skills in Ghana while also exploring contemporary design elements.

2. The research findings unequivocally demonstrate that existing training programmes within the industry have not adequately addressed the teaching of hand embroidery, with very limited or no inclusion. While hand embroidery is nominally part of school curricula, this approach excludes individuals who lack access to formal education and hands-on instruction. Training programmes offering ample practice opportunities under instructor guidance tend to be more successful.

Access to high-quality materials, tools, and resources is pivotal for effective training. Participants' availability and familiarity with these resources during training, including their correct usage and maintenance, are highlighted. Establishing a supportive learning environment is crucial. The research emphasizes that fostering motivation and engagement among participants is aided by peer interactions, group activities, and opportunities for sharing ideas and experiences.

3. The study revealed that despite the existence of numerous training programmes within the industry, hand embroidery has been largely neglected or scarcely included in these initiatives. Although hand embroidery is theoretically a part of school curricula, this approach excludes individuals lacking formal education and practical instruction. The curriculum should cover theoretical knowledge and hands-on training for a comprehensive

learning experience. Instructors with expertise in hand embroidery are crucial for effective training, as per the study's findings.

Training programs that offer ample opportunities for guided practice under the supervision of instructors tend to be more successful. Access to quality materials, tools, and resources is highlighted as crucial for effective training. The study underscores the importance of participants having access to these resources during training, along with learning their proper usage and maintenance. The study emphasizes that creating a supportive and encouraging learning environment fosters motivation and engagement among participants. Peer interactions, group activities, and opportunities for sharing ideas and experiences are identified as factors enhancing the effectiveness of training programs.

4. The study's findings point to potential strategies that could amplify skill development in hand embroidery, ultimately augmenting its role in fostering job creation in Ghana, as demonstrated in Table 12.

The research identifies that the introduction of vocational training centers holds promise for enhancing hand embroidery skills. These collaborations could formulate structured training programs focused on hand embroidery. The recommended programs should encompass comprehensive training in diverse embroidery techniques, design principles, color theory, and crucial business skills.

Additionally, the study highlights the significance of promoting female entrepreneurship in hand embroidery, which could lead to empowerment and increased job opportunities. Such an approach equips individuals with the necessary knowledge and confidence to

initiate their own embroidery enterprises or work independently as freelancers. By investing in skill development and fostering a supportive environment for hand embroidery, Ghana stands to harness the potential of this craft for substantial job creation and economic empowerment.

6.2 Conclusions

The study highlights that hand embroidery skills can play a significant role in driving job creation and contributing to Ghana's economic growth. The skill's cultural significance and artistic value align with Ghana's heritage. The participants' resistance to modern technological integration into hand embroidery training indicates the preservation of traditional methods. Investing in hand embroidery skill development has the potential to enhance product quality and global competitiveness. This parallels similar ideas in the literature and supports the notion that traditional crafts can boost industries.

The research strongly indicates that current training programs in the hand embroidery industry in Ghana have failed to adequately teach hand embroidery skills. Despite being nominally included in school curricula, the exclusion of those without formal education and hands-on instruction is evident. Well-designed, structured training programs that cater to participants' needs are essential for effective skill acquisition. Practical, hands-on training under experienced instructors is crucial for success, and a lack of continuous monitoring and assessment in existing programs is noted.

The study emphasizes the need for training programs that address participants' needs and skill levels. A structured curriculum covering theoretical knowledge and hands-on training, led by

experienced instructors, is crucial. Practical training, access to quality materials, tools, and resources, as well as a supportive learning environment with peer interactions and group activities, all contribute to effective skill acquisition.

The study suggests strategies that could enhance skill development in hand embroidery and subsequently lead to job creation. The establishment of vocational training centers with structured programs focused on diverse embroidery techniques, design principles, color theory, and business skills is recommended. Promoting female entrepreneurship in hand embroidery can empower women and men alike, contributing to job opportunities. Technical training should incorporate business-related workshops to equip individuals with entrepreneurial skills. By investing in skill development and fostering a supportive environment, Ghana can harness the potential of hand embroidery for substantial job creation and economic empowerment.

In conclusion, the findings underscore the economic and cultural significance of hand embroidery in Ghana, highlighting the need for effective training programs and supportive environments to promote skill development, entrepreneurship, and job creation.

6.3 Recommendations

Based on the research findings and observation, the following recommendations are made;

1. **The current state of hand embroidery skills acquisition as a viable source of job creation in the contemporary Ghanaian economy:**
 - a. Fashion Industry and TVET should promote the continuation of traditional techniques to maintain authenticity and cultural identity.

- b. Stakeholders should recognize the potential of investing in hand embroidery skill development to enhance product quality and global competitiveness.
- 2. **The effectiveness of current training programs, if any, aimed at promoting skill acquisition in hand embroidery in Ghana:**
 - a. Curriculum planners and the CTNET should design well-structured training programs catering to participants' needs, regardless of their formal education, and provide hands-on instruction.
 - b. Trainers should highlight the need for continuous monitoring and assessment in existing programs.
- 3. **The challenges and barriers to skill acquisition in hand embroidery and their impacts on job creation:**
 - a. Curriculum developers and planners should propose a curriculum that combines theoretical knowledge with hands-on training, led by experienced instructors. Ensure access to quality materials, tools, and resources to facilitate effective skill acquisition.
 - b. Foster a supportive learning environment that encourages peer interactions and group activities.
- 4. **Potential strategies to bolster skill development in hand embroidery, thereby enhancing its contribution to job creation in Ghana:**
 - a. Government and stakeholders should help create of vocational training centers with structured programs focusing on diverse embroidery techniques, design principles, color theory, and business skills. Integrate business-related workshops within technical training to equip individuals with entrepreneurial skills. Investing in skill

development and creating supportive environments can lead to substantial job creation and economic empowerment in Ghana through hand embroidery.

6.4 Suggestions for Further Research

Relating to the topic of the current study, future research areas have been recommended.

1. A similar study should be carried out in other countries, regions and districts so as to make the results and conclusions as well as generalization of the study more evocative and applicable in a national context.
2. Other research instruments such as interviews, tests and assessments, surveys, audio and video recordings and photographs and images can be used for data collection.

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APPENDIX A

QUESTIONNAIRE FOR DRESSMAKERS AND TAILORS

This questionnaire is intended to collect relevant information about your views on **the impact of skill development in hand embroidery on job creation in contemporary Ghana**. Any information you offer will assist in improving the role skill development in hand embroidery plays in the Ghanaian economy, which could lead to targeted educational and vocational programs. This, in turn, could stimulate job creation, economically empower individuals, especially women and marginalized groups, and contribute to sustainable development in the region. Do not write your names on the questionnaire to ensure anonymity. Your response to the items of this questionnaire will remain confidential. You can use a [√] mark to specify your responses.

SECTION A: DEMOGRAPHICS

1. Gender: Female Male
2. Age: 21-30 31-40 41-50 50 & above
3. Highest Educational qualification: None Basic Secondary Diploma 1st Degree 2nd Degree Others (specify)_____
4. Area of specialization _____
5. Rank: Owner Manager Worker
6. Work Experience: less than a year 1-5years 6-10years Above 10years

SECTION B: THE CURRENT STATE OF HAND EMBROIDERY SKILLS ACQUISITION IN GHANA

<i>The current state of hand embroidery skills acquisition in Ghana</i>	<i>Strongly Agree</i> 5	4	3	2	<i>Strongly Disagree</i> 1
Hand embroidery skills are commonly taught in Ghana					
Adequate resources are available for individuals seeking to learn hand embroidery in Ghana.					
The government supports and promotes hand embroidery skills acquisition in					
Traditional hand embroidery techniques are being preserved in modern Ghanaian practices.					
Modern technology is well-integrated into hand embroidery training in Ghana.					
Hand embroidery skills acquisition leads to entrepreneurial opportunities					
There is a strong demand for skilled hand embroidery professionals in the Ghanaian market.					
Hand embroidery is considered a prestigious and well-respected skill in Ghana.					
The program for hand embroidery in Ghana is up-to-date with global standards.					
Individuals with hand embroidery skills have an easy time finding employment					
Hand embroidery is recognized as a valuable part of Ghana's cultural heritage.					

Key: 5=Strongly Agree; 4= Agree; 3= Not sure; 2= Disagree; 1=Strongly Disagree

**SECTION C: THE POTENTIAL OF HAND EMBROIDERY AS A VIABLE SOURCE OF
JOB CREATION IN THE CONTEMPORARY GHANAIAN ECONOMY**

<i>The potential of hand embroidery as a viable source of job creation in the contemporary Ghanaian economy</i>	<i>Strongly Agree 5</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>Strongly Disagree 1</i>
Hand embroidery has significant potential as a source of employment in Ghana.					
Skill development in hand embroidery can contribute to the growth of the Ghanaian economy.					
Government support is essential for promoting hand embroidery as a viable profession in Ghana.					
Traditional hand embroidery techniques contribute to the uniqueness of the Ghanaian textile industry.					
Developing hand embroidery skills among the youth would reduce unemployment rates in Ghana.					
Hand embroidery requires more recognition and support from local communities for sustained growth.					
Hand embroidery can be a major source of income for women and disadvantaged groups in Ghana.					
The market for hand-embroidered products in Ghana is sufficient to sustain a growing workforce.					
Investment in skill development for hand embroidery will lead to increased quality and global competitiveness.					
Hand embroidery businesses can be successfully integrated into the larger textiles and fashion industry.					
Eco-friendly practices in hand embroidery will enhance its appeal and create more opportunities in Ghana					

Key: 5=Strongly Agree; 4= Agree; 3= Not sure; 2= Disagree; 1=Strongly Disagree

SECTION D: THE EFFECTIVENESS OF CURRENT TRAINING PROGRAMS AIMED AT PROMOTING SKILL ACQUISITION IN HAND EMBROIDERY IN GHANA

<i>The effectiveness of current training programs aimed at promoting skill acquisition in hand embroidery in Ghana</i>	<i>To a very Large Extent</i> 5	4	3	2	<i>Not at All</i> 1
The training programs in hand embroidery are easily accessible in my locality.					
The training programs is comprehensive and relevant.					
Instructors in the training programs are well-qualified and experienced.					
The training programs provide enough hands-on practice for skill development.					
There are enough resources and tools available in the training programs.					
The training programs offer employment opportunities upon completion.					
The training programs in hand embroidery meet international standards.					
The training programs have positively impacted the local hand embroidery business.					
I feel the training programs are value for money.					
Graduates of these programs have shown significant improvement in their skills.					
There is continuous monitoring and assessment in the training programs.					

Key: 5 = Very Large Extent 4 = Large Extent 3 = Some Extent 2 = A Small Extent 1 = Not at

All

**SECTION E: THE CHALLENGES AND BARRIERS TO SKILL ACQUISITION IN
HAND EMBROIDERY AND THEIR IMPACT ON JOB CREATION**

<i>To what extent do you agree to the following</i>	<i>To a very Large Extent 5</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>Not at All 1</i>
Lack of proper training facilities hinders skill development in hand embroidery.					
Traditional embroidery methods are not adequately taught in vocational schools.					
Financial constraints limit the acquisition of skills in hand embroidery.					
Cultural perceptions discourage individuals from pursuing careers in hand embroidery.					
Focusing on modern technology in education diminishes the emphasis on hand embroidery skills.					
Limited market access for hand-embroidered products affects job creation in this field.					
Government support and policies are inadequate for the promotion of hand embroidery.					
Gender biases affect the participation in and growth of the hand embroidery sector.					
Skills in hand embroidery do not translate into sustainable employment opportunities.					
The importation of machine-made embroidery affect local job creation.					
Continuous skill development and innovation are essential for job creation in hand embroidery.					

Key: 5 = Very Large Extent 4 = Large Extent 3 = Some Extent 2 = A Small Extent 1 = Not at

All

**SECTION F: POTENTIAL STRATEGIES TO BOLSTER SKILL DEVELOPMENT IN
HAND EMBROIDERY**

<i>To what extent do you agree to the following</i>	<i>To a very Large Extent 5</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>Not at All 1</i>
Introducing vocational training centres can enhance hand embroidery skills.					
Government funding for training programs in hand embroidery can lead to more job creation.					
Collaboration with international artisans can bolster the quality and diversity of embroidery skills.					
Technology integration in hand embroidery can lead to increased efficiency and marketability.					
Awareness campaigns about the economic potential of hand embroidery can boost local participation.					
Certification and standardization in hand embroidery can lead to greater international recognition.					
Establishing a hand embroidery cooperative can foster collaboration and innovation.					
Encouraging female entrepreneurship in hand embroidery can lead to empowerment and job creation.					
Enhancing raw material accessibility can improve production efficiency in hand embroidery.					
Tax incentives for hand embroidery businesses can stimulate growth and create more jobs.					
Integration of modern design techniques with traditional methods can innovate the embroidery sector.					
Fostering links between educational institutions and the embroidery industry can enhance skills.					

Key: 5 = Very Large Extent 4 = Large Extent 3 = Some Extent 2 = A Small Extent 1 = Not at

All

THANK YOU

APPENDIX B
FOCUSED GROUP DISCUSSION GUIDE
FOR FASHION DESIGNERS

Impact of Skill Development in Hand Embroidery on Job Creation in Contemporary Ghana

Introduction: Welcome participants and thank them for their willingness to participate in this focused group discussion (FGD) on the impact of skill development in hand embroidery on job creation in contemporary Ghana. Explain the purpose of the discussion and the importance of their perspectives. Emphasize the need for open and respectful dialogue.

Introduction:

1. Background Information: Provide a brief overview of the hand embroidery industry in Ghana and the significance of skill development in job creation.
2. Personal Introductions: Ask each participant to introduce themselves briefly, including their background, and any experience or knowledge they have in hand embroidery or related fields.

Objective 1: Assessing Potential of Hand Embroidery for Job Creation:

- Ask participants about their perceptions of the current state of hand embroidery skills in Ghana.
- Encourage participants to share their thoughts on the economic potential of hand embroidery in today's Ghanaian economy.
- Discuss the demand for hand-embroidered products locally and internationally.
- Explore participants' views on the income potential and growth prospects in the hand embroidery sector.

Objective 2: Evaluating Effectiveness of Current Training Programs:

- Inquire about participants' awareness of existing hand embroidery training programs.
- Discuss the strengths and weaknesses of these programs based on participants' experiences or knowledge.
- Explore whether these programs adequately prepare individuals for skill acquisition and job opportunities.

Objective 3: Exploring Challenges and Barriers to Skill Acquisition:

- Prompt participants to share challenges they believe hinder people from acquiring hand embroidery skills.

- Discuss barriers such as limited access to training, lack of resources, and market constraints.
- Explore how these challenges might impact the potential for job creation in the hand embroidery sector.

Objective 4: Proposing Strategies for Skill Development and Job Creation:

- Engage participants in brainstorming potential strategies to enhance hand embroidery skill development.
- Discuss the importance of collaboration between stakeholders, including artisans, trainers, and policymakers.
- Encourage participants to share innovative ideas for addressing the identified challenges and maximizing the sector's contribution to job creation.

Wrap-up:

- Summarize key points discussed during the session.
- Thank participants for their valuable insights and contributions.
- Emphasize the importance of collective efforts in improving hand embroidery skills acquisition and job creation in Ghana.

Remember to facilitate the discussion to ensure that all participants have an opportunity to share their perspectives. Encourage open dialogue and consider recording the discussion for later reference as you work on your research.

APPENDIX C

OBSERVATION CHECKLIST

HAND EMBROIDERY SKILLS ACQUISITION ASSESSMENT

No.	Observation Criteria	Description/Details	Remarks
1	Basic Stitch Proficiency:	<ul style="list-style-type: none"> • Running Stitch • Backstitch • Satin Stitch • French Knot • Chain Stitch 	
2	Advanced Stitch Proficiency (if applicable):	<ul style="list-style-type: none"> • Lazy Daisy Stitch • Feather Stitch • Bullion Knot • Couching Stitch • Fly Stitch 	
3	Thread and Color Management:	<ul style="list-style-type: none"> • Selection of appropriate thread types (e.g., stranded cotton, silk, metallic). • Skill in blending and shading different thread colors. • Effective use of contrasting and complementary colors for visual impact. 	
4	Design Interpretation:	<ul style="list-style-type: none"> • Ability to interpret a provided design or pattern. • Creativity in selecting appropriate stitches for different design elements. • Attention to detail in replicating the design accurately. 	
5	Fabric Handling:	<ul style="list-style-type: none"> • Appropriate choice of fabric for the embroidery project. • Proper stretching and securing of fabric in an embroidery hoop or frame. • Ensuring the fabric remains taut throughout the stitching process. 	
6	Stitch Consistency and Evenness:	<ul style="list-style-type: none"> • Consistency in stitch length and tension. • Avoidance of loose or overly tight stitches. • Neat and uniform appearance of stitches across the project. 	

7	Technical Skills:	<ul style="list-style-type: none">• Knotting and starting stitches neatly at the back of the fabric.• Handling thread tangles and knots effectively.• Incorporation of three-dimensional elements like beads or sequins (if applicable).	
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APPENDIX D
PARTICIPANTS IN HAND EMBROIDERY



Focused Group



Participant in Observation Group



Sample of Completed Hand Embroidered Designs



Sample of Completed Hand Embroidered Designs



Sample of Completed Hand Embroidered Designs