

**ASSESSMENT OF SUPPORT SYSTEMS AND THEIR IMPACT ON
STUDENTS' SKILL ACQUISITION IN TEXTILES EDUCATION IN SELECTED
SENIOR HIGH SCHOOLS IN KUMASI METROPOLIS**

KNUST

By

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**A thesis submitted to the Department of Educational Innovations in Science and
Technology, College of Art and Built Environment, Kwame Nkrumah University of
Science and Technology, Kumasi in partial fulfilment of the requirements for the
degree of**

MASTER OF PHILOSOPHY IN ART EDUCATION

October, 2019

DECLARATION

I hereby declare that this submission is my own work towards the degree of Master of Philosophy in Art Education and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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Signature

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Date

DEDICATION

This thesis is dedicated to my mum, Christiana Adjei and my fiancé, Mr. Edward Kwabena Tetteh.

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ACKNOWLEDGEMENTS

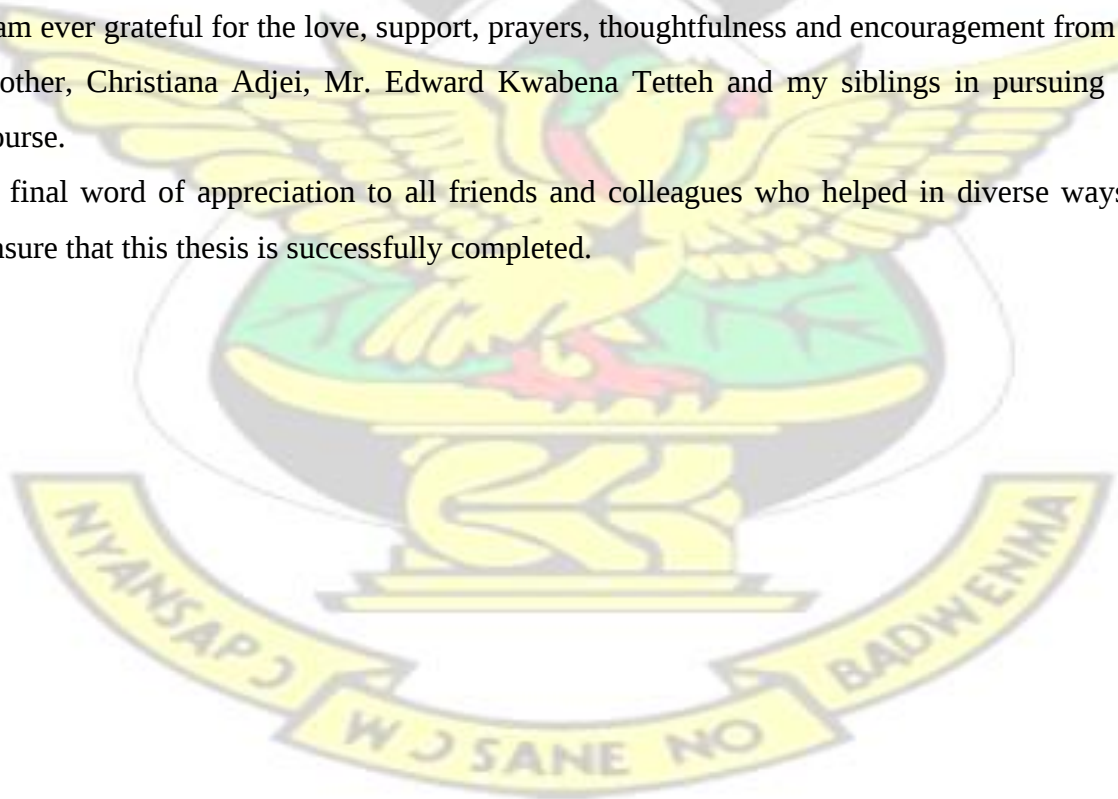
First, I would like to thank the almighty God for the insight, wisdom and knowledge granted to me for this research.

My profound gratitude to my supervisor Dr. Joe Adu-Agyem and Dr. Ebenezer Kofi Howard of Textiles and Fashion Department, KNUST for their selfless guidance and constructive criticism to ensure that this work comes to fruition. I am eternally grateful for their commitment and constant support.

A special thank you to Dr. Daniel Danso of Textiles and Fashion Dept., UEW-K, Dr. Benjamin K. Asinyo and Miss Cynthia Chichi of Textiles and Fashion Dept. KNUST and also to Heads of school, Heads of Department, Textiles teachers, Assemblymen, NaCCA coordinator and all Textiles students who participated in the study. I am also grateful to all the lecturers especially Dr. Mrs. Mavis Osei and Dr. Harry Barton Essel of Dept. of Educational Innovations in Science and Technology for their positive impact on my life during the two-year programme.

I am ever grateful for the love, support, prayers, thoughtfulness and encouragement from my mother, Christiana Adjei, Mr. Edward Kwabena Tetteh and my siblings in pursuing this course.

A final word of appreciation to all friends and colleagues who helped in diverse ways to ensure that this thesis is successfully completed.



ABSTRACT

The sole aim of any Visual Art programme which Textiles is no exception is to foster creativity and equip learners with skills to be self-employed. Skill acquisition comes with a task thus putting the right resources in place to ensure that a desirable result is achieved. Also, there must be key stakeholders to ensure that resources are utilized effectively because the sustenance of every institution largely depends on the availability and accessibility of support system in the teaching and learning environment. Due to the above, the study had two objectives (1) to identify and describe Support Systems available for Textiles and also (2) to assess the impact they have on students' skill acquisition. Several literature were reviewed to highlight on the various support systems which must function properly to ensure skill acquisition in Textiles education in the Senior High Schools. The study employed both qualitative and quantitative approaches (mixed methods) based on case study and descriptive research; and also used interview, questionnaire and observation as the main data collection instruments. The data were collected using the sample size of 50 SHS three students, 5 heads of department, 3 heads of schools, 3 assemblymen, 3 lecturers and 1 National Council for Curriculum and Assessment coordinator in the Kumasi Metropolis. The data were analyzed through SPSS and the CIPP model propounded by Stufflebeam to gain insight into what goes into the teaching and learning of Textiles at the Senior High Schools in the Kumasi metropolis. The study revealed that skills acquired by students are inadequate to be self-employed due to lack of tools, equipment, and materials, the reluctance of some key stakeholders, lack of innovation on the part of teachers, limited instructional period and total neglect of co-curricular activities such as field trips. The teaching syllabus for Textiles in the Senior High School is thorough enough to equip students with enough expertise to be self-employed but the majority of students end up with only theoretical knowledge due to lack of physical resources for effective coursework. Also, key stakeholders who are supposed to offer support to the programme have neglected their responsibilities. To ensure that students acquire the requisite skills to practise a vocation after school, it is recommended that, the government should establish centres within the sub-metros or municipalities to serve as teaching facilities to satisfy the schools within that district. The timelines of both the University and the Senior High School must be structured well so that SHS can access the University's facilities when they vacate. School authorities must collaborate with Textiles teachers to create E-libraries where students can access information in the absence of GES approved textbooks.

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CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter highlights the Background to the Study, Statement of the Problem, Objectives, Research Questions and Delimitation of the Study. Also, the Chapter discusses the Importance of the Study, Definition of Terms and Abbreviations found in this Research.

1.2 Background to the Study

The survival and success of any Visual Art programme largely depend on the Support systems available. Support systems are a broad variety of instructional approaches, educational services, or facilities delivered to learners in an attempt to assist them to speed up their learning progress, become at par with their peers, meet learning goals, or basically to be successful in school (Edglossary 2013).

Therefore, Support Systems in Textiles Education can be defined as a network of resources that provide Textiles students with practical support for the acquisition of skills to enable them to practice a vocation after school. The network of resources may include physical and human resources which must be available and accessible to the Textiles learner to have a holistic education. Ifeanyichuku (2013) is of the view that when teaching and learning facilities, tools and equipment as well as logistics and expertise are available, learners are motivated and the productivity and efficiency of teachers are enhanced. On the contrary, when these afore-mentioned resources are lacking or inadequate, students are likely to perform abysmally (Atieno 2014). He further adds that the availability of these basic items in education boosts the productiveness of schools with regard to academic performance in the students (Atieno 2014).

Visual Art education has been introduced into schools in Ghana to encourage students to be creative and position them to solve problems in the country with less difficulty (Edusei 2004). This means that students offering Visual Art would be equipped with the prerequisite skills that would empower them to secure livelihood for themselves and their families as well as serve the society in diverse ways. The objective of the programme is to foster creativity, appreciation and criticism of artefacts, mass production, and promotion of artefacts (Sintim 2008).

The Visual Art curriculum outlines eight subjects including, Textiles, Leatherwork, Graphic Design, Picture Making, Jewellery, Sculpture, Ceramics and Basketry and each student is required to narrow down in two subjects for three instructional years of Senior High Education together with General Knowledge in Arts which is the core (Opoku-Asare, Agbenatoe, & Degraft-Johnson 2014). These Visual art subjects according to Siaw and Nortey (2011), can be grouped into two categories that are two-dimensional and three-dimensional categories.

Textiles, a subject under the two-dimensional category is described in the Textiles teaching syllabus (2008) as an element of Visual Art that encircle all activities in art which constitute two and three-dimensional forms.

Taking the local industry into consideration, the Textiles syllabus is designed to expand the furtherance of indigenous Textiles industry due to the global competitions which have caused the overriding and falling apart of the Textiles industry in Ghana.

The Textiles programme focuses on giving enough basics to students who wish to further their education in Art. Moreover, it offers sufficient expertise to students ending the second cycle education and would want to be self-employed (CRDD 2010).

1.3 Statement of the Problem

Senior High School Textiles programme is very broad and for that matter expected to offer enough knowledge and skills to students ending their education at the Senior High School who would practice the vocation for industrial and national development (Howard 2013). Meanwhile, many graduates of the SHS Visual Art programmes like textiles do not have the prerequisite skills to be self employed (Antwi-Boadi, 2002).

Usman (2016) holds the view that to enhance the output of the education system which Textiles is one exception, there must be the availability and accessibility of educational resources. Additionally, the SHS teaching syllabus for Textiles suggests tools, equipment and materials that should be made available for the instructional activities in Textiles and the manner in which Textiles teachers should carry out practical lessons in the school environment. To enhance the output of Textiles students to create employment, these questions boggle the mind of the researcher which are; who are the stakeholders involved?

What are the available materials, equipment and tools needed to augment the instructional process? and how is the instructional process conducted?

The study, therefore, aims at assessing Support Systems available for teaching and learning of Textiles and how they impact on students' skill acquisition in selected Senior High Schools in the Kumasi metropolis.

1.4 Objectives

1. To identify and discuss the Support Systems available for the teaching and learning of Textiles in selected SHS in the Kumasi Metropolis.
2. To assess the impact of the Support Systems on students' acquisition of skills in the teaching and learning of Textiles in the selected SHS.

1.5 Research Questions

1. What Support Systems are available for the teaching and learning of Textiles in selected Senior High Schools in the Kumasi metropolis?
2. How do the Support Systems used in the teaching and learning of Textiles in the selected schools impact on students' acquisition of skills?

1.6 Delimitation

The geographical area for the research was limited to five selected Senior High Schools in the Kumasi Metropolis. In content, the study focused on assessing the Support Systems used in the teaching and learning of Textiles and their impact on students' acquisition of skills.

1.7 Definition of Terms

Support system: A network of resources that provide Textiles students with practical support for the acquisition of skills to enable them to practice a vocation after school.

Intangible support system: It is the theoretical knowledge students need to be taught with the help of the tangible support system in order to have a holistic education in terms of skill acquisition.

Tangible support system: it is the physical resources and human resources needed in Textiles education to ensure effectual teaching and learning.

Textiles: A programme of study in the SHS Visual Art Curriculum.

Creativity: It is the act of causing something new to exist.

Appreciation: Assessing and appraising an artwork without passing judgement on it.

Criticism: It is the discussion or evaluation of artwork.

Two-dimensional art: It is a work of art with only length and breadth.

Three-dimensional art: It is a work of art that has depth, length and breadth.

Syllabus: The breakdown of the curriculum into subject areas.

Assessment: A judgment about the value of something.

Visual Art: Any Artwork that can be seen and touched.

1.8 Abbreviations / Acronyms

CRDD: Curriculum Research Development Division

GKA: General Knowledge in Arts

KNUST: Kwame Nkrumah University of Science and Technology

GES: Ghana Education Service

SHS: Senior High School

2D: Two-dimensional

3D: Three-dimensional

PTA: Parent Teacher Association

NaCCA: National Council for Curriculum and Assessment

MOE: Ministry of Education

WAEC: West Africa Examination Council

CIPP: Context, Input, Process, Product

ICT: Information and Communication Technology

1.9 The importance of the Study

- The research will expose the problems that hinder effective teaching and learning of Textiles in Senior High Schools.
- It will add on theoretically to the body of knowledge related to the teaching and learning of Textiles.

- It will serve as an informative material and reference guide for textiles teachers and students in the Senior High Schools.

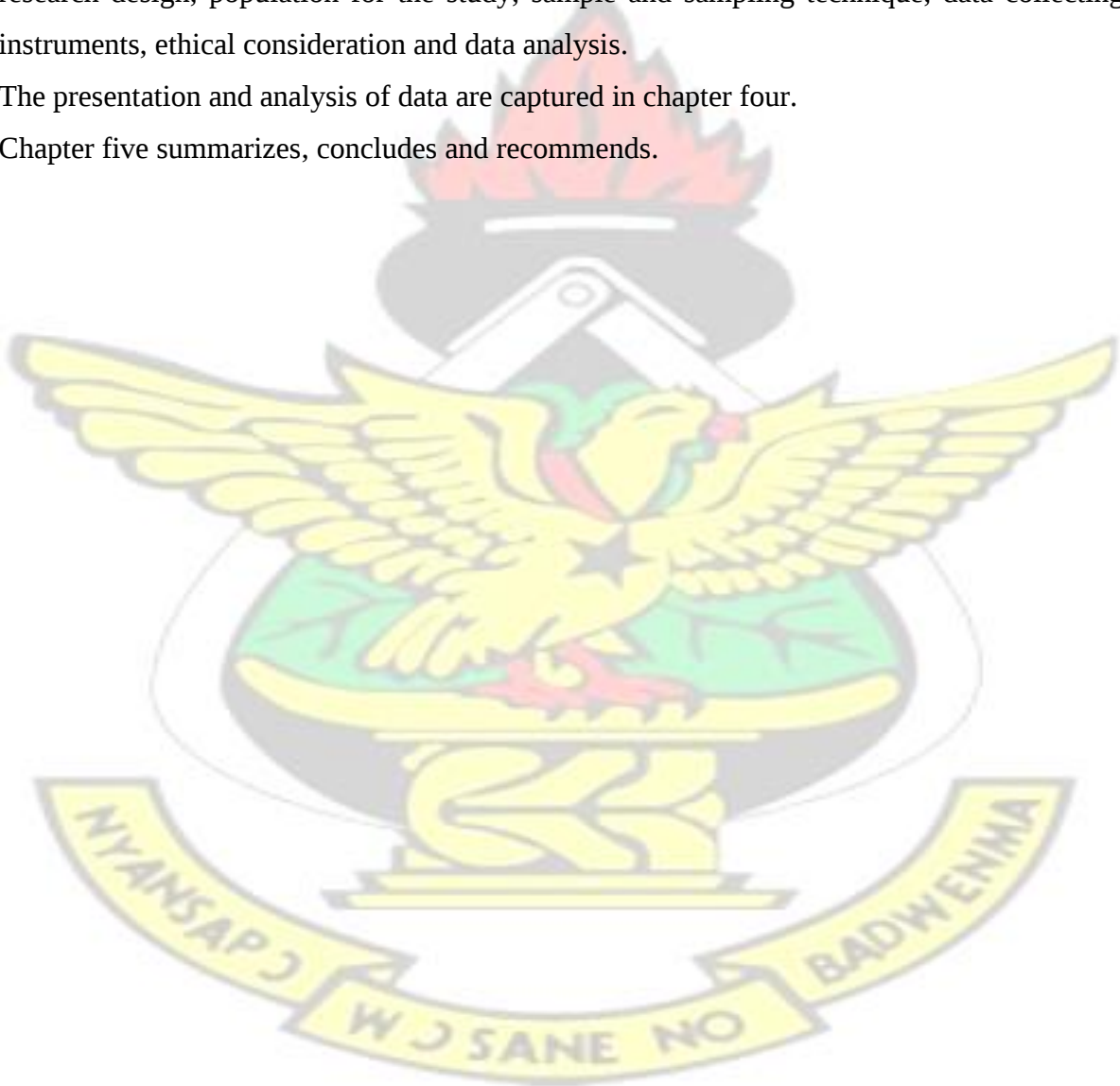
1.10 Organization of the Rest of the Text

The other sections of this project apart from chapter one is summarized into four other chapters. Chapter two consists of related literature review.

Chapter three contains the methodology used in conducting the research which includes research design, population for the study, sample and sampling technique, data collecting instruments, ethical consideration and data analysis.

The presentation and analysis of data are captured in chapter four.

Chapter five summarizes, concludes and recommends.



CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Overview

This section contains the literature that was reviewed with regards to assessment of Support Systems and their impact on students' acquisition of skills in selected Senior High Schools. In this review are the following sub-topics:

- Support systems
- Programme assessment
- The concept of teaching
- Theories of learning
- Visual Art Education in Ghana
- Textiles Education in the Senior High School in Ghana
- CIPP Model for Evaluation
- Careers in Textiles

2.2 Support Systems

Support system involves diverse instructional strategies, educational services, and school resources that offer assistance to students for the acceleration of skill acquisition and learning progress, meet anticipated school prerequisites and learning standards, and succeed in their education (GSP 2016).

Husson (2018) defines supports systems as a group of services that are distant from the conventional educating devices that the project administration programme supplies to its students. Edglossary (2013) views support system as a broad assortment of instructional strategies, educational services, or school assets conveyed to students within the endeavour to help them to speed up their learning progress, become at par with their peers, meet learning measures, or fundamentally to be fruitful in school. Businessdictionary (2019) describes Support Systems as a formal and informal network of merchandise, administrations, staff, and organizations that buttress an entity in its survival and development. The Support Systems sustains the Textiles programme in its survival and growth. Vocabulary (2018) puts it this way, a network of people, facilities, experts who interconnect and remain in informal communication for reciprocal support hence a network

that permit you to live in a characterized way. In Textiles education, Support Systems can be defined as a network of resources that provide Textiles students with practical support for the acquisition of skills to enable them practice a vocation after school. There are two basic types of Support Systems in Textiles Education at the Senior High School. The types are explained below;

2.2.1 Tangible Support System

Tangible Support Systems are things that have a physical form which is quantifiable and are utilized in the company's operations (Harness 2018; Murphy 2019). Grant (2002) opines that Tangible Support Systems comprises workers, stakeholders, monetary resources, formal organizational structures and physical assets such as infrastructure, From Grant's (2002) definition, it can be said in the study that, the tangible support systems are the physical resources and human resources needed in Textiles education to safeguard efficient teaching and learning.

2.2.2 Physical Resources in Textiles Education

Teaching and learning can be effective when resources are sufficient and accessible. Atieno (2014) posits that schools that have inadequate physical resources such as classrooms, workshops, laboratories (studios in the case of Textiles), teaching-learning materials are likely to perform poorly. In other words, the accessibility of instructional materials enhances the productiveness of schools as they are essential things that can ensure great performance in students learning (Atieno 2014). Ifeanyichuku, (2013) is of the view that, when facilities, equipment, tools and materials as well as adequate personnel are available, students are motivated which enhances teacher's efficiency and productivity.

Also, CRDD (2010) prescribes that practical works can be successfully executed when schools are given a workspace which contains at least a set of Textiles equipment, tools and materials capturing all the areas comprising equipment for printing/dyeing, embroidery/appliqué and weaving. Physical facilities in effect are an important variable in both attendance and achievement (Jonathan, Nzeadibe, & Nzeadibe, 2014; Kapinga 2017).

It can be derived from all the assertions made above that physical resources encompass all the school facilities and materials that ensure effectual teaching and learning of Textiles.

These physical resources include; tools equipment, materials, studios/sheds, library, syllabus, textbooks, Textiles industry both indigenous and contemporary and the department of Textiles in the higher institutions.

2.2.3 Human Resources in Textiles Education

Human resources are defined by Heathfield (2018) as a single person or employee within an organization. Therefore, the human resources in Textiles Education involve all the stakeholders responsible for ensuring that Textiles Education achieves its sole aim of equipping students with skills to practice a vocation. In other words, the individuals who provide students with the opportunity to develop their skills. Human resources include stakeholders in Textiles education. These stakeholders in Textiles education include the Textiles teacher, head of department, Ghana Education Service, National Council for Curriculum and Assessment (NaCCA), the district assembly, heads of schools, parents, Parent-Teacher Association and Textiles lecturers.

2.2.4 The Role of Stakeholders in Textiles Education

2.2.4.1 The Textiles Teacher/Lecturer

According to Usman (2016), a teacher is an individual who teaches or instructs and give education to learners in a way of helping them to acquire new knowledge that is able to make them useful for the society and themselves. He continues to establish that teachers cannot be taken away from any organized education because they are a pivotal component of any educational system. Similarly, a Textiles teacher is responsible for imparting knowledge regarding Textiles to make students experts in Textiles for the benefit of society. Textiles lecturers, on the other hand, serve as consultants for the teachers in the second cycle institutions since they have climbed almost all the academic ladders pertaining to Textiles Education. Through the numerous research conducted in the field of Textiles, they may possess some level of expertise to help curb the challenges confronting the Textiles Education at the SHS level.

2.2.4.2 The Head of Department

The HOD is required to set the pace, manage and create the department to guarantee it accomplishes the most elevated conceivable measures of brilliance in all its works (Sheffield, 2013). For instructors to convey their errand, HODs must continuously back them hence encouraging communication channels, arranging with senior authority and external officials on behalf of instructors (Jaca 2013). According to Bambi (2013), HOD's are responsible for setting objectives, apportioning resources to instruction, overseeing the curriculum, monitoring lessons, and assessing instructors. He further asserts that as a HOD, effecting learning through teachers is your paramount responsibility. The availability of physical and human resources is hinged on the effort of the HOD. In Textiles education, HODs are required to liaise with school authority to ensure that, there is a workspace, tools, equipment and material for students and also ensure that teachers who have received adequate training in Textiles are handling the subject.

2.2.4.3 The Headmistress/Master

According to Usman (2016), the foremost task of the head of school includes to interpret policy, actualize curriculum programmes, induct and retrain staff, pay attention to students' well-being, provide and maintain equipment and facilities. Moreover, the onus lies on the head of the school to make sure that teaching-learning process takes place in a congenial environment and after that see to it that the facilities are productively and beneficially utilized so as to achieve educational aims and learning outcomes (Okongo, Ngao, Rop, & Nyongesa 2015).

This is to mean that heads of schools are responsible for creating an enabling environment for Textiles students thus supplying them with all the needed resources to facilitate teaching and learning.

2.2.4.4 Ghana Education Service

The Ghana Education Service, which is run by a governing council, was established as part of the Public Service of Ghana in 1974 by NRCD 247 and subsequently amended by NRCD 252, 357 and SMCD 63. The aim of Ghana Education Service is to establish a strong and conducive atmosphere within every academic institutions and management positions that

will improve effective instructional processes in school and bolster productive management inside the service. Moreover, it is in charge of enacting education policies of the government up to the senior high school level which is to ensure that all Ghanaian children of school-going age are given quality formal education and training (GES 2018).

2.2.4.5 National Council for Curriculum and Assessment

National Council for Curriculum and Assessment is one of the three bodies established under the Education Act 778 (2008) as part of efforts guaranteeing more prominent effectiveness and key management of education delivery within the nation. Its aim is to handle the method of deciding the objectives, aims and structure of courses at the different level of pre-tertiary instruction (NaCCA 2019).

The NaCCA according to Abdulai (2015), leads the improvements in curriculum and assessment and support the usage of changes coming about from its work. It functions in a spirit of consensus and collaboration and looks forward to advancing an innovative and creative environment for all learners in schools and other instruction settings. Abdulai further adds that the NaCCA obtains reports on the quality and amounts of textbooks and any other materials of educational value and make the suitable suggestions to get reports on school inspections half annually and make the necessary proposals to the education service for the advancement of the various areas of the education system.

In 2017, Dr. Mathew Opoku Prempeh, Minister of Education in inaugurating new council members of NaCCA expressed that, the NaCCA has the onerous obligation which is guaranteeing quality education within the nation (Myjoyonline 2017).

2.2.4.6 The District Assembly

They are mindful for the general development of the district and should guarantee the arrangement of development plans of the district. They define and effect schemes for the successful mobilization of the resources fundamental for the general progress of the locale. Moreover, they advance and bolster profitable action and social development within the area and evacuate any impediments to initiative and development (Laboneexpress 2015).

2.2.4.7 Parents

According to Trinity (2019), encouragement and financial support from parents in their learning activities are a primary necessity in children's education. Topor, Keane, Shelton, and Calkins (2010) emphasize that there is a positive impact on children's performance when parents involve themselves in the education of their children.

To ensure effective teaching and learning of Textiles, parents must support children financially so they can purchase materials for the execution of practical works.

2.2.4.8 Parent-Teacher Association

The Parent-Teacher Association is an assemblage composed of parents and instructors. The two sections meet to evaluate teachers and come up with ways of enhancing life performance areas; cultural, academic, social and ethical (Flavia 2012). According to Lineberger (2019), PTA has an objective to make the school a better learning venue for children. Parents are to work together with Textiles teachers to raise money for resources needed in Textiles education (Lineberger 2019).

2.2.5 Intangible Support System

Intangible Support System refers to the non-physical resources of an institution that cannot be measured due to its ambiguity and complexity (Adero 2012). According to Barney (2007), as cited by Adero, (2012) intangible resources include both organizational and human capital. Human capital includes expertise and the way workers are organized.

Intangible support system talks about the theoretical knowledge students need to be taught with the help of the tangible support system in order to have a holistic education in terms of skill acquisition.

Also, the teaching syllabus emphasizes that students must be taken through practical topics which include printing, weaving, dyeing, knitting, crocheting, embroidery and applique because these topics are capable of equipping students with the requisite skills for the creation of jobs to alleviate poverty.

2.2.6 Practical Topics that Needs to be Covered for the Acquisition of Skills

2.2.6.1 The scope of weaving

Weaving is the technique where two bands of yarns intertwine at a right angle. The two bands of yarns encompass of the lengthwise yarn called end and the crosswise yarn called fill (Onder & Berkalp 2018). Kumi (2010) comments that merchants and purchasers use warp and filling whereas ends and picks are familiar with producers and converters.

According to Onder and Berkalp (2018), weaving takes place only on a device namely loom. Lasisi (2014) asserts that a loom is the principal piece of equipment for all kinds of weaving. Therefore, weaving can only be possible only on a loom.

Tools, equipment and materials needed in weaving

Weaving offered in the second cycle institution is composed of card loom weaving, table loom weaving, traditional loom and broadloom weaving. For weaving to take place at the senior high schools, studio or shed must be furnished with the following according to (CRDD 2010);

1. Traditional Kente looms
2. Table looms and broadlooms
3. Weaving accessories (reed, heddle hook, reed hook, warping mill, skeinner, bobbin winder, shuttle, warping/shedding sticks).
4. Yarns (hanks/cones/cheeses)

Weaving processes

Theoretical knowledge in weaving helps students to practise with the help of the equipment, tools and materials for the acquisition of the requisite skills in weaving. If students will be able to weave with the available equipment, tools and materials, they must be exposed to the following topics;

Designing

In order to get a well- constructed woven piece, three determining factors must be considered. They comprise of the design, the draft and the peg plan or tie-up. Designing is a preparatory level across all art programmes. Sackey (2002) as cited by Kumi (2010) asserts that the basics of any woven design are the weave that displays the intertwining of the warp and weft yarns.

Akwaboa (1994) is of the view that the most vital and elemental part of Textiles is designing, which is noticeable in areas like painting, weaving, embroidery, batik and so on. This creates a yarn intersection in which the warp runs above the weft and the weft, above the warp. Akwaboa (1994) further indicates that to begin the process of actual weaving on a loom, the structure of the weaves should be designed on a special point paper (graph sheet). The weave structure is then shaded with colour pencil to depict the intertwining of the warp and weft yarns to form the weave (Kumi 2010).

Warp Preparation

Thakkar and Bhattacharya (2017) define warping as an intermediary procedure for producing warp for the weaving process. Rony and Alam (2011) explain warping as the parallel winding of warp ends from many winding packages either cone or cheese on to a common package (warp beam). Akwaboa (1994) as cited by (Kumi 2010) opines that warping is an activity of putting several long yarns together so they can make up the lengthwise yarns which run through the woven fabric. These yarns also run parallel to the selvedge of the cloth. Warping takes place on the warping mill or the warping board. The central objective behind the warping process is to change the single yarn packages (last product of the winding process) into a multi-thread beam. The beam produced at the warping stage will have the several hundreds of warp yarns wound in the form of a parallel sheet (Thakkar & Bhattacharya 2017) and the resulting package is a warper's beam (Wadje 2009). Goswami, Anandjiwala, and Hall (2004) maintains that the efficiency of the warping process is affected when faults are removed from yarns, hence it is not recommended, and also single break negatively affects productivity by making several hundred other good warp yarns inoperative.

Before warping begins, and in order to produce a design, the cloth particulars of the design for both warp and weft should be indicated in a jotter. They include the type of weave, the colour of yarns to be used, reed used, the total number of warp yarns and the plies used for the weft (Kumi 2010).

He continues to add that, the weaver stands still in the course of warping while the mill moves in a reverse and forward manner. In order to cater for different lengths of warp, the four upright posts are bored with series of small holes from the top to the bottom so that the

crossbars carrying the pegs can be fixed at any height desired depending on the length of the warp to be made.

For warping to begin, estimating the number of ends, the colour pattern of warp/weft, warp laying, beaming, heddling, reeding, tying-up, bobbin winding, weaving must be considered. Warp density is the number of warp ends per unit fabric length thus spacing between warp threads and it is determined by reed number and denting (Onder & Berkalp 2018).

Sizing

According to Wadje (2009), sizing is the heart of weaving. He further states that sizing is the process of coating a starchy adhesive to sheets of yarn to ensure smooth weaving. Goswam, Anandjiwala, and Hall (2004) opine that the primary intent of the sizing process is to produce lengthwise yarns that can withstand tension that emanates from the moving parts of the loom to bring out a perfect weave.

Sizing, however, imparts special properties (weight, feel, softness, handle) to fabric, increases strength and reduces hairiness (Goswam et al., 2004; Wadje 2009).

Raddling

Raddling is the uniform distribution of warp yarns on the loom to ensure that yarns are properly balanced where the raddle is inserted on the loom. Raddling takes place before beaming to obtain equal tension during weaving and it is done by tying the warp to the tension box (“weaving Processes - Broadloom” 2013).

Beaming

Beaming involves the mounting on the loom of milled warp yarns wound up around the weaver’s beam. During the winding, tension sticks are placed within the warp intermittently to give added tension within the mounted warp. During beaming, the warp ends are tied to the tension boxes to give tension to the warp (“weaving Processes - Broadloom” 2013).

Heddling

In heddling, the warp yarns are threaded from end to end of the hearlds based on the pattern of the draft and the design. In heddling, single yarn is passed through one hearld's eye to create in the fabric distinct features (“weaving Processes - Broadloom” 2013).

Reeding

A process of passing the ends through the dents of the reed with reed hook. In the course of reeding, During reeding, it is necessary to consider the fabric volume to decide the number of ends in a dent because of the pattern one hopes to achieve. The breadth and the dimensions of the fabric are determined in reeding (“weaving Processes - Broadloom” 2013).

Tying of ends to flyer rod

This process is fastening edges to the fabric roller. It must properly be done to produce an even tautness in the lengthwise yarns (“weaving Processes - Broadloom” 2013).

Tie-Up

The method of fastening pedals to lams to create a heddling order based on the design one intends to weave (“weaving Processes - Broadloom” 2013).

Weft Preparation

In this process, threads for weaving are unwound from the state of hanks, cheese and cones to the bobbin for weaving. The colour of the fabric is decided in preparing the weft so it can be combined with the warp to achieve the preferred colour for the woven piece (“weaving Processes - Broadloom” 2013).

Actual Weaving

A critical look on how weaving is done on the broadloom shows that the warp yarns receive stress during shedding mechanism, beaming and most especially during beat-up. The development of the pattern in the fabric is determined by the up and down movement of the harness. The shuttle conveys the from one side of the opening to the other and restores the pick to its initial point. The reed is parallel to the harness and is in charge of filling the weft yarn into position against the previously positioned pick yarn. The cloth beam or cloth roll, located at the front of the loom, holds the completed fabric (Kumi 2010).

(Kumi 2010) further outlines fundamental weaving operation which consists of three steps regardless of the kind of loom, its technological state, or the pattern to be woven. He explains the steps further;

Shedding is the raising and lowering of the warp ends by means of the headles and harness to form the shed, the opening between the warp yarns through which the filling yarn can be passed.

Picking is the actual procedure of placing the filling or pick yarn into the shed.

Battening, sometimes called beating-up is the uniform arrangement of the filling yarns into position against the yarns previously placed.

In addition to the above, Wadje (2009) identifies two other supplementary motions required for uninterrupted weaving. They include;

Take Up

It is responsible for pulling the cloth forward after beating-up the weft. It also maintains a similar density of the weft, spaces in every part of the weaving of fabric and rolling the finished fabric on a roller.

Let-off

This motion ensures that ends are unwound from the warp beam during weaving and also keeps a minimum tautness of ends in the weaving process.

Kumi (2010) agrees with (Wadje 2009) that Secondary motions are critical in allowing weaving to take place and in controlling the quality of the final fabric being produced. The let-off motion ensures that the warp ends are kept at the optimum tension for fabric that is being woven. The cloth take-up motion withdraws cloth from the fell and then stores it at the front of the loom.

Wadje (2009) further opines that to ensure quality weave and avoid damages, it is relevant to have some stop motions provided on the loom which are termed as auxiliary motions. These auxiliary motions encompass;

Warp Protector

This motion halts the loom when the shuttle could not get to the selvage side and box properly into either the shuttle box during picking so as to protect the warp threads.

Warp Stop

This auxiliary motion halts the loom during a break in the lengthwise threads or loses its tightness.

Weft Stop

Stops the loom during breakages of pick and prompt the weaver when the pick is exhausted from the bobbin.

Temple

This motion secures fabric steadily to ensure an even generation of the breadth of the fabric. Moreover, it is stipulated emphatically in teaching syllabus for Textiles that students should be taken through weaving being it on the broadloom, traditional loom and card loom as a way of acquiring skill in weaving (CRDD, 2010).

In the area of weaving, students should be able to demonstrate skill in calculating the number of ends in warp based on the density of reed and width of cloth to be woven and demonstrate processes involved in warping, beaming, heddlings, reeding, tying-up, bobbin winding and weaving.

After students have been taken through the basic knowledge in weaving, they should be able to come out with the various types of weave with the help of the physical resources available. Weaving comes in three types which have been explained below according to (Whewell & Abrahart 2019);

Plain weave

The simplest and most universal weave which is produced by passing the weft across the warp twice. On the outward journey, it passes over all the odd warps and under the evens: on its return, it passes over the evens and under the odds.

Twill weave

Twill weaves can be identified by the marked diagonal movement across the cloth created by the sequencing of the weft threads which cross the warps at evenly off-set, vertical intervals (from left to right or from right to left).

Satin weave

The smooth shiny surface of a satin weave is created by the large surface area of exposed warp threads which are intermittently bound on only every fourth cross of the weft (four under, one over). This sequence can be reversed so that the weft threads form the dominant surface area of the fabric (four over, one under) though this type of weave is called 'sateen'.

2.2.6.2 The scope of Dyeing

Baumann and Fletcher (1966) view dyeing as the process of applying pigment on to a substrate in an even manner where the pigment becomes a part of the substrate. They continue further to say that, the substance used for dyeing is referred to as dyes. Dyes include natural substances that impart to textile fibres, fabrics and other materials colour that is relatively stable or fast to washing and light.

According to Needles (1986), the classification of dyes is based on trade name, chemical composition, intended use, colour and mode of application.

Goetz (2008) classifies dyes based on the types of fibres they are most compatible with and the predominant ones are substantive dyes, mordant dyes, direct developed dyes, basic dyes, disperse dyes, naphthol dyes, vat dyes, sulfur dyes and reactive dyes.

Dyeing Techniques

The two basic concepts of dyeing according to CRDD (2010) that Textiles students must go through in order to acquire dyeing skills include batik and tie-dyeing.

Batik

Batik is an additive form of art whereby a fabric is gradually covered up with ink and texture in several similar steps of application. A resisting medium is used to prevent the ink from penetrating areas where the artist desires to have no colour or to protect a previously applied colour (Shabani 2005). According to (Hann 2005), batik is the method of applying hot molten wax to selected areas on fabric's surface where the solidified wax is placed in a dye bath by immersion. The wax serves as a barricade to the dye and the unwaxed areas of the fabric take up the dyes.

Tie/dye

It is a process where parts of a piece of fabric are pulled into tufts which are bound with string or elastic bands for the penetration of the dye to the unbound areas of cloth (Manitoba 2015; Shabani 2005). The tie-dye techniques include pleating, folding, twisting, or crumpling fabric that is bound with string or rubber bands and followed by the application of dye (Pssurvival 2016).

(Manitoba, 2015) further outlines that suitable fabrics which include cotton, burlap, silk, some rayon, linen and wool, Bindings (string, twine, cord, thread, and elastic bands) serving

as binders, Newspapers (to protect the floor or work surface), rubber gloves, an old apron., rags are essential logistics in the production of tie/dye.

Tie/dye comes with several techniques such as tying, stitching/tritiking, knotting, folding, bunching, sandwiching, etc.

Tools, materials, equipment needed in Dyeing

For students to go through dyeing successfully in order to gain skills, the following items according to (CRDD 2010) must be available and accessible;

1. Dyeing tables (padded)
2. Wooden frames /screens
3. Squeegees, spoons, bowls/buckets
4. Large coal pots, stoves (kerosene / gas/electric)
5. Hand gloves and face masks
6. Chemicals: Photo-emulsion, dichromate, hydrosulphite, caustic soda, common salt.
7. Fine mesh or silk organdie
8. Plain fabrics (poplin/calico/lien)
9. Waxes, raffia threads, “kokonte” powder.
10. Dyes (Vat, procion, etc.)

Shabani (2005), in agreement with CRDD (2010) attests that, to produce a batik, there must be basic equipment and materials which include Tjanting, brushes, measuring jugs, scissors, thermometer, ruler, stove, dewaxing bowl, pressing iron, tobacco paper cloth, wax (bee or candle), dyestuff, reactive, salt, soda ash.

In terms of fabric, he suggests 100% cotton fabric due to the fact that they hold dye well and also have a smooth surface.

2.2.6.3 The scope of Screen Printing

Screen printing is a technique completed by a mesh used to transfer ink onto a substrate, except in areas made impermeable to the ink by a blocking stencil. A blade or squeegee is moved across the screen to fill the open mesh apertures with ink, and a reverse stroke then causes the screen to touch the substrate momentarily along a line of contact. This causes the ink to wet the substrate and be pulled out of the mesh apertures as the screen springs back after the blade has passed. This method of using a mesh-based stencil can be used to apply

ink onto substrates such as wood, stickers, T-shirts, posters, vinyl, or other material (Bondy, Pardiwala, & Morgan 2015).

Tools, equipment and material in Screen Printing

According to CRDD (2010), the following items must be available for printing to take its full course;

1. Printing tables (padded)
2. Wooden frames /screens
3. Squeegees, spoons, bowls/buckets
4. Large coal pots, stoves (kerosene / gas/electric)
5. Hand gloves and face masks
6. Chemicals: Photo-emulsion, dichromate.
7. Masking tape
8. Fine mesh or silk organdie
9. Plain fabrics (poplin/calico/linen)
10. Lightbox

2.2.6.4 The Scope of Applique /Embroidery/Crocheting/Knitting

In acquiring skills in applique, embroidery, crocheting and knitting, the following items must be present (CRDD 2010).

1. Knitting pins/needles
2. Crocheting pins
3. Hand-sewing needles (assorted sizes)
4. Stranded cotton/cotton-a-boarder /metallic threads
5. Sequins/beads
6. Fabrics (decorated / undecorated / coloured).

2.3 Programme Assessment

Programme assessment is defined as the orderly and continuous strategy of gathering, analyzing and utilizing data from different sources about a programme and measuring programme results in order to improve student learning. The rationale for assessing a programme is on what and how an educational programme is contributing to the learning,

growth and development of students as a group and not on an individual student (Selim, Pet-Armacost, Albert, & Krist 2008). According to Manoa (2011), programme assessment is a continuous process pointed at gaining insight and enhancing student learning. It includes making our expectations clear and open; setting suitable criteria and high benchmarks for learning quality; systematically gathering, analyzing, and interpreting evidence to decide how well programme performance matches those expectations and benchmarks; and utilizing the resulting data to record, clarify, and improve performance.

Also, Berkeley (2019) establishes that in programme assessment, student performance and experience are being examined across a cohort of students whereas the data accumulated are utilized persistently to improve curriculum effectiveness. They continue further to add that evaluating a programme offers an opportunity to;

- discover whether students are learning within the ways we trust and anticipate, to understand, confirm, or fortify student learning and experience within the programme.
- recognize curricular and pedagogical features and areas that are working well and are in require of advancement.
- for making rich discussions around student learning, instructional method, curriculum.
- Educate how resources ought to be designated for enhancement, progression, reinforcing and to plan for long-term.

From the standpoint of Metz (2007), Programme assessment is a valuable tool that answers basic questions about a programme's effectiveness, and the assessment data can be used to improve programme services.

2.3.1 Types of Programme Assessment

According to Metz (2007), programme assessment can be divided into two types which include;

Process Assessment: assesses the degree to which the objective of a programme has been achieved, the impediments involved and successful strategies associated with programme implementation.

Outcome Assessment: determines whether, and to what extent, the expected changes in child or youth outcomes occur and whether these changes can be attributed to the programme or programme activities.

2.4 The Concept of Teaching

According to Davis and Winch (2015), teaching is a purposive activity whose aim is to empower students to learn what the instructor intends them to learn. Teaching is a set of activities which are outlined to support the internal process of learning (Sequeira 2017). Crawford, Saul, Mathews, and Makinster (2005) assert that teaching is a way of addressing a set of goals for a specific time span, in a specific educational environment and community setting hence, discovering an equilibrium between direct teaching and organizing learners' activities. Bhatt (2002), maintains that teaching serves as an avenue to show knowledge and approve implicitly the time and effort spent in obtaining it. He further opines that teaching must be exceptional where it is characterized by stimulation of feelings related with intellectual activity, the fervor of considering thoughts, understanding abstract concepts and seeing their significance to one's life, and taking part within the process of discovery.

Olutade (2006) opines that teaching is to inform and explain to your students any new knowledge they are anticipating to know in your subject area. Besides, it is a deliberate activity which points at bringing about learning or impartation of knowledge into the learners and one aim of teaching is to bring the students together for way better interaction since, within the process of teaching, students blend unreservedly together and understand one another's conduct.

2.5 Teaching Strategies

Teaching strategies are methods instructors utilize to assist students to become independent, strategic learners (Crawford et al. 2005). According to Crawford et al. (2005), teaching strategies become learning strategies when students freely select the fitting ones and utilize them successfully to accomplish tasks or meet objectives.

There are disparate strategies of teaching and numerous components such as time, content, group size, the students' capability as well as the teachers' individual preference influences one's choice of strategy to utilize. In this manner, it can be concluded that teaching strategies must have a direct link to the subject area being taught. To teach art effectively, the right techniques must be employed.

Agyeman (2018) identifies six strategies that are mostly used in teaching art. These strategies include project-based, discussion, group or cooperative teaching and learning, lecture method, demonstration and lastly the exhibition method of teaching.

2.5.1 Group or Cooperative Teaching and Learning

Cooperative teaching and learning, from the outlook of Johnson and Johnson (2019), is the use of small groups to instruct students so that they work together to maximize their own and each other's learning. They include that, the essential objective of the group teaching and learning is to get learners effectively involved in their learning where there's an accepted common objective.

2.5.2 Project-Based Strategy

Project-based strategy engages learners in an exercise that permits them to build their own knowledge and create authentic products whereas dealing with real-world issues. Teachers serve as a guide in this learning environment while students work to complete long-term, interdisciplinary projects that require critical thinking, content knowledge, communication skills, creativity, innovation and collaboration (Kolk 2019). Also, in a project-based teaching and learning environment, technology is the only tool used by students and according to Kolk (2019), when learners are given the chance to engage the curriculum with the pertinent tools, their interest for school gets to be eminent. Lumen (2019) puts it this way, a pedagogical strategy in which students are guided to make an artefact to showcase the knowledge they have gained. These artefacts may incorporate diverse media such as calligraphy, paintings, three-dimensional representations, videos, photography. He continues to say that in this teaching and learning approach, instructors are there to facilitate additionally, to work with learners to pose beneficial questions, structure significant tasks, coach expertise and also critically evaluate learners' lessons drawn from experience.

Schuetz (2018) therefore admonishes that if we are to prepare students for success in life, instructors need to prepare them for a project-based world.

2.5.3 Exhibition Method of Teaching

Exhibition refers to projects, presentations, or products through which students display what they have learned, ordinarily as a way of demonstrating whether and to what degree they have accomplished anticipated learning standards or learning targets (Edglossary 2014). Exhibition in the instructional process is a test of the instructors as well as the students and their combined learning process. The teachers are tested how far they have been fruitful in imparting the required knowledge and skills whereas the students are tested on the parameters of how much they have acquired by the teaching process. Furthermore, exhibition displays the learning of the students and even within the complete process of the exhibition the teaching and learning process proceeds (FGSI 2018).

2.5.4 Demonstration Method

According to Farooq (2013), demonstration strategy encompasses of conventional classroom method utilized in vocational institutes. Demonstration strategy centers to achieve psychomotor and cognitive goals. The act of demonstrating readily makes a difference to encourage more natural interactions between the students and the teacher. The active responses and completely unconstrained observations give an excellent opportunity for the instructor to put through with them and with their unedited thoughts (Giridharan & Raju 2016). Demonstration method hence, gives concrete, practical learning experience that by its nature commands attention. It has the advantage of utilizing visual as well as oral perceptions, thus facilitating learning. Moreover, it gives a common experience for all learners giving a premise for dialogue to strengthen learning and once more gives students the opportunity to sharpen their observational skills (Cooper 1982).

2.5.5 Discussion method

Omatseye (2007) views discussion as a teaching method of bringing students face to face with the teacher as they engage in a verbal exchange of ideas. She emphasizes that it is a

design that offers an opportunity for discussion between teacher and students and between students.

Schwartz (2019) believes that discussion strategy has the capacity to give teachers an opportunity to evaluate students' understanding of course material and also when teachers are well prepared, the result of the discourse is effective. She further encourages instructors to utilize a number of diverse strategies so as to propel students to trust their own opinions since some students are uncomfortable with the discussion approach.

2.5.6 Lecture method

Paris (2014) defines the lecture method as an oral presentation given by an instructor to a body of students. Giridharan and Raju (2016) assert that the lecture method contains a verbal presentation of ideas, facts, concepts, and generalization. They further add that this method spoon-feeds learner with facts or information. In agreement with what has already been said, Omatseye (2007) opines that the teachers in this method contain a body of knowledge to communicate to his students who are more or less silent participants. She included that there's no self-evident gulf or boundary between teachers and students in the lecturing method.

2.6 The Concept of Learning

Learning is a persevering change in behaviour, or capacity to act in an expected manner, which comes about from series experience (Schunk 2012). Dharmaraj (2016), maintains that learning is a deed of getting evidence, information, skills and values by understanding what to do and how to do any task by synthesizing the diverse types of information seen by us.

All learning includes exercises which might be physical or mental and these exercises change from simple to complex (Sharma 2019).

2.6.1 Learning Theories

In spite of the numerous diverse learning approaches, the fundamental theories of learning encompass behaviourism, Cognitivism and social constructivism (Berkeley 2019). Theories of learning are a well-structured set of principles clarifying the manner people obtain, hold,

and recollect information. The principles of the theories are exceptionally necessary for guiding one to choose methods for instruction for effectual learning (Kelly 2012).

2.6.2 Types of Learning Theories

Behaviourism

Behaviourism is primarily concerned with observable and measurable aspects of human behaviour (Zhou & Brown 2015). Behaviourists believe that the existence of knowledge lies independently and outside of people and also learning occurs when new behaviours or changes in behaviours are acquired through associations between stimuli and responses. Also, they view the learner as a blank slate who must be provided with the experience (Kelly 2012).

They also affirm that the only behaviours that are worthy of study are those that can be directly observed thus, it is actions instead of thoughts or emotions, which are a genuine object of study. In effect, behaviourist techniques have long been employed in education to promote behaviour that is desirable and discourage that which is not. Among the methods derived from behaviourist theory for practical classroom application are contracts, results, fortification, termination, and behaviour modification.

According to Kelly (2012), behaviorism instruction is not geared towards shaping the learner for problem-solving or creative thinking due to the fact that students heed to instructions what they are told and do not take the initiative to change or improve things additionally, a learner is only prepared for recall of fundamental facts, automatic reactions or performing tasks.

Cognitivism

Cognitive theory is based on the thought process behind the behaviour. This is based on the idea that people handle the information they get, instead of just responding to stimuli. Cognitive learning theorists moreover argue that learning occurs information is internally processed. They pay more attention to what goes inside the learners head and focuses on mental processes instead of observable behaviour (Kelly 2012). In cognitive learning, learners interpret experiences and information in the light of their extant knowledge, their stage of cognitive development, their cultural background, their personal history, and so forth. Learners use these factors to organize their experience and to select and transform new

information. Knowledge is therefore actively constructed by the learner rather than passively absorbed (Berkeley 2019).

According to Clint (1993), Cognitive learning theories hold a special place in history, they search the captivating depths of the mind from the perspective of process. He continues to say that in theories of cognition, one's ability to learn stems from the way one perceives, organizes, stores, and retrieves information. Also, the theory emphasizes primarily on how problems can be solved and the facilitation of how information can be stored and recalled for application.

Constructivism

The constructivist holds the view that humans can understand only what they have themselves constructed (Har 2013). Here, the most essential part of constructivism is that in the learning process, the learner should get the emphasis. Learners must develop their knowledge, not others. They must also be responsible for learning outcomes where their creativity and liveliness will help them to stand alone in their cognitive life (Suhendi & Purwamo 2018). Constructivist learning is inductive according to Bhattacharjee (2015) and also states that the concepts are followed by actions rather than precedes it. She further opines that students from the beginning of the lesson actively involve themselves in activities through which they acquire skills and concepts.

In the constructivist classroom, students work basically in groups. Learning and knowledge are interactive and dynamic. There are a great focus and emphasis on social; and communication skills, as well as collaboration and exchange of ideas (Bhattacharjee 2015).

2. 7 Visual Art Education in Ghana

Visual Art is an important elective subject of the Art Education Key Learning Area which provides students with knowledge, skills, artistic and aesthetic experiences, values and attitudes thus contributing to students' whole-person development (hkcdcity 2018)

Visual Art began in Ghanaian schools in the year 1908 with the aim of inculcating practical subjects into the school curriculum to revolutionize the bookishness in the school instruction practised in Ghana (Edusei 2004). The practicality of the new reform was to ensure that students become creative enough to deal with problems governing the nation with relative ease.

Another major concern that was revealed by Edusei (2004), is that the content of education of every nation should reflect the culture of the people hence the introduction of Visual Art into the school curriculum. Edusei (2004) further recounts that there was a cultural gap and the only antidote to bridge the gap is to link the teaching of Visual Art with the indigenous Ghanaian art. This contributed to the birth of culturally based curriculum to produce culturally educated students. *Agyeman (1986) as cited by Edusei (2004) reiterates that, whenever and wherever the content and organization of education are different from the cultural background of the society, that society falters in its progress, and there is bound to be a social unrest and the learner can develop schizophrenic personality”.*

Achimota College was the first institution that had an experience of art and was started by Mr. Herman Meyerowitz, a German-Jew in 1939. In the 1940s, the pioneer art students were veterans like Kofi Antubam, R.R Amponsah, Ahia Lamptey, Cobblah and Ziga (Antwi-Boadi 2002). This was later transferred to Kwame Nkrumah University of Science and Technology formally known as Kumasi College of Technology and was succeeded by Mr. Machendricks in the year 1952. He worked tirelessly to change the department to Art and Craft school, the present-day College of Art. University of Education, Winneba previously called the specialist training college had their share of the Art and Craft Department being instituted there to train specialist art teachers. Then later, teacher training colleges like Komenda, St. John Bosco at Navrongo, Asokore and Peki were introduced to art for the reason being that the art programme will be opened to the new junior high school all over the country. This art programme could not thrive but remained only in the experimental stages until 1986 (Edusei 2004).

According to Kassah and Kemevor (2016), Visual Art education is important and necessary in the development of every human therefore should legitimize for all students irrespective of their inborn talent or what they are capable of academically.

In the Senior High School (SHS), Visual Art curriculum comprises nine subjects: eight electives and one core subject - General Knowledge in Art (GKA). The Elective subjects consist of Leatherwork, Basketry, Graphic Design, Picture Making, Ceramics, Sculpture, Jewellery and Textiles (Opoku-Asare, et al. 2014). These Visual Art subjects according to Siaw and Nortey (2011), can be grouped into two-dimensional categories and three-dimensional categories.

Each student is required to offer at least two electives selecting one each from the 2D and 3D categories. These are studied and examined to obtain West Africa senior secondary certificate which will guarantee one for the college and university education (Okai-Mensah 2015).

Though students have the liberty to offer one subject each from both categories, there are limitations as to what students should offer due to the lack of experts to teach the subjects, lack of practical studios, the necessary tools and materials needed to execute works (Antwi-Boadi 2002; Okai-Mensah 2015). This situation, therefore, poses a threat to students' acquisition of knowledge and skills, therefore, affecting students' career path.

The Visual Art programme has the potency to help students discover tools and materials in their environment for the execution of work. Therefore, Edusei (2004), encourages that the works made by students should portray the cultural values of the communities they live in.

2.8 Textiles Education in the Senior High School in Ghana

For an extended time, Textiles has remained a very significant area in Ghana's educational system that is the formal and informal and has served as the upholder for managing and projecting the nation's image (Bruce-Amartey 2012).

Textiles education is obtainable at each secondary and tertiary levels in Ghana, and has collectively helped to scale back impoverishment, increase employment opportunities and average incomes, and to boost the overall welfare and also the material well-being of each young Ghanaian who has shown interest in the area of Textiles (Bruce-Amartey, 2012; Howard 2013).

Textiles as a subject under the 2D category is offered in addition to at least one elective of the 3D category (Sculpture, Ceramics, Leatherwork, Basketry, Jewellery) plus GKA which is compulsory. According to Sintim (2008), Textiles students combine their electives to four core courses namely Mathematics, English language, Integrated Science and Social Studies. He added that the combination of the elective and core subjects prepare students for further education.

Currently, Textiles has influenced communication, health, education and the overall lifestyle of communities. The progress of art and technology rely for the most part on Textiles. Consequently, the socio-economic development of nations has seen progress due to Textiles

and boosted the standard of living in various components across the globe. In the same vein, the energy of Textiles, combined with Science and Technology reinforces the survival and growth of Ghana. To this effect, it is necessary to assist the youth of Ghana to develop creative skills and competence in Textiles not solely to contribute to the development and significance of science and technology however additionally industry, economics, social studies and so, the proud history as a nation (CRDD 2010).

2.9 The Conceptual Framework

2.9.1 The CIPP Model for evaluation

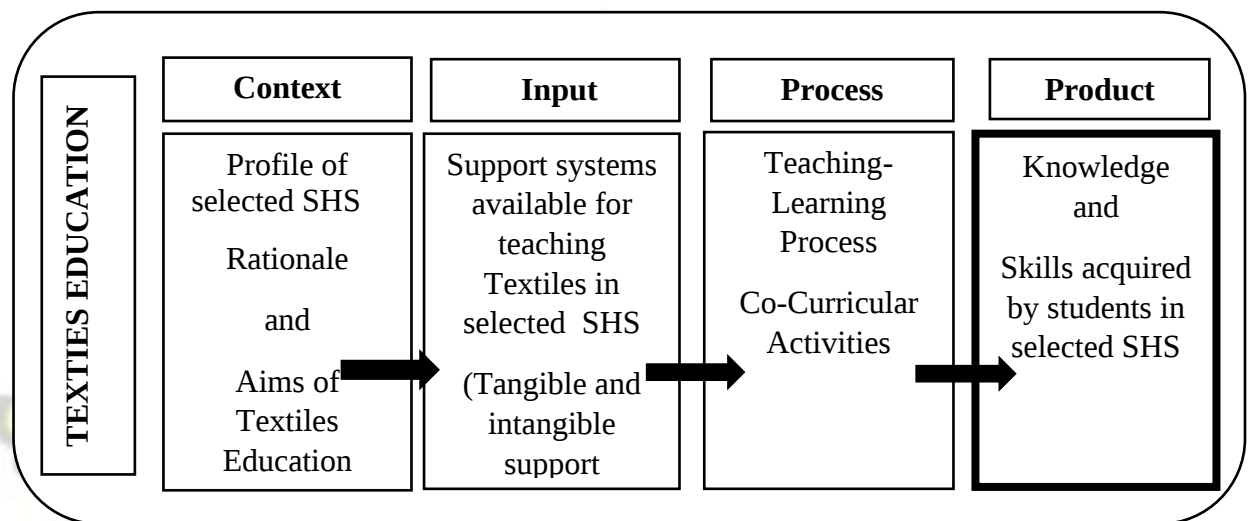
The CIPP Model is a thorough framework for assisting formative and summative evaluations of programmes, projects, personnel, products, institutions, and systems. This model was established by Daniel Stufflebeam in 1966 to guide mandated evaluations of U.S. federally funded projects because these emergent projects could not meet requirements for controlled, variable-manipulating experiments, which they were considered the gold standard for programme evaluations (Stufflebeam 2011).

The CIPP Model (Context, Input, Process, and Product) is relevant for both summative and formative evaluation (Aziz, Mahmood, & Rehman 2018). They further maintain that the model provides a comprehensive outlook of every component by evaluating context, input, process and product from each and every angle thus assisting in an orderly evaluation, satisfying the traditional needs of evaluation. Patil and Kalekar (2015) believe that, although CIPP originally aims at championing the curriculum development process, it can help in a successful evaluation of schools. According to Stufflebeam (2011), the purpose of the model was to deliver decision-makers such as school boards, project directors, school principals, teachers, and counsellors with timely, valid information of use in identifying an appropriate project area; Formulating sound goals and activity plans; Successfully carrying out work plans; Periodically deciding whether to repeat or expand an effort and, if so, how; and meeting the sponsors' accountability requirements. Zhang et al. (2011) establish that, the CIPP evaluation model is designed to systematically guide both evaluators and stakeholders in posing relevant questions and conducting assessments at the beginning of a project (context and input evaluation), while it is in progress (input and process evaluation), and at its end (product evaluation). The components of Stufflebeam CIPP evaluation model are

critical and essential in the planning, implementation, and assessment of a project (Zhang et al. 2011).

In a nutshell, the goal of evaluation is to gather information to be compared with the criteria that have been made and conclude afterwards (Warju Warju 2016).

The CIPP model comes in four elements which are context, input, process and product (Fig.2.1);



2.9.2 Context

In context evaluation of the CIPP model, information is provided for the development and evaluation of mission, vision, goals and objectives, values and priorities. One defines the characteristics of the environment, determine general goals and specific objectives and identify and diagnose the problems or barriers which might inhibit achieving the goals and objectives (Rogers 2019). To take decisions on curriculum and subsequently develop objectives, the aggregate data and information serves as a basis (Tseng, Diez, Lou, Tsai, & Tsai 2010). The general aim for SHS Textiles education ensures that students according to CRDD (2010) are to;

1. Acknowledge the value of Textiles as a central area of productive living.
2. Make an individual, proud, confident and patriotic as learners appreciate their artistic creations.

3. Make one capable to create and solve a problem through activities that employ traditional and contemporary tools, materials and ICT
4. Build one's skills in manipulating objects with the help of ICT, tools and materials.
5. Gain skills to perceive and analyse direct artistic experience and through the processes of self-expression.
6. think critically to help in bringing together different ideas, contradictions and inconsistencies pertaining to human life.
7. Expose students to various job opportunities in Textiles education and make a wise decision that will make you fulfilled.
8. Build relevant attitudes and skills for the growth and development of the nation.
9. Inculcate in students the taste for local Textiles and patronize them.
10. Build positive attitudes for exploring the indigenous textile industry

Also, CRDD (2010) adds that educating students in Textiles informs them on the following:

- a. To understand the characteristics of fabrics, yarns and fibres during application.
- b. How to design, construct and decorate fabric.
- c. Why durable and serviceable fabrics are used on specific occasions.
- d. To understand the temperature of certain fabrics.
- e. How Textiles serves as a way of promoting, preserving, transmitting and sustaining culture.
- f. Knowledgeable in appraising standards and brands of products in order to make good choices.
- g. Wear fabrics that suit the specific functions.
- h. How to care for and maintain fabrics to increase their life span.
- i. Textiles as a means of livelihood.
- j. How Textiles are used to foster community, national and international relationships.
- k. Textiles as a basis for further education at the tertiary level.

In regard to the above, the course constitutes the history, principles and practice of Textiles as a vocation. The Textiles programme focuses on giving enough basics to students who wish to further their education in Art. Moreover, it offers sufficient knowledge and skills to

students ending their education at the second cycle institutions and would want to be self-employed (CRDD 2010).

Okai-Mensah (2015) adds that learners who go through Textiles education for three instructional years should be able to have skills in the following areas in Textiles. These are;

Scope of dyeing: students should gain skill in Idea development, drawing, mixing of colours, painting, stitching, tying, folding of fabric, waxing, de-waxing and ironing

Scope of Spinning: Cleaning of fibres, scutching, and carding, combing, roving, spinning

Scope of Printing: Idea development, painting, stretching the mesh, coating the screen, development of the screen, registering the design, Squeegeeing, printing and finishing

Scope of Knitting and Crocheting: Measuring, stitching, colour combination

Scope of Embroidery and Appliqué: Drawing, cutting, Stitches, colour combination;

Scope of Weaving (Broadloom weaving and Traditional kente weaving): Planning and designing, cloth particulars, warp planning, colour combination, beaming, reeding, tie-up, paper weaving, kente weaving, non-woven fabrics.

Scope of Finishing and caring for fabrics: Ironing, washing, drying, shrinkage control

Scope of Business plan: Costing and pricing of Textiles product,

Okai-Mensah (2015) further revealed that the skills above as stipulated in the teaching syllabus are capable of offering students with the competencies required to establish their own small scale business.

2.9.3 Input

This includes the description of inputs and resources, the way the school has structured its resources and these resources are of various types (Patil & Kalekar 2015). It continues to say that for a school to function properly, physical facilities such as classroom, playground, table/chairs, audio-video aids, common halls, laboratories, library, workshops, auditorium, etc. and human resources such as teaching, nonteaching and administrative staff, counsellors, special teachers are very essential. Aziz et al. (2018) opine that the goal of input evaluation is to give information which will ensure that the goals of the programme are met using the available resources.

Also, Smith (1981) reiterates Stufflebeam, et al. (1971) that input evaluation is useful in figuring out problems on resources to be dealt with during the implementation of a selected

method yet, it helps in finding a solution for a basic problem found in the overall system. According to Aziz et al. (2018), one must consider the following questions during this level of evaluation;

1. What are the distinctive learning abilities that learners will acquire?
2. Is there any level ground between the practical and theory work?
3. What sort of facilities ought to be utilized in the school for the effective delivery of instructions?
4. Are there science laboratories and a library? Are they well maintained?
5. How are instructors utilizing their instructional skills for successful teaching-learning?
6. Are the teachers competent to teach?

In addition, Patil and Kalekar (2015) assert that the school has to focus on various developmental aspects of the learner, therefore, inputs of different kinds like inputs for social development, emotional development; art, craft, physical development etc. also have to be obtained by the school.

2.9.4 Process

In the opinion of Tunc (2010), the process evaluation aims at the manner in which a programme is being implemented. The sole objective is to come up with a response concerning the necessary modification there is something lack in the implementation. At this stage, a series of questions come to play which are; have the programme activities been planned? Are they being carried out as planned? Are available resources being used properly? And do programme participants willingly discharge their assignment?

Aziz et al. (2018) add that this level of evaluation focuses on the day-to-day administration of the programme, teaching-learning processes and also ensures that resources are effectively utilized to achieve the targeted aims and objectives of the product. Also, processes of every school must comprise of well-structured methods, teaching-learning exercises, parent-teacher gatherings, annual ceremonies, co-curricular and extracurricular activities. Tunc (2010) posits that even though the core aim of this level of evaluation is to give a report on the degree of implementation, it can also fulfil a dual function to give information to people outside who wish to acquire knowledge about the programme and also

to support programme staff, evaluators, and administrators in explaining the results of the programme.

2.9.5 Product

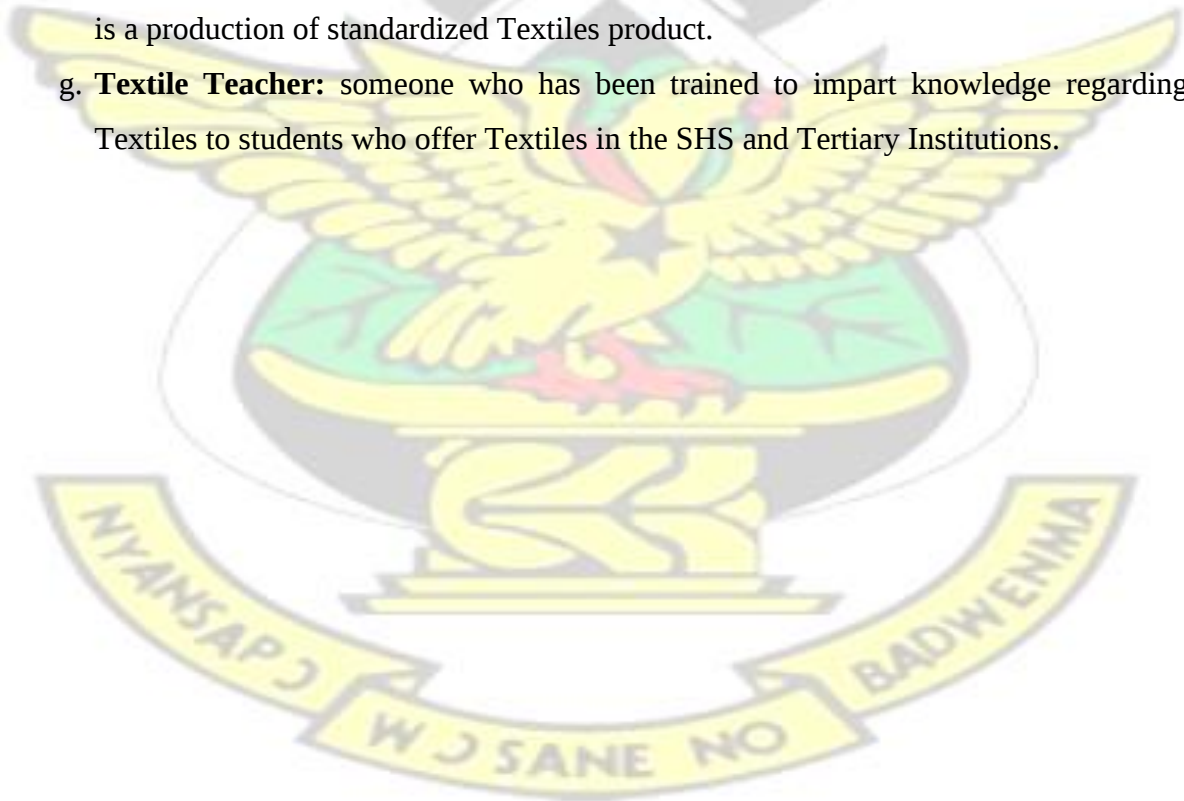
Product evaluation is the last stage of the model and during this stage where information is provided about the extent to which goals and objective have been accomplished and measures and interprets attainments as often as necessary during the project term and at the completion of the project cycle (Smith 1981). Patil and Kalekar (2015) assert that students acquisition of knowledge, skills, values, attitudes, etc. are the most vital outcome of every teaching and learning environment because these are the virtues one is going apply in life or as part of society. Aziz et al. (2018) put it this way, the primary goal of product is not the success obtained from good grades but the acquisition of skills, attitudes, knowledge, learning and abilities to be used in life for the benefit of society. Product evaluation considers the extent of meeting the identified needs and identifying the wide implications of the programme (Tunc 2010).

2.10 Careers in Textiles

Evans-Solomon (2004) and Sottie (2007) as cited by Okai-Mensah (2015) believe that, if tools, equipment, materials are made available and accessible to students, teaching and learning is conducted the manner it should be and have the support of the various stakeholders, then students may find themselves in these job opportunities in Textiles. The job opportunities include Textiles designer, Textiles Engineer, Textiles retailer, Textile Technology, Textile Chemist, Quality Controller / Supervisor and Textiles Teacher.

- a. **Textile Designer:** He or she adds together his/her expertise in Textiles with desirable Visual Art standards to create plans and after that translates or utilize them properly to come out with textile items such as tie/dye, wax print and batiks. Again, he/she can use the principles of the loom in designing to create exceptional fabrics such as plain weave glossy silk and twill weave fabric.
- b. **Textile Technician:** Someone who has been trained to use his/her special skills to help in various areas in Textiles production. He oversees processes involved in production, repairs and bolsters Textile machinery.

- c. **Textile Engineer:** a person who is capable of producing, installing and repairing of Textile machinery and equipment such as looms and loom accessories.
- d. **Textile Retailer:** This is a person who trades in textile goods. They mediate between dealers and buyers. Possessing considerable knowledge about Textiles enhances sales since merchandisers are able to guide both buyers and manufacturers. The merchandisers provide information and criticisms for the enhancement of the Textile merchandizes, therefore a considerable knowledge in Textiles will assist manufacturers to improve on their services to both the buyer and manufacturer.
- e. **Textile Consultant:** An expert in Textiles that provides a solution to issues pertaining to Textile manufacturing and distribution.
- f. **Textile Chemist/ Quality Controller:** someone who is an expert in handling chemical processes of Textiles such as preparation of spinning solution and chemical finishing processes of fibres and fabrics like scouring bleaching and colouring. A Textiles chemist is needed in the processing of textile because they ensure that there is a production of standardized Textiles product.
- g. **Textile Teacher:** someone who has been trained to impart knowledge regarding Textiles to students who offer Textiles in the SHS and Tertiary Institutions.



CHAPTER THREE

METHODOLOGY

3.1 Overview

This section of the study discusses and establishes the Research Design, the Population, the Sampling Technique, Research Instruments, the Collection of Data and Data Analysis Plan employed for the study.

3.2 Research design

Research design is viewed by Singh (2006) as a statement of the object of inquiry and methods for gathering and analyzing evidence to come out with findings; hence a mapping strategy. Kumar (2011) attests that research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems. Basically, there are two approaches to research which encompass qualitative and quantitative approaches. Therefore, this research employed a mixed-methods approach using case study and descriptive research methods.

3.2.1 Mixed Methods

The combination of qualitative and quantitative data in a single study is termed as mixed methods (Halcomb & Hickman 2015). According to Creswell (2007), the essence of combining the two research methods is to provide a better understanding of the research issue than employing only one. Also, to explore more complex features and relations of the human and social world, mixed method is used. The features and relationships are analyzed using quantitative and qualitative (Malina, Nørreklit, & Selto 2015).

The mixed-method was applied in this study to identify the support systems available for Textiles Education and also to assess their impact on students' skill acquisition in selected Senior High Schools. The following sections explain how both approaches that are qualitative and quantitative were employed in the study.

3.2.2 Qualitative research method

The goal of qualitative research is geared towards the understanding, explaining, exploring, discovering and clarifying beliefs, experiences, feelings, attitudes, values, situations, and

perceptions of a group of individuals (Kumar 2011). Sutton and Austin (2015) opine that qualitative work requires the researcher's reflection as a way of providing background and comprehension for readers prior to and during the research process.

It is worthy of notice that qualitative is not based on statistics or surveys or experiments but rather uses words and images to help in the understanding of “why” and “how” something is happening and sometimes “what” is happening (IWH 2011).

Qualitative methods are typically more impressionable – that is, they allow greater uninhibitedness and modification in the manner by which researcher and study participants interact (Collector & Module 2018).

The qualitative approach was employed in this study to collect information from teachers and other stakeholders on their contribution to Textiles education in selected Senior High Schools in Kumasi Metropolis to ensure that students have holistic education that is geared towards skill acquisition. Also, to gather information on physical resources which enhance the teaching and learning in selected senior high schools in the Kumasi Metropolis.

3.2.3 Quantitative Research

Quantitative research is a study which employs statistical strategies in the use and analysis of numerical data. They ask questions about how, how much, what, how many, where, who and when. Quantitative research methods are designed to produce statistically reliable data that tells us how many people do or think something (Malina et al. 2015).

In this study, quantitative approach enabled the researcher to administer questionnaire to a large group of students to gain insight into the way the teaching of Textiles is being conducted, the availability of tools, equipment and materials, the skill they have acquired through the three year instructional periods and also to assess whether the skill they have acquired is enough to be self-employed.

3.3 Research Methods

3.3.1 Descriptive research

Explorable (2018) defines descriptive research design as a scientific method which observes and describes the behaviour of a participant without affecting it anyway. One aim of descriptive study is summarizing thoroughly daily terms of specific occurrences which

people experience (Lambert & Lambert 2012). They further add that the descriptive approach is convenient when researchers need to be informed of individuals who participated in an event, and where activities happened. The descriptive research was used in this study to observe the support systems in place in the various Textiles department and describe their impact on students' skill acquisition.

3.3.2 Case study research

Heale and Twycross (2018) establish that case study is a method of studying an individual or group of individuals thoroughly to generalize over several units. Case study gives an opportunity to enquire and understand issues that are complex using reports of past studies (Zainal 2007). Heale and Twycross (2018) opine that, in as much as case study comes with several advantages, it has drawbacks also thus; how voluminous the data is alone makes it difficult to organize and data analysis and integration strategies need to be critically examined.

According to Zainal (2007), case study allows a critical observation of data within a definite context. One common thing about case study method is the selection of a small geographical area with few people to serve as the main participants of the research.

It is on this premise that the case study method was employed to carefully examine five selected Senior High Schools in the Kumasi Metropolis offering Textiles. Also, to ascertain the physical and human resources available for Textiles Education in the selected Senior High Schools in the Kumasi Metropolis and how these resources ensure a holistic education in Textiles education.

3.4 Population for the Study

A research population is usually collecting a large number of individuals or objects which serve as the main focus of a scientific query (Explorable 2018). Asiamah, Mensah, and Oteng-Abayie (2017) attest that the population is the largest number of participants who share some common features of interest and therefore constitutes the target and accessible population.

3.4.1 Target population

The target population is the sum of the group of people where the sample is usually taken from (McLeod 2014). Asiamah et al. (2017) emphasize that the target population is more narrowed as compared to the general population on the basis of containing no feature that conflicts with the research aim.

This study focused on Textiles students and teachers in five selected schools in the Kumasi metropolis. The participating schools are coded for the reason for secrecy. The sampled schools are encoded as follows;

1. School A
2. School B
3. School C
4. School D
5. School E

The target population for the study was all Textiles students in the selected Senior High Schools for the study which has a total of 281, five heads of the sampled schools, five Visual Art HOD's of the sampled schools, five assemblymen, and ten Textiles teachers in the sampled schools, one NaCCA coordinator, and three Textiles lecturers. The respondents for the study were 310 in all.

3.4.2 Accessible Population

The accessible population was fifty final year Textiles students of the sampled schools, three heads of the sampled schools, five Visual Art HOD's in the sampled schools, three assemblymen and seven Textiles teachers in the sampled schools, one NaCCA coordinator, and three Textiles lecturers. The total number of the accessible population was seventy-two

Table 3.1: Target and accessible population of the respondents

Respondents	Target population	Accessible population
Textiles Students	281	50
Textiles teachers	10	7
Textiles lecturers	3	3
Heads of department	5	5
Heads of SHS	5	3
NaCCA coordinator	1	1
Assemblymen	5	3
Total	310	72

Table 3.2: Accessible students from the selected schools

School	Accessible population
School A	10
School B	10
School C	10
School D	10
School E	10
Total	50

3.5 Sample and Sampling technique

Sample is a subset of people, items or objects derived from a larger population for measurement. A sample is selected to represent the larger group in order to generalize findings if feasible (IWH 2011).

Sampling is a method of choosing an appropriate sample to represent the larger group with the goal of figuring out the features of the entire population (Mugo 2002). Purposive and convenience sampling techniques were used to select sample for the study.

3.5.1 Purposive Sampling

Rai and Thapa (2018) describe purposive sampling as a method of taking decisions regarding people to be involved in the study depending on a number of criteria which may include the expertise of the research issue, or capability and eagerness to take part in the study. They continue to add that purposive sampling is also known as selective, judgmental, or subjective sampling, the reason being that it totally depends on the evaluation of the researcher when it comes to the objects of study. Purposive sampling technique was

employed in the study because respondents have useful information which aided in the answering of the research questions.

Since the study focused on Textiles education, purposive sampling method was used to select five Senior High schools that offer Textiles, SHS three Textiles students, seven Textiles teachers from selected schools for the study, heads of schools, HOD's, three Assemblymen and one NaCCA coordinator.

Using purposive sampling, the final year Textiles students were selected to reveal through an administration of questionnaire whether the Textiles programme has provided students with the requisite skills. Seven Textiles teachers, three Textiles lecturers, three assemblymen, one NaCCA coordinator, five HOD's and three Heads of School were interviewed to reveal their contribution to textiles education.

3.5.2 Convenience sampling Technique

A convenience sampling considers the involvement of individuals who are near and available for the study. This sampling technique can be called accidental (Crossman 2019). It is on this basis that convenience sampling technique was used to select fifty final year students who were available and ready to provide the needed information from the selected Textiles SHS in the Kumasi metropolis.

3.6 Data Collection Instrument

To facilitate a deeper understanding of the study, the researcher employed triangulation that is the use of more than one data sources in an inquiry to generate understanding (Qualres 2018). Honorene (2017) posits that to triangulate means employing multiple theory, method, researcher and data collection method and techniques to come out with valid and reliable results that can be generalized.

In this respect, the main data collection instruments for the study were interview, questionnaire and observation.

3.6.1 Questionnaire

A questionnaire is used to provide a somewhat efficient, affordable and rapid way of getting relatively great size of information from an enormous sample of people (McLeod 2014). The

questionnaires were in three folds Likert questions (see appendix A); the first part was adopted from Sintim (2008) and the other parts were designed by the researcher and copies were given to the supervisor and colleagues to go through for corrections and suggestions. A pretest of questionnaires was done in one school before they were finally administered to the five selected schools. The questionnaires solicited information on how instructional process in Textiles is conducted, the availability of workspace, tools, equipment, and the skill students have acquired in Textiles education. Fifty questionnaires were administered by the researcher to fifty final year Textiles students and all were retrieved.

3.6.2 Interview

Lecturers, Heads of School, Heads of Departments, NaCCA Coordinator and Assemblymen were all given prior notice through a formal letter. The interview guides (see appendices C, D, E, F and G) were given to them one week earlier before the interview was conducted. A one-on-one interview was conducted with seven Textiles teachers, five HOD's, three heads of the sampled SHS and recorded with a phone recorder which was transcribed later by the researcher.

Interview was conducted to pursue in-depth information on support systems used in the teaching and learning of Textiles and their impact on students' skill acquisition in the five selected schools in the Kumasi metropolis (Dapzury & Pallavi 2018). Also, three assemblymen, one NaCCA coordinator, three Textiles lecturers were all interviewed through the administration of a structured interview guide to gain insight into their contribution to Textiles education.

3.6.3 Observation

Observation is a method of data collection in which researchers observe within a specific research arena. Through observation, the researcher is better able to fathom and grasp the idea in which individuals interact (Bryant 2019).

Bryant (2019) continues to say that, firsthand experience with a setting serves as an eye-opener which allows researchers to discover the context and become aware of things which escape the participant using another strategy. It offers an opportunity to study things that people may be reluctant to discuss in an interview.

Observation was employed to collect data on the availability of workspace, tools, equipment, materials and other instructional materials in five selected Senior High Schools in the Kumasi metropolis. Also, it allowed the observation of the manner in which some of the practical lessons are conducted in the selected schools.

3.7 Ethical Consideration

A letter of permission was sent to Lecturers, Heads of School, Heads of Departments, NaCCA Coordinator and Assemblymen to imply that they are not under any obligation to participate when there is the need to fall out from the study and also can refuse to answer questions that are not suitable for them. Students were given two weeks prior notice. Students' questionnaires were printed and administered to them after class hours in order not to disrupt teaching and learning processes. Interview guide was given to teachers and a date was scheduled for the interview. Lecturers, Heads of School, Heads of Department, NaCCA Coordinator and Assemblymen were all given prior notice before the actual interview was conducted.

The anonymity of the schools, teachers, students, lecturers, Heads of School, Heads of Department, National Council for Curriculum and Assessment co-ordinator and Assemblymen were considered. For this reason, sampled schools were encoded as Schools A, B, C, D and E.

No one had access to completed questionnaires, recorded interviews and ticked observational checklist except the researcher.

3.8 Data Analysis

The collated data from interviews, questionnaires and observation were presented and discussed. The recorded interview was transcribed and interpreted. The Statistical Package for Social Science (SPSS) software was employed to analyze data gathered from the questionnaire in order to quantify responses in percentages.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Overview

This chapter presents and analyzes collected data with regards to support systems. It focuses on the use of CIPP Evaluation Model to assess support systems and their impact on students' skill acquisition. The results were contextually discussed under Context, Input, Process and Product conceptual framework and according to the specific objectives of the study.

4.2 Identification and discussion of support systems available for SHS Textiles Programme

4.2.1 Context

Rogers (2019) posits that the context evaluation of the CIPP model gives information to develop and evaluate vision, goals, objectives, priorities, values and mission. In this study, this level of evaluation provided information on the profile of the five selected Senior High Schools, determine general aims of Textiles Education and rationale for studying Textiles in the Senior High School.

4.2.2 Profile of the schools

School A

This school is a single-sex (Boys' School) school which was established in the year 1962. It is found at Gyinyase a suburb in Kumasi. The school is populated with 3,208 students, 126 teaching staff and 88 non-teaching staff. The offered Programmes by the school comprise Visual Art, General Arts, Agricultural Science, General Science and Business. In the area of Visual Art, they offer Sculpture, Ceramics, Leatherwork for their three-dimensional art category and Textiles, Picture making and Graphic Design for their two-dimensional art category which combines with General Knowledge in Art. Students offering Visual Art are 120 in number of which 48 are Textiles students. Textiles is taught by one teacher from SHS one through to SHS three due to the transfer of one teacher with no replacement.

School B

A mixed school comprising of 3089 boys and 2362 girls making a total population of 5451. It is located at Patasi which is within the Kumasi Metropolitan Assembly. The School has 140 teaching staff and 85 non-teaching staff. They offer programmes which include General Arts, Technical, Business, Science, Visual Art and Home Economics. The Visual Art department offer programmes like Leather Work, Sculpture, Graphic Design, Picture Making, and Textiles. In school B, 150 students offer Visual Art of which 80 students offer Textiles. The Textiles programme is taught by three teachers, each teacher handling a class.

School C

The third school is a girls' school which constitutes 3,026 students, 128 teaching staff and 90 non-teaching staff. They offer General Science, General Arts, Home Economics, Business and Visual Art. The Visual Art Department specializes in the area of Sculpture, Graphic Design, Picture Making, Textiles and General Knowledge in arts. In the department, Sculpture, Graphic Design and General Knowledge in Art are taken by all where Picture Making and Textiles are optional. The population of the Visual Art is 250 of which 98 are Textiles students. Textiles is taught by two teachers.

School D

The school is a mixed school located at Suame. It consists of 1381 girls, 2118 boys making a total of 3499. Out of the 3499, 773 represent form one gold track, 841 represent form one green track, 945 constitutes form two and 940 constitutes form three students. The School has 115 teaching staff and 56 non-teaching staff. They offer General Arts, Business, General Science, Home Economics and Visual Art. The Visual Art programme specializes in areas of Sculpture, Picture Making, Ceramics, Textiles, Graphic Design and General Knowledge in Arts. Students who choose Picture Making combine with Sculpture while those who choose Textiles combine with Ceramics. Graphic Design and General Knowledge in Arts are taken by all students. Textiles is taught by two teachers.

School E

School E is a single-sex (Girls School) school with a population of 3362 that can be found at Oduom in Kumasi. It has a teaching staff of 118 and non-teaching staff of 78. The school offers a programme in General Science, General Arts, Business, Home Economics and

Visual Art. In the area of Visual Art, they have specialized in Picture Making, Textiles, Graphic Design, General Knowledge in Arts, Basketry and Sculpture which is compulsory for every student offering Visual Art. The department composes 120 students with 33 students offering Textiles. In school E, Textiles is taught by only one teacher.

4.2.3 Rationale for Studying Textiles

Textiles is an aspect of Visual Art which encircle activities that result in two-dimensional and three-dimensional forms. Societies achieve their relevance from producing artworks. In the same way, societies are identified based on their artworks. To produce Ghanaian youths that are patriotic with a sense of pride, it is therefore important for them to acquire interest for the cultural and aesthetic values in Textiles.

The competitive nature of the Textiles industry globally has resulted in the overriding and falling apart of Ghana's Textiles industry making it necessary to expand the furtherance of the country's indigenous Textiles industry. Considering the expansion of the local industry, the Textiles programme focuses on offering sufficient knowledge and skills to students who go through Textiles to be self-employed to improve on the standard of living (CRDD 2010).

4.2.4 Aims of Textiles Education

According to CRDD (2010), the SHS Textiles syllabus aims at assisting students to;

1. Acknowledge the value of Textiles as a central area of productive living.
2. Make an individual proud, confident and patriotic as learners appreciate their artistic creations.
3. Make one capable to create and solve a problem through activities that employ traditional and contemporary tools, materials and ICT
4. Build one's skills in manipulating objects with the help of ICT, tools and materials.
5. Gain skills to perceive and analyse direct artistic experience and through the processes of self-expression.
6. Think critically to help in bringing together different ideas, contradictions and inconsistencies pertaining to human life.
7. Expose students to various job opportunities in Textiles education and make a wise decision that will make them fulfilled.

8. Build relevant attitudes and skills for the growth and development of the nation.
9. Inculcate in students the taste for local Textiles and patronize them.
10. Build positive attitudes to explore the local textile industry

4.2.5 Input

Aziz et al. (2018) establish that the goal of input evaluation is to give information for deciding on the resources used to achieve the objectives of the programme. Teaching and learning can be effective when resources are sufficient and accessible. Therefore, this level of evaluation in this study provided information on the tangible and intangible support systems available at the sampled schools for the study in the Kumasi Metropolis to ensure holistic education to textiles students.

4.2.6 Availability of Tools, Equipment and Materials

Curriculum Research Development Division (2010) suggests that practical works can be effective in Textiles education when schools have a studio furnished with a minimum of a set of textile equipment from all the groups which comprise of weaving equipment, printing /dyeing equipment, embroidery/appliqué equipment as outlined in Table 4.1

Table 4.1: Suggested Tools, Equipment and materials from the SHS Textiles Syllabus

Scope	Tools/equipment	Materials
Weaving	Traditional Kente looms Table looms and broadloom Weaving accessories (reed, heddle hook, reed hook, warping mill, skeiner, bobbin winder, shuttle, and warping/shedding sticks.	Yarns (hanks/cones/cheeses)
Printing And Dyeing	Printing tables (padded), Wooden frames /screens, Squeegees, spoons, bowls/buckets Large coal pots, stoves (kerosene/gas/electric) Hand gloves and face masks	Chemicals: Photo-emulsion, dichromate, hydrosulphite, caustic soda, common salt. Fine mesh or silk organdie Plain fabrics (poplin/calico/linen) Waxes, raffia threads, “kokonte” powder. Dyes (Vat, procion, etc.)
Applique/Embroïdery/Crocheting/Knitting	Knitting pins/needles Crocheting pins Hand-sewing needles (assorted sizes)	Stranded cotton/cotton-a-boarder /metallic threads Sequins/beads Fabrics (decorated / undecorated / coloured).

Source: Field Work**Table 4.2: Results from observation on the Availability of Work Space, Tools, Equipment and Materials**

School	Workspace, Tools, Equipment, Material
School A	has a common studio, Broken broadloom without accessories
School B	No studio, Two broadlooms, one damaged and without accessories
School C	large studio, one broadloom, one traditional loom, loom accessories, darkroom with a lightbox, five unpadded tables, small quantities of dyes, hydrosulphite, caustic soda, printing paste, a large bowl, three squeegees, buckets, coal pot, spoons, a container holding pins, needles, pieces of fabric, fine mesh
School D	Found no studio, equipment and materials
School E	large studio, Two broadlooms with accessories, darkroom with a lightbox, padded tables, two coal pots, two big pots, Adinkra stamps, small quantities of printing paste, dyes, wax, container holding pins, needle, pieces of fabrics.

Source: Field Work

From Table 4.2 it is clear that studio, tools and equipment are not available in school B and D. According to teachers in school B, a designated place for workspace has been turned into a staff common room by Visual Art teachers whiles studio in school D has been pulled down for the construction of a new administration block. One teacher in school A expressed that, to have tables and workspace for practical lessons like dyeing and printing, lessons are taken during weekends. Regarding the availability of materials for the execution of works, all the teachers revealed that they are only available when it is time for practical lessons because students acquire their own materials.

Using CRDD (2010) standards in table 4.1, some schools lack workspace, tools, equipment and materials. Also, other schools have inadequate tools, equipment and materials which has a negative impact on the Textiles programme. This affirms Antwi-Boadi (2002) and Okai-Mensah (2015), findings that unavailability of resources impedes practical activities and results in student's incapability of practising Textiles as a profession.

Danso (2008) attests to the fact that students are able to acquire skills when the necessary tools and equipment are utilised effectively and consistently. This means that without tools, equipment and materials, students offering Textiles will lack basic skills which will make them self-employed.

Below are samples of tools, equipment and materials found in some of the selected schools;

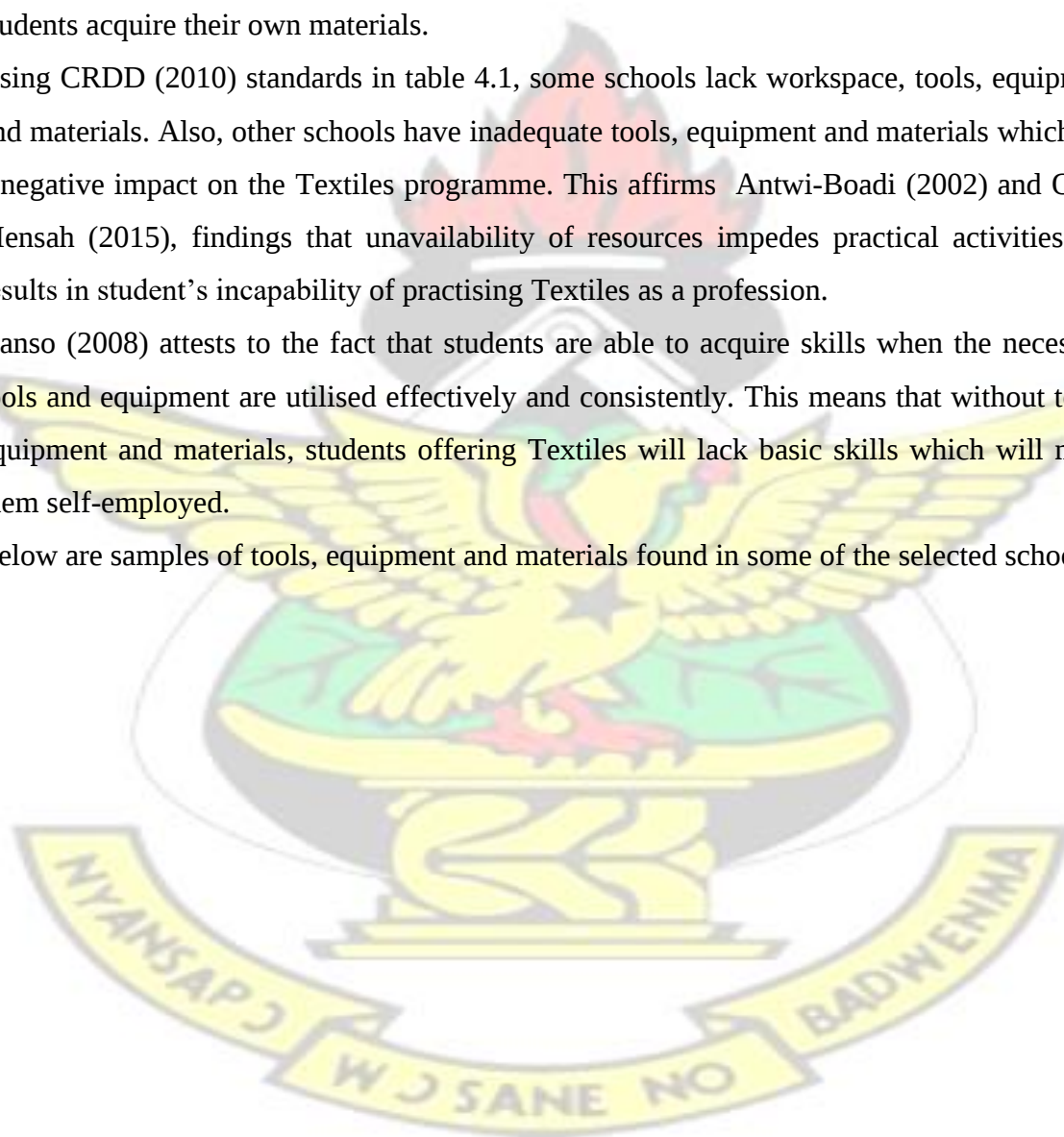




Plate 4.1: Dysfunctional broadloom

Source: Field Work





Plate 4.2: lightbox in a darkroom

Source: Field Work





Plate 4.3: broadloom in a studio

Source: Field Work

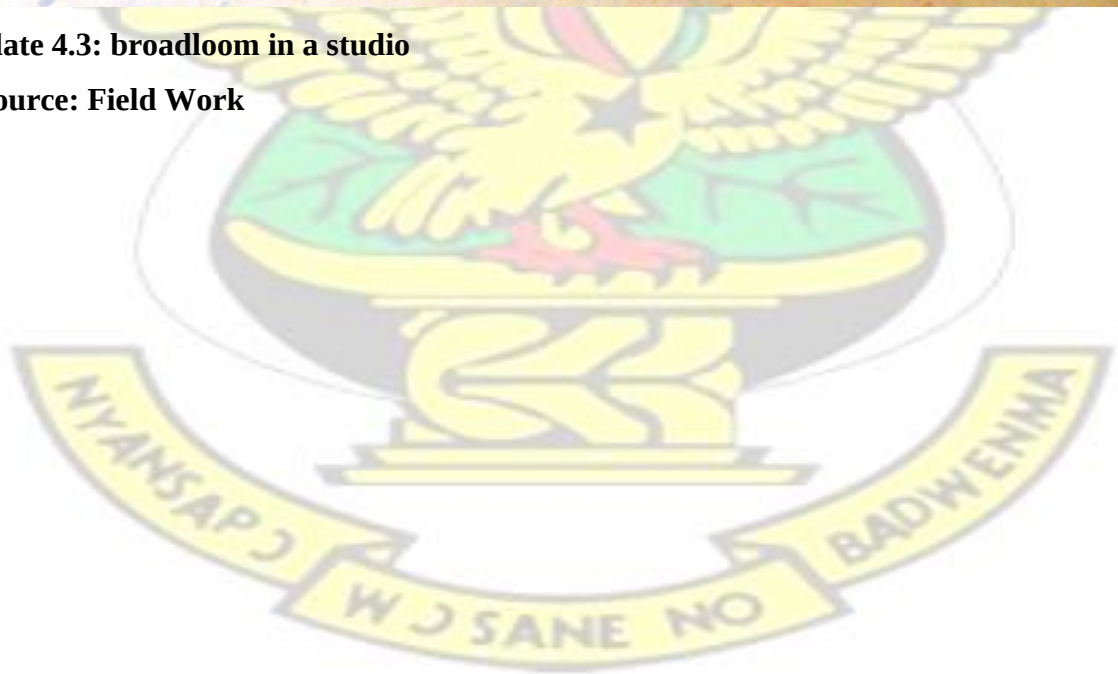




Plate 4.4: Traditional loom in a studio

Source: Field Work



Plate 4.5: Studio with padded tables

Source: Field Work





Plate 4.6: Stamps and wax

Source: Field Work



Plate 4.7: Bobbin winder, shuttle and reed hook

Source: Field Work



Plate 4.8: Warping mill

Source: Field Work

4.2.7 Availability of Instructional Material

Majority (70%) of the Students expressed in the questionnaire that they have no handouts or textbooks for further reading or reference material on the subject but have always relied on notes provided by teachers while (30%) pointed out that they have a textbook in addition to the notes given to them by their teachers.

Instructional materials found include Art for schools and colleges, Textiles notes gathered from the university, fibre to fabric, Textiles technology for schools and Art for schools and colleges, compiled notes from the internet, and Introduction to Textiles for SHS.

Textiles education lack an approved textbook however, it was revealed in an interview with NaCCA co-ordinator that the government has stopped publishing books but rather requires teachers to write for their approval to enhance teaching and learning.

4.2.8 The Textiles Syllabus

Textiles have been organised to cover three years of Senior High School and each year's work consists of a number of sections and units (CRDD 2010). Table 4.3 shows the structure and organization of the Textiles teaching syllabus;

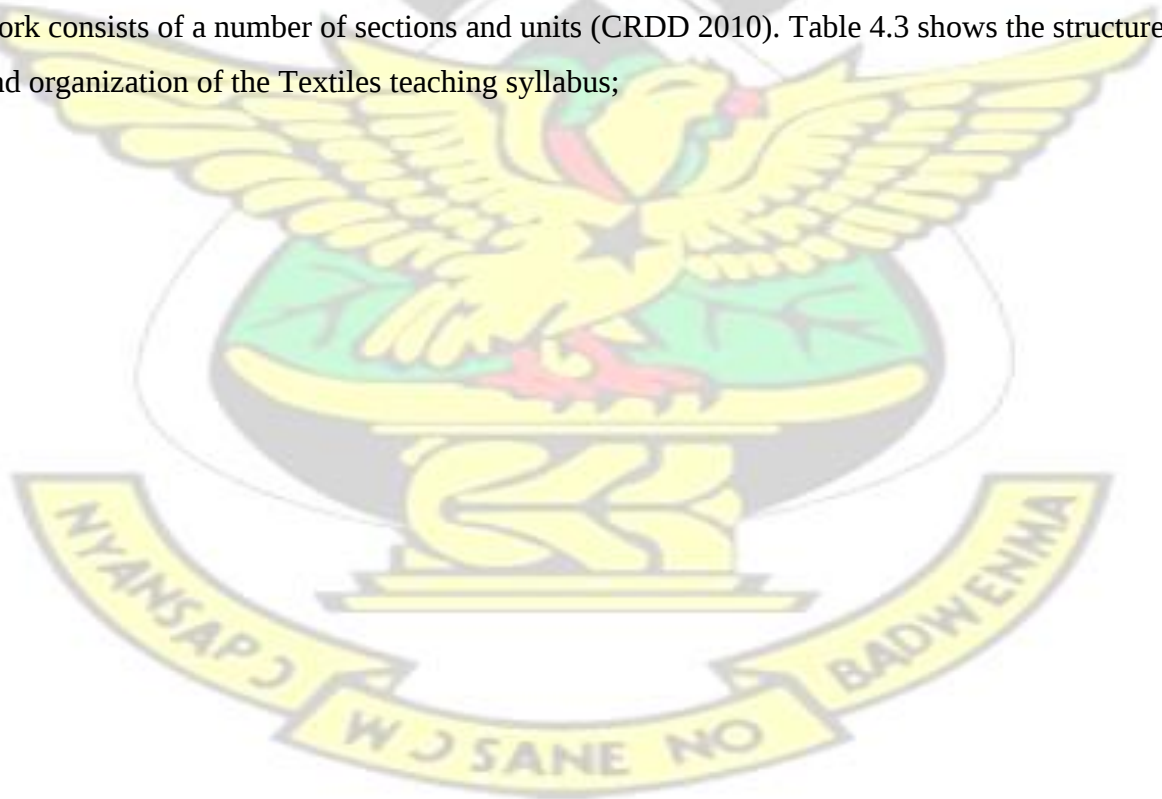


Table 4.3: Textiles Teaching Syllabus, 2010

YEAR ONE	YEAR TWO	YEAR THREE
SECTION ONE INTRODUCTION TO TEXTILES (pp. 1 – 12) Unit 1: Rationale for studying Textiles Unit 2: Textile developments and careers Unit 3: Renowned Ghanaian Textile Artists Unit 4: Textiles and cultural values Unit 5: Competences attitude and behaviour of the student/learner for employment and customers	SECTION ONE: FIBRES: PROTEIN AND MANMADE Unit 1: Protein fibres (wool and silk) Unit 2: Man-made fibres (regenerated, synthetic) Unit 3: Contemporary yarn spinning	SECTION ONE: FABRIC CONSTRUCTION (pp.57- 61) Unit 1: Traditional weaving (kente weaving) Unit 2: Crocheting/knitting Unit 3: Tapestry Unit 4: Non-woven fabrics
SECTION TWO: FIBRE(CELLULOSIC) (pp. 13 -14) Unit 1: General properties of fibres Unit 2: Cellulosic fibres (cotton, linen) Unit 3: Exploring the Environment for textile fibres	SECTION TWO: SUSTAINABLE DEVELOPMENT AND ENTREPRENEURIAL PRACTICE (pp. 32- 39) Unit 1: Managing Resources Unit 2: Healthy Studio Practices Unit 3: Building a portfolio and Exhibition Unit 4: Developing a Business Plan, Brochure and Card Unit 5: Costing and pricing Unit 6: Packaging in Textiles	SECTION TWO: FABRIC DECORATION TECHNIQUES (pp.62- 65) Unit 1: Dyeing /batik making Unit 2: Printing Unit3: Appliqué/embroidery Unit 4: Finishing and care of fabrics
SECTION THREE: YARN PREPARATION (CELLULOSIC) (pp. 15 – 16) Unit 1: Traditional Yarn preparation (Cellulosic) Unit 2: Contemporary yarn preparation. (Cellulosic)	SECTION THREE: FABRIC CONSTRUCTION – TWILL WEAVES AND OTHER WEAVES (pp.40– 47) Unit 1: Designing and Weaving Twill structures Unit 2: Satin/ Sateen Weaves Unit 3: Crocheting and Knitting Unit 4: Tapestry Unit 5: Types of power looms (shuttle/shuttleless) Unit 6: Finishing and care of woven fabrics Unit 7: Effects of weave structures on the body	SECTION THREE: INDIGENOUS TEXTILE EXPLORATION. (pp. 66- 68) Unit 1: Exploration of indigenous tools and Materials Unit 2: Exploration of indigenous fabric construction and decoration processes.

Source: Fieldwork

Teachers believe that the Textiles syllabus is broad as confirmed by Howard (2013) that Senior High School Textiles programme is very broad and for that matter expected to offer enough knowledge and skills to students terminating their education at the end of Senior High School who would practice the vocation for industrial and national development.

The only challenge they indicated is that the contact hours for the teaching of Textiles are not enough considering how the syllabus is loaded. Meanwhile, NaCCA co-ordinator attributes it to laziness on the part of teachers.

Agreeing with the findings of Okai-Mensah (2015), students who are taken through all the topics in the syllabus are likely to gain the following skills;

Table 4.4: Skills to be gained by Students from the Syllabus

Scope	Skills
Dyeing	Idea development, drawing, mixing of colours, painting, stitching, tying, folding of fabric, waxing, de-waxing and ironing
Spinning	Cleaning of fibres, scutching, and carding, combing, roving, spinning
Printing	Idea development, painting, stretching the mesh, coating the screen, development of the screen, registering the design, Squeegeeing, printing and finishing
Knitting and Crocheting	Measuring, stitching, colour combination
Embroidery and Appliqué	Drawing, cutting, Stitches, colour combination
Weaving (Broadloom weaving and Traditional kente weaving)	Planning and designing, cloth particulars, warp planning, colour combination, beaming, reeding, tie-up, paper weaving, kente weaving, non-woven fabrics.
Finishing and caring for fabrics	Ironing, washing, drying, shrinkage control
Business plan	Costing and pricing of Textiles product

Source: Fieldwork

The skills above as stipulated in the teaching syllabus are capable of offering students with the competencies required to establish their own small scale business (Okai-Mensah 2015).

4.2.9 Human Resources in Textiles Education

Human resource as defined by Heathfield (2018) is a single person or employee within an organization. Therefore, the human resources in Textiles Education involve all the stakeholders responsible for ensuring that Textiles Education at the SHS achieves its sole aim of equipping students with requisite skills to be self-employed.

The study sought to find out the participation of Stakeholders in Textiles education which include the Textiles teachers, heads of department, Ghana Education Service, National Council for Curriculum and Assessment (NaCCA), the District Assembly, Heads of School, Parents, Parent-Teacher Association and Textiles lecturers.

4.2.10 The Contribution of the Textiles Teacher

Table 4.5: Teachers' Qualification and Experience

Teacher	Teacher Qualification	Teaching Experience
1	B.A Art Education specialized in Textiles and Jewellery	3 years
2	B.A Art Education specialized in Textiles and ceramics M.A Art Education	22 years
3	B. A Industrial Art majored in Textiles	2 years
4	B.A Art Education specialized in Textiles and leather MPhil. Art Education	10 years
5	B.A Integrated Rural Art MPhil. Integrated Rural Art	20 years
6	B.A Art Education specialized in Picture Making and Ceramics MPhil. Art Education	1 year
7	B. A Industrial Art majored in Textiles M.A Art Education	23 years
8	B. A Clothing and Textiles MTech Textiles and Fashion	19 years

Source: Fieldwork

Instructors are required to have sufficient professional and requisite knowledge that will help them to lead the learners in instruction (Yalo, Arshad, & Salleh 2016). From Table 4.5 it is clear that majority (6) of the teachers have classroom experience and Opoku-Asare and Siaw (2016) opines that the number of years a teacher has served in the classroom indicates acquisition of much knowledge and expertise in coaching, sharing and mentoring colleagues however Okai-Mensah (2015) is of the view that long years of teaching does not equate to competency if there is inadequate in-service training to improve on their instructional

strategies. Textiles teachers, therefore, revealed that they have the expertise to train students with requisite skills when resources to ensure smooth instructional activities are made available to them.

4.2.11 Contribution of Heads of Department

Through an interview, heads of department brought to light that requisitions of tools and equipment needed by the department are made by them. Also, students are given their respective areas due to their effort. Teachers in all the five schools added that Heads of department do their possible best to get them all the needed resources to ensure effective teaching and learning. Three of them, however, indicated that the lack of resources for practical lessons does not mean that they are reluctant to ensure their availability but rather the failure of Heads of schools to release funds to support the Textiles programme. This confirms one of the teachers comment that some heads of schools are not in favour of the Visual Art programme but rather channel all resources to other departments. When heads are not releasing physical resources to support the Visual Art programme like Textiles, teachers are compelled to teach the programme theoretically which will result in no acquisition of skill. This in effect confirms Opoku-Asare & Siaw (2016) that when there is no financial support for teachers and students to demonstrate their lessons, there is a negative impact on skill acquisition in the Visual Art programme which includes Textiles.

4.2.12 Contribution of Academic Heads of Schools

In an interview with academic headmasters/mistresses of the five schools, all of the five interviewed revealed that they provide tools, equipment and sometimes materials for the Visual Art Department. They also expressed that, the programme is running due to their effort. Meanwhile, some teachers and HOD's disagree with this assertion that they provide the resources mentioned earlier for the department. It was found that there were inadequate tools, equipment and materials in almost all the schools sampled which means that most of the heads of the selected schools do not provide logistics to the Visual Art department including Textiles. This hinders effective delivery of instructions which aims at skill acquisition.

4.2.13 Parental Involvement

Parents play an important role in their ward's education. A majority (80%) of the students sampled disclosed that their parents provide them with financial assistance for the purchase of materials for practical lessons as the administration is not providing for them. Teachers also confirmed that students buy their own materials for practical lessons and it is as a result of their parents' monetary contribution. Students perform academically well when they have the support of their parents (Amponsah, Milledzi, Ampofo, & Gyambrah 2018). If all parents make the effort to always provide materials for practical works and the other stakeholders play their part of ensuring that tools and equipment are available and accessible, students may gain the requisite skills needed to be self-employed. Quality education in Textiles can only be attained through stakeholders' collective efforts roles (Moswela 2014).

4.2.14 Contribution of PTA, NaCCA, Assemblymen, GES

An interview conducted revealed that PTA, NaCCA, opinion leaders, GES do not provide any support to the Textiles department. Meanwhile, NaCCA coordinator in an interview revealed that the government has stopped publishing textbooks so their work is to approve of a book as and when it is written and submitted by teachers for inspection and approval. The three assemblymen interviewed are all oblivious to the challenges facing Textiles education; therefore, they have not made any contribution. According to Laboneexpress (2015) assemblymen define and execute plans, programmes and strategies for the successful mobilization of the resources fundamental for the overall development of the area. This could mean that assemblymen are not fully discharging their duties because ensuring the overall development of the area includes the schools that are also situated in the districts.

4.2.15 Contribution of Textiles Lecturers

All the three lecturers, two from the Textiles and Fashion Dept. KNUST and the other one from Textiles and Fashion Dept. UEW-K interviewed also confirmed that Textiles students from the SHS have not been coming to their departments nowadays to have an experience of what they are learning. However, the lecturers revealed that Textiles teachers sometimes consult him to guide them through WASSCE practical even though they are in the know of

the difficulties confronting Textiles education in the SHS, yet their inputs are very subtle. However, in their responses, they expressed readiness to support Textiles Education in the SHS only if teachers and policymakers involve them in decisions regarding Textiles Education in the Senior High Schools.

4.2.16 Calibre of students

Heads of departments in the sampled schools brought to light that most of the students admitted in the departments are those with low grades and even with that most of the students do not have interest in the Visual Art programme including Textiles. They added that some students come there with their own specializations in mind, therefore, placing them in their respective specializations becomes a challenge. Meanwhile, 5% of the students revealed in the questionnaire that they were forced into Textiles while a majority (95%) answered that they have interest in Textiles and would want to pursue as their career in the future.

It was also observed that the boys' schools do not have many students offering Textiles because they believe that Textiles is a feminine course as revealed by some teachers and HODs'.

4.3 Assessment of the Impact of Support Systems on Students' Acquisition of Skill in the Teaching and Learning of Textiles in the selected Senior High Schools in the Kumasi Metropolis.

4.3.1 Process

This level of evaluation focuses on the day-to-day administration of the programme, processes involved in the teaching-learning and also ensures that resources are effectively utilized to achieve the targeted aims and objectives (Aziz et al. 2018).

Before students can acquire much-needed expertise, they must be taken through all the scopes in Textiles. The basic areas under Textiles that students need to be practically oriented such that they can establish a vocation after school include weaving, dyeing, printing, knitting and crocheting, embroidery and applique. In view of this, teachers were interviewed on how instructional processes are being conducted in order to achieve the sole aim of Textiles which is geared towards the acquisition of skills. An interview was also

conducted on teachers to ascertain the teaching methods employed in the delivery of instruction. Also, questionnaires were administered to Textiles students to reveal their understanding of how teaching and learning of Textiles are conducted in their academic environment.

The questionnaire consisted of items under each scope which involved five alternative responses with respect to how teaching is done: strongly agree=5, agree=4, not sure=3, disagree=2, strongly disagree=1.

4.3.2 Respondents' Views on Teaching of Weaving

Table 4.6: Teacher has taught weaving both broadloom and traditional loom.

	Frequency	Percent	Valid Percent	Cumulative Percent
Agree	16	32.0	32.0	32.0
Strongly Agree	34	68.0	68.0	100.0
Total	50	100.0	100.0	

Table 4.7: Teacher demonstrated weaving both on the broadloom and the traditional loom.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	42	84.0	84.0	84.0
Agree	8	16.0	16.0	100.0
Total	50	100.0	100.0	

Source: Field Work

Table 4.6-Table 4.7: Teaching of Weaving

In the teaching of weaving, two (2) teachers expressed that it was demonstrated but due to time constraint the students could not demonstrate, five (5) mentioned that notes were taken due to the fact there are no tools, equipment and materials to be used. Also, students buy their own materials and sometimes are reluctant to buy due to financial constraint. This, however, makes it impossible to effectively teach the lesson. Teachers are compelled to employ lecturing method in weaving lessons due to the circumstances surrounding them.

4.3.3 Respondents' Views on Teaching of Dyeing

Table 4.8: Teacher has taught dyeing

	Frequency	Percent	Valid Percent	Cumulative Percent
Agree	3	6.0	6.0	6.0
strongly agree	47	94.0	94.0	100.0
Total	50	100.0	100.0	

Table 4.9: Dyeing lessons were demonstrated

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	15	30.0	30.0	30.0
Strongly Agree	35	70.0	70.0	100.0
Total	50	100.0	100.0	

Source: Field Work

Table 4.8-Table 4.9: The Teaching of Dyeing

From Table 4.8 and Table 4.9 it is obvious that a large majority (70%) of students strongly agree that the teaching of dyeing has always been coupled with a demonstration. Teachers confirmed that dyeing has always been practically demonstrated because it does not require any sophisticated tools and equipment as compared to weaving. Others also expressed that dyeing does not require a lot of instructional time comparing to weaving that can take the whole term if care is not taken. It was observed in two schools that, practical lessons were done during Saturdays giving students enough time to practise and also for teachers to meet their objectives for the lessons. It can, therefore, be deduced that teachers demonstrate dyeing lessons.

4.3.4 Respondents' Views on Teaching of Printing

Table 4.10: Teacher has taught both block printing and direct printing

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	50	100.0	100.0	100.0

Table 4.11: Block and direct printing were practically demonstrated by teacher

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	11	22.0	22.0	22.0
Agree	14	28.0	28.0	50.0
Strongly Agree	25	50.0	50.0	100.0
Total	50	100.0	100.0	

Source: Field Work**Table 4.10-Table 4.11: The Teaching Printing**

In an interview with teachers in school D, it was revealed that due to lack of workspace, tools, and equipment, students visit freelance artist for the production of their practical works. The danger in this act is that some students might be tempted to hire someone to do it for them for marks

Generally, teachers demonstrate printing as the majority (78%) responded in table 4.11.

4.3.5 Respondents' Views on Teaching of Embroidery and Applique

Table 4.12: Teacher has taught both embroidery and applique

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Sure	4	8.0	8.0	8.0
Agree	4	8.0	8.0	16.0
Strongly Agree	42	84.0	84.0	100.0
Total	50	100.0	100.0	

Table 4.13: The teaching of embroidery and applique were practically demonstrated.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	9	18.0	18.0	18.0
Agree	16	32.0	32.0	50.0
Strongly Agree	25	50.0	50.0	100.0
Total	50	100.0	100.0	

Source: Field Work**Table 4.12- Table 4.13: The Teaching of Embroidery and Applique**

Table 4.12-4.13 show clearly the teaching of embroidery and applique is coupled with demonstration. Teachers believe that teaching embroidery and applique do not require much since it can be done in the classroom with few items.

4.3.6 Respondents' Views on Teaching of Crocheting and Knitting

Table 4.14: Teacher has taught knitting and crocheting

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	50	100.0	100.0	100.0

Table 4.15: Knitting and Crocheting were Practically Demonstrated by Teacher

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	20	40.0	40.0	40.0
Agree	5	10.0	10.0	50.0
Strongly Agree	25	50.0	50.0	100.0
Total	50	100.0	100.0	

Source: Field Work

Table 4.14- Table 4.15: The Teaching of Knitting and Crocheting

Students indicated from Table 4. 14 – Table 4.15 that, knitting and crocheting were practically demonstrated which was also confirmed by teachers. The responses from students and teachers show clearly that students are taken through all the scope in Textiles. The manner in which they are taught is where the challenge is. Teachers are willing to demonstrate all lesson but time and availability of resources have become the major impediment.

4.3.7 Co-curricular Activities

4.3.8 Participation in field trips

Teachers expressed that field trips have become impossible for them as Textiles teachers due to several reasons such as to lack of funds, time constraint and ungranted permission from heads. However one revealed that students are taken to field trips once a term. Students confirmed through their responses from the questionnaire when a large majority (76%) of them strongly disagreed that they have been going on educational visits, about a quarter (20%) disagreed and the rest (4%) said they were not sure.

Even though field trip is an essential tool in teaching and learning because using traditional methods is inadequate to challenge learners to explore freely or to have first-hand experience on a specific subject (Sitali-Mubanga, Lukonga, & Denuga 2018), unfortunately, majority (4) of the schools sampled do not take part.

4.3.9 Participation in Art Exhibition

Two schools were found with exhibition rooms even though a large majority (90%) of the respondents clearly stated that they have not taken part in any art exhibition. One uses the exhibition room as a classroom where Textiles lessons take place. Other schools were found with no exhibition rooms and responses from them indicate that they do not participate in an exhibition. Teachers, however, expressed that exhibition has become difficult due to lack of resources to enable students to produce works for display while others also attributed it to limited contact hours for the Textiles programme. When students go through a three-year course without participating in an exhibition it becomes a great loss because they are missing out on a whole chapter of the syllabus (Opoku-Asare et al. 2014).

4.3.10 Product

The primary goal of product is not the success obtained from good grades but the acquisition of skills, attitudes, knowledge, learning and abilities to be used in life for the benefit of society (Aziz et al. 2018).

Similarly, the Textiles programme focuses on giving enough basics to students who wish to further their education in Art. Moreover, it offers sufficient knowledge and skills to students ending their education at the second cycle institutions and would want to be self-employed (CRDD, 2010). Therefore, this level of evaluation assessed the skills students have acquired from the various scopes in Textiles.

This part of the questionnaire aimed to reveal skills acquired by students. It consists of items under each scope that involved three alternative responses: very skilled=3, skilled=2, not skilled=1.

4.3.11 Assessment of Students' Skills in Weaving

Before weaving is done there are preparatory processes that are so crucial for actual weaving to be done. These processes include warping, beaming, heddlng, reeding, tying-up, bobbin winding.

Table 4.16: I can prepare warp for weaving

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	30	60.0	60.0	60.0
Skilled	7	14.0	14.0	74.0
Very Skilled	13	26.0	26.0	100.0
Total	50	100.0	100.0	

Table 4.17: I can do beaming

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	35	70.0	70.0	70.0
Skilled	10	20.0	20.0	90.0
Very Skilled	5	10.0	10.0	100.0
Total	50	100.0	100.0	

Table 4.18: I can do heddling

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	40	80.0	80.0	80.0
Skilled	6	12.0	12.0	92.0
Very Skilled	4	8.0	8.0	100.0
Total	50	100.0	100.0	

Table 4.19: I can do reeding

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	32	64.0	64.0	64.0
Skilled	14	28.0	28.0	92.0
Very Skilled	4	8.0	8.0	100.0
Total	50	100.0	100.0	

Table 4.20: I can do tying-up

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	32	64.0	64.0	64.0
Skilled	12	24.0	24.0	88.0
Very Skilled	6	12.0	12.0	100.0
Total	50	100.0	100.0	

Table 4.21: I can prepare the weft for weaving

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	10	20.0	20.0	20.0
Skilled	20	40.0	40.0	60.0
Very Skilled	20	40.0	40.0	100.0
Total	50	100.0	100.0	

Table 4.22: I can weave on my own by demonstrating the three basic motions in weaving thus shedding, picking and beating up

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	35	70.0	70.0	70.0
Skilled	12	24.0	24.0	94.0
Very Skilled	3	6.0	6.0	100.0
Total	50	100.0	100.0	

Source: Field Work

Table 4.16- Table 4.22: Assessment of Students' Skill Acquisition in Weaving

In weaving, it is clear from the responses of the students that they lack adequate skill which will make them self-employed. Tools and equipment are woefully inadequate for effective delivery in weaving. This confirms an assertion made by (Antwi-Boadi, 2002) that lack of tools and equipment militate against practical activities and result in students running away from weaving question to dyeing or printing during WASSCE. This hinders teachers from demonstrating rather compelling them to handle weaving lessons theoretically. It was revealed through an interview that even schools where tools and equipment are available, teachers are not demonstrating weaving due to limited contact hours. Students could not practise what they have learnt after school when they cannot produce a weaving item whiles in school. This is an indication that students lack requisite skill in weaving in order to practise a vocation in weaving.

4.3.12 Assessment of Students' Skills in Dyeing

Table 4.23: I can prepare fabric for dyeing

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	5	10.0	10.0	10.0
Skilled	15	30.0	30.0	40.0
Very Skilled	30	60.0	60.0	100.0
Total	50	100.0	100.0	

Table 4.24: I can prepare a dye bath

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	30	60.0	60.0	60.0
Skilled	15	30.0	30.0	90.0
Very Skilled	5	10.0	10.0	100.0
Total	50	100.0	100.0	

Table 4.25: I can produce a batik

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	25	50.0	50.0	50.0
Skilled	15	30.0	30.0	80.0
Very Skilled	10	20.0	20.0	100.0
Total	50	100.0	100.0	

Table 4.26: I can produce tie/dye

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	5	10.0	10.0	10.0
Skilled	15	30.0	30.0	40.0
Very Skilled	30	60.0	60.0	100.0
Total	50	100.0	100.0	

Source: Field Work, 2019

Table 4.23- Table 4.26: Assessment of Students Skill in Dyeing

Table 4.23-4.26 shows that half (50%) of the students have acquired enough skills in dyeing as compared to weaving. This confirms that teachers have been demonstrating dyeing though a majority (60%) believes that what they have been taught is not enough to practice a vocation.

4.3.13 Assessment of Students' Skill in Printing

Table 4.27: I can construct and prepare a screen for printing

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	10	20.0	20.0	20.0
Skilled	35	70.0	70.0	90.0
Very Skilled	5	10.0	10.0	100.0
Total	50	100.0	100.0	

Table 4.28: I can prepare printing paste for printing

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	41	82.0	82.0	82.0
Skilled	5	10.0	10.0	92.0
Very Skilled	4	8.0	8.0	100.0
Total	50	100.0	100.0	

Table 4.29: I can print with screens on my own

	Frequency	Percent	Valid Percent	Cumulative Percent
Not Skilled	8	16.0	16.0	16.0
Skilled	29	58.0	58.0	74.0
Very Skilled	13	26.0	26.0	100.0
Total	50	100.0	100.0	

Table 4.30: I can prepare badie printing ink, design and print a piece of Adinkra cloth

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Not Skilled	50	100.0	100.0	100.0

Table 4.31 I can print with Adinkra stamps and dyes

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
not skilled	4	8.0	8.0	8.0
Skilled	40	80.0	80.0	88.0
very skilled	6	12.0	12.0	100.0
Total	50	100.0	100.0	

Source: Field Work

Table 4.27- Table 4.31: Assessment of Students' Skill in Printing

Table 4.27-Table 4.29 indicate that majority (86%) of the students are skilful in screen printing leaving few (14%). It also confirms that teachers have been demonstrating screen printing and involve students in the instructional period.

On the contrary, All the fifty students sampled possess inadequate expertise from the preparation of badie printing ink, designing and printing a piece of Adinkra cloth as it is indicated in table 4. 28. Meanwhile, majority (92) of the students are skilful in printing with Adinkra stamps and dye. This means when the materials are made available, the skill they have acquired in batik and tie/dye-making will be applied. It was obvious in an interview that teachers themselves do not know how to prepare badie printing ink but they can also print when materials are made available just like the students.

4.3.14 Assessment of Students' Skill in Embroidery and Applique

Table 4.31: I can make a stitch on a fabric

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Not Skilled	3	6.0	6.0	6.0
Skilled	17	34.0	34.0	40.0
Very Skilled	30	60.0	60.0	100.0
Total	50	100.0	100.0	

Table 4.32: I can demonstrate on-laying and in-laying techniques in applique

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Not Skilled	20	40.0	40.0	40.0
Skilled	17	34.0	34.0	74.0
Very Skilled	13	26.0	26.0	100.0
Total	50	100.0	100.0	

Source: Field Work

Tables 4.32-4.33: Assessment of Students Skill in Embroidery and Applique

Teachers expressed that embroidery and applique are done manually and believe that the skills students have acquired do not match up to standard. They also added that students have the skill to make stitches on their torn dresses but not something that can establish them in terms of job creation.

4.3.15 Assessment of Students' Skill in Knitting and Crocheting

Table 4.33: I can construct knitted and crocheted fabrics

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
Not Skilled	20	40.0	40.0	40.0
Skilled	25	50.0	50.0	90.0
Very Skilled	5	10.0	10.0	100.0
Total	50	100.0	100.0	

Source: Field Work

Table 4.34: Assessment of Students Skill in Knitting and Crocheting

Teachers indicated that crocheting requires only a crocheting pin and yarns to produce items so they believe what students have acquired will help them produce crocheting items like purse and bags. The production of these items can help students generate income for living

after school. In contrast, teachers revealed that proper knitting can only be done on a knitting machine and therefore what they teach students is not enough for self-employment.

Below are Plates 4.9-4.12 displaying samples of students' work found in the selected Senior High Schools;

KNUST





Plate 4.9: Batik work
Source: Field Work



Plate 4.10: Applique work

Source: Field Work





Plate 4.11: Kente strips

Sources: Field Work



Plate 4.12: Frame loom weaves

Source: Field Work



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

This chapter presents a summary of the entire findings and the conclusions drawn out of the findings. It, therefore, gives recommendations on support systems and the impact on students' skill acquisition.

5.2 Summary

The study was conducted using descriptive and case study research methods based on qualitative and quantitative approaches (Mixed method) to assess support systems available for Textiles education and how they impact students' skill acquisition. The researcher sampled fifty final year textiles students, seven Textiles teachers, five HODs, three heads of school, in five senior high schools in addition to three Textiles lecturers, one NaCCA coordinator, and three assemblymen all in the Kumasi metropolis using purposive and convenience sampling techniques. Data were collected through observation, interview and questionnaire and later were assembled and discussed using themes.

The first objective which sought to identify the support systems available brought to bear that there are both human and physical resources. The support system identified include the Textiles teacher, head of school, PTA, HOD, parent, community, NaCCA, Textile lecturers, Textiles students, workspace, tools, equipment, materials, textbooks, Textiles syllabus, field trips and art exhibition.

The principal findings of the objective one are, some of the stakeholders are oblivious to the challenges confronting the programme and those who are aware are not providing any support to ensure that the programme is successfully implemented.

Majority of the schools do not have workspace, tools, equipment and materials. Those who have the workspace furnished with tools, equipment and materials are also not taken through some of the topics due to the inadequacy of instructional time.

In the quest of seeking answers to objective two, the principal findings that came up were that majority of the support systems were not functioning properly as it is expected in order to equip students with requisite skills. The reluctance of some key stakeholders and lack of facilities to fully implement the sole aim of the Textiles programme have resulted in

students lacking skills to practice a vocation. Even students who claim to be skilful cannot work on their own during WASSCE practical unless they are assisted by teachers or a hired resource person. Students are generally not skilled enough to practise a vocation because majority cannot go through a whole process without receiving guidance.

It has become obvious that students are prepared solely for examination rather than equipping them with skills for the job market.

5.3 Conclusions

The teaching syllabus for Textiles in the Senior High School is thorough enough to provide the prerequisite knowledge and skills to students who will terminate their education at the end of the three years and would want to practice a vocation. This has the capacity to reduce the unemployment rate in the country but students end up rather with a theoretical knowledge due to lack of physical resources for effective coursework. Also, key stakeholders who are supposed to offer support to the programme have neglected their responsibilities. Co-curricular activities like field trips, art exhibition, art celebrations that complement the programme have not been given the needed attention.

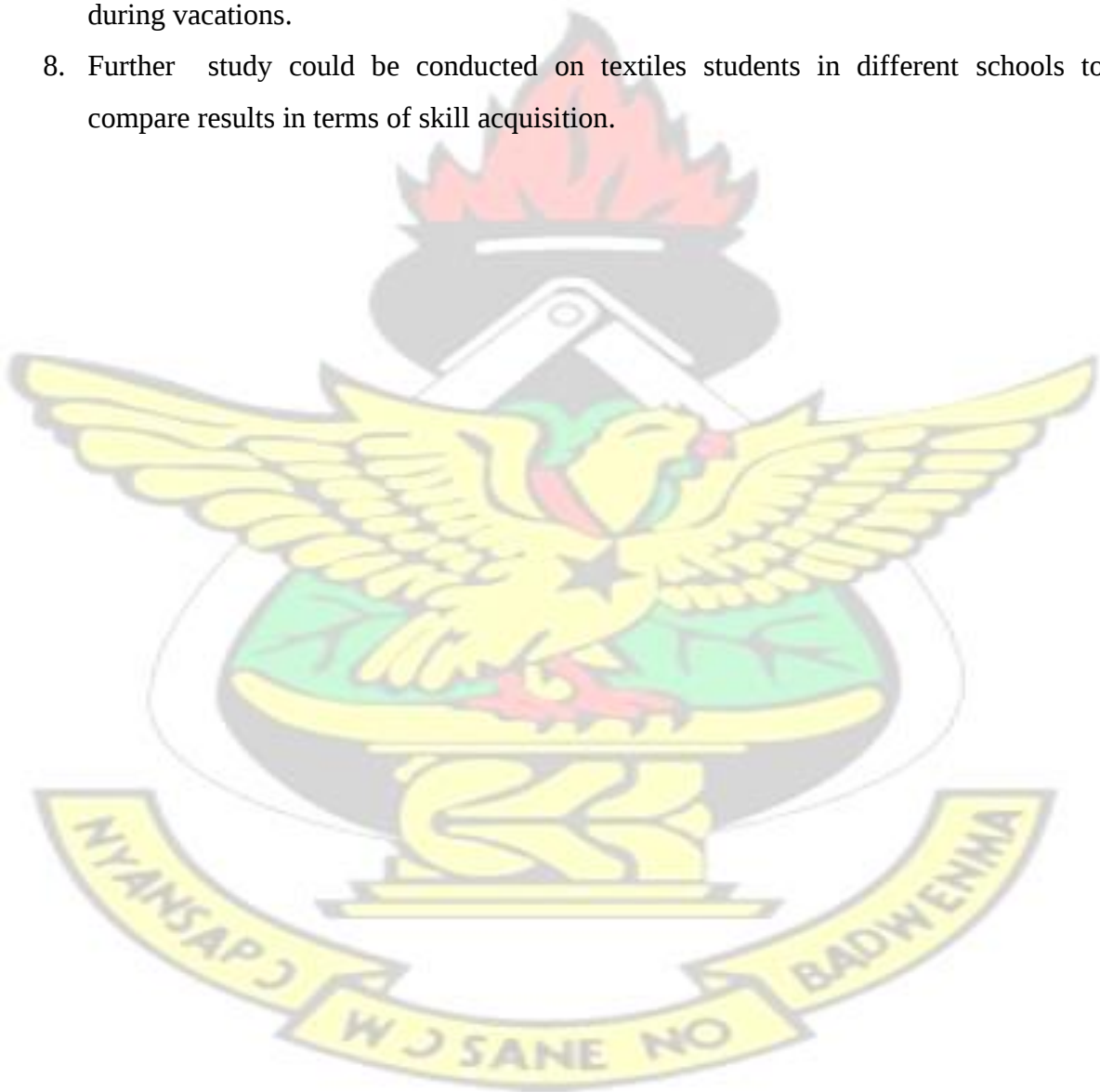
It is rather an unfortunate situation that even though all these schools are situated in Kumasi, surrounded by indigenous Textiles industries like Bonwire and Adanwomase kente weaving Centres, Ntonso dyeing centre and a great institution like KNUST yet they are not utilized properly for the benefit of skill acquisition in Textiles education.

5.4 Recommendations

For Textiles education in the senior schools to achieve its aim of offering enough skills to terminating students after the three years, these are some of the means that could improve students' skill acquisition.

1. The government should establish centres within the sub-metros or municipalities which will serve as teaching facilities to satisfy the schools within that district.
2. The timelines of both the university and the SHS must be structured well so that SHS can access the university's facilities when they vacate.
3. School authorities must collaborate with Textiles teachers to create E-libraries where students can access information in the absence of GES approved textbooks.

4. The Ministry of Education should post Textiles technicians to SHS to assist students in their practical lessons.
5. Policymakers which include MOE, GES and NACCA should monitor schools frequently to ensure whether the objective of the programme is being achieved.
6. Schools that lack workspace, tools and equipment should seek permission from neighbouring schools to access their facilities.
7. School authorities should make attachment compulsory for every Textiles student during vacations.
8. Further study could be conducted on textiles students in different schools to compare results in terms of skill acquisition.



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KNUST



APPENDICES

APPENDIX A: QUESTIONNAIRE FOR TEXTILES STUDENTS

This questionnaire is aimed at soliciting information on support system employed in textiles education in the senior high schools and its impact on students' skill acquisition. Data gathered will be regarded with confidentiality.

Instruction: Please tick the appropriate answer in the provided space and provide written answers where necessary.

Textiles Education

Statement	Strongly Agree	Agree	Not sure	disagree	Strongly disagree
You have a teacher for the Textiles programme.					
The teacher is very punctual and regular at school.					
The teacher uses methods which make the subject very interesting.					
The teacher is interested and zealous in teaching.					
The teacher uses classroom hours to do his own business at the expense of the students.					
The teacher only teaches theory leaving the practical works.					
The three-year course is adequate for skills needed for self-employment.					
The course content is adequate enough to make you self-employed or for further studies.					
The time table allows for enough time for practical lessons.					
There are adequate tools/equipment/machines for practical.					
You are taught how to care and maintain the tools.					
You are allowed to handle and use the tools/machines very often for mastery of skills.					
You are taught safety precautions in handling tools and machines.					
The school supplies the right type of materials for practical lessons.					
The school supplies sufficient books form the school's book shop.					

Your school has a library well furnished with books on Textiles.					
You have other handouts, periodicals and magazines for further reading on the subject.					
You enjoy the way theory, practical lessons, designs and drawings are taught.					
You have been going on educational visits such as excursions, sight-seeing and project sites.					
Real objects and charts are often used in the class for teaching and learning.					
You have an interest in the Textiles program/subject.					
You were forced to study the subject.					
You have an art room/studio.					
You have an art gallery/exhibition room.					
You take part in an art exhibition.					

The teaching of the Scopes in Textiles

The questionnaire consisted of items under each scope which involved five alternative responses with respect to how teaching is done: strongly agree=5, agree=4, not sure=3, disagree=2, strongly disagree=1.

The teaching of the scopes in textiles	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
The teacher has taught weaving both broadloom and traditional loom.					
The teacher demonstrates weaving both on the broadloom and the traditional loom.					
The teacher has taught dyeing					
Dyeing lessons were practically taught by the teacher					
The teacher has taught both block printing and direct printing					
Block and direct printing were practically demonstrated by teacher					
The teacher has taught both embroidery and applique					
The teaching of embroidery was practically demonstrated.					
The teaching of applique was practically demonstrated.					

The teacher has taught knitting and crocheting.					
Knitting and crocheting was practically demonstrated by the teacher					

This part of the questionnaire aimed to reveal skills acquired by students. It consists of items under each scope that involved three alternative responses: very skilled=3, skilled=2, not skilled=1.

Assessment of Students Skills

Skills acquired in the scopes	Very skilled	skilled	Not skilled
I can prepare warp for weaving			
I can do beaming			
I can do reeding			
I can do tying-up			
I can prepare the weft for weaving			
I can weave on my own by demonstrating the three basic motions in weaving thus shedding, picking and beating up			
I can prepare fabric for dyeing			
I can produce batik			
I can produce tie/dye			
I can construct and prepare a screen for printing			
I can prepare the badie printing ink, design and print a piece of Adinkra cloth			
I can print with Adinkra stamps and dyes			
I can make a stitch on a fabric			
I can demonstrate on-laying and in-laying techniques in applique			
I can construct knitted and crocheted fabrics			
I can do heddling			
I can prepare a dye bath			
I can prepare a printing paste for printing			
I can print with screens on my own			

APPENDIX B
OBSERVATIONAL CHECKLIST

1. Availability of tools, equipment, and materials

2. Availability of workspace

3. Availability of textiles teachers

4. Availability of approved textiles textbook

5. Samples of works produced by students

- a. works on weaving _____
- b. works on printing _____
- c. works on dyeing _____
- d. works on embroidery and applique _____
- e. work on knitting and crocheting _____

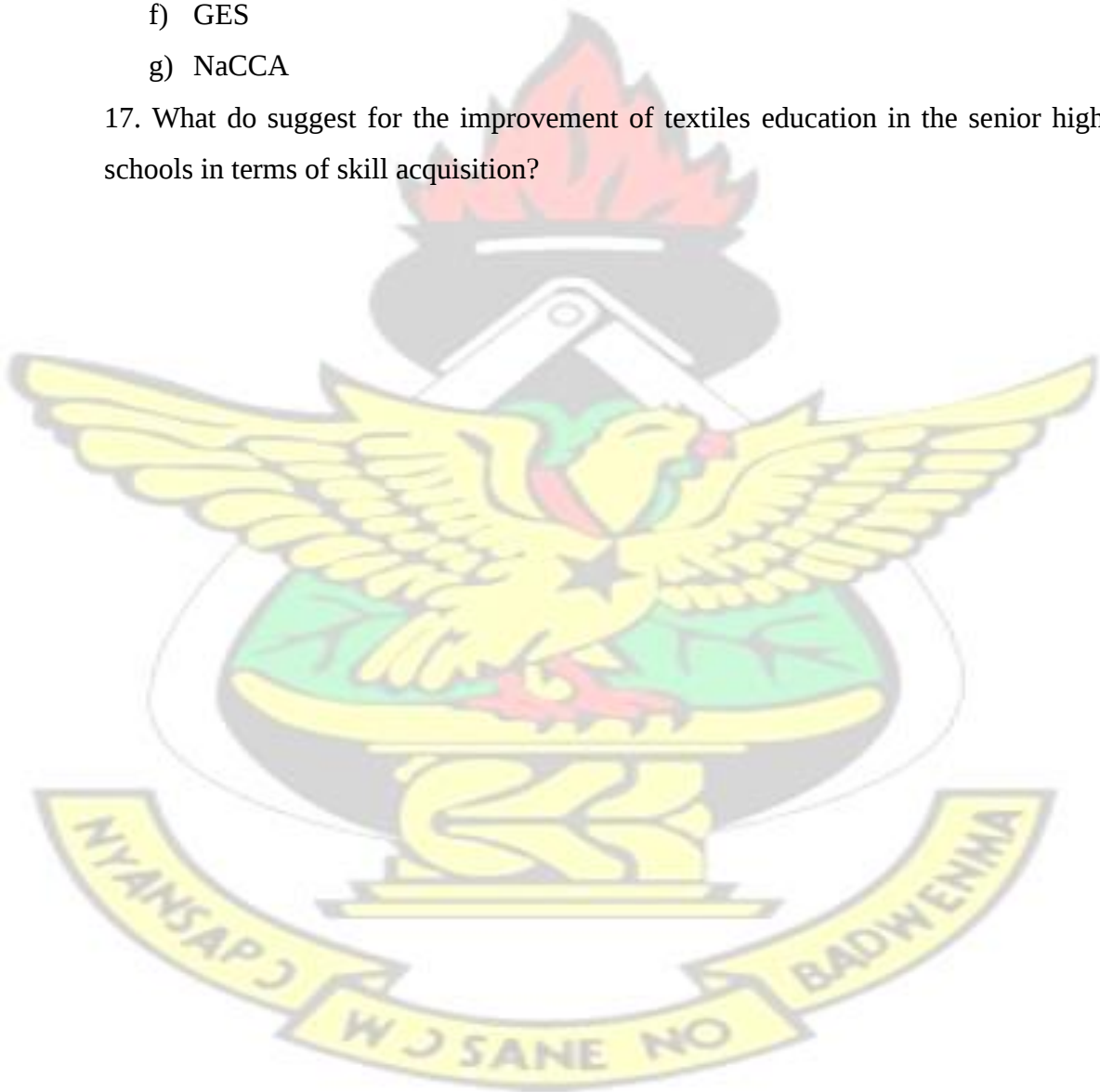
APPENDIX C
INTERVIEW GUIDE FOR TEXTILES TEACHERS

1. Qualification(s)
2. How many years have you been teaching textiles?
- 3a. Do students acquire their own materials for textiles practical lesson? Yes/No
- 3b. If No, how?
- 4a. Does the school provide students with materials, tools and equipment for their work? Yes/No
- 4b. If yes, how often
- 5a. Is the time allocated for textiles on the timetable enough to enable students to acquire the skills needed? Yes /No
- 6a. Do you take students on field trips to abreast them with what is happening in the industry? Yes/ No
- 6b. If yes, how often
- 6c. If no, why
- 7a. Are there topics in the syllabus that you find them difficult to teach? Yes/No
- 7b. If yes, which one?
8. Which textbook do you use for teaching?
9. As a textiles teacher do you make use of resource person from tertiary institutions like KNUST and UEW? Yes/No
10. Do you think the textiles syllabus is exhaustive enough to provide students with the skills needed to practice a vocation? Yes/ No
11. What do you think hinders students from acquiring enough skills to practice a vocation?
12. How often do you take students to art centres and exhibition centres?
13. Are you satisfied with your profession as a textiles teacher? Yes/No
- 14a. Do students show interest in textiles? Yes/ No
- 14b. If no what do you think it's the problem?
15. Which external support do you receive for the improvement of textiles education?

16. How have these stakeholders contributed to the progress of textiles since you became a textiles teacher?

- a) The PTA
- b) The parents
- c) The community leaders
- d) The headmaster/mistress
- e) The Head of Department
- f) GES
- g) NaCCA

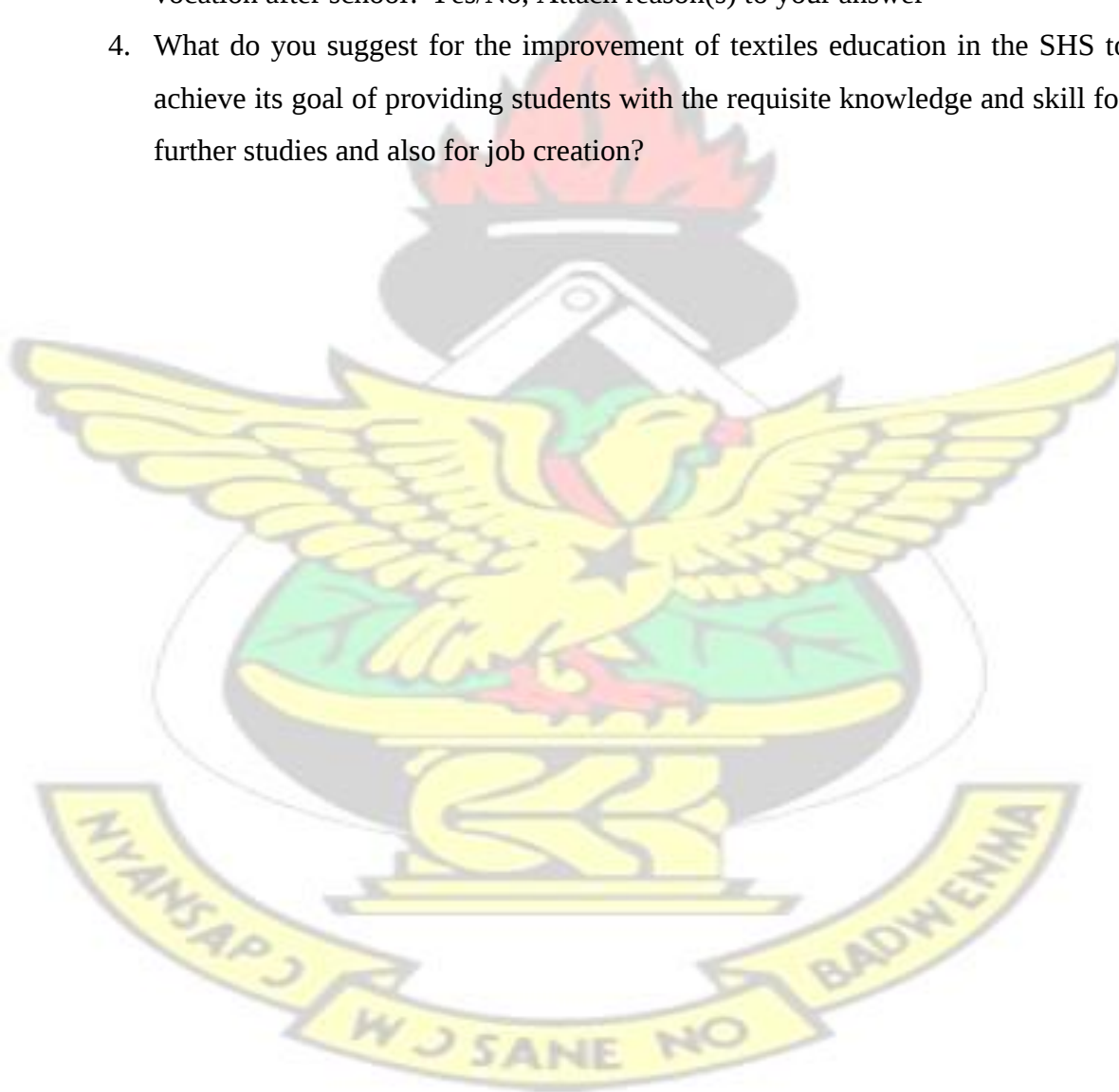
17. What do suggest for the improvement of textiles education in the senior high schools in terms of skill acquisition?



APPENDIX D

INTERVIEW GUIDE FOR ASSEMBLYMEN

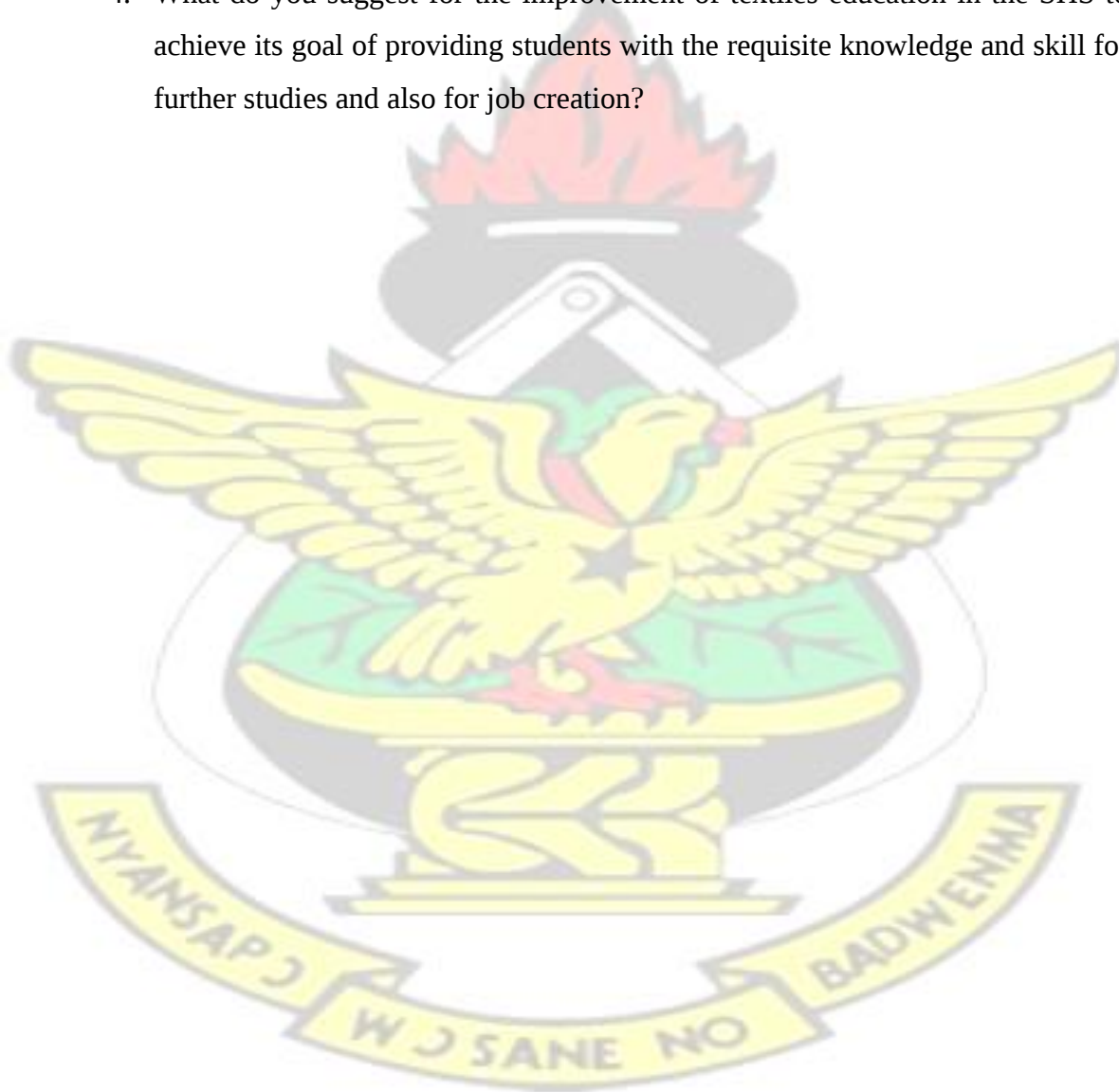
1. Are you aware of the challenges facing textiles education in the senior high school in the assembly? Yes /no
2. If yes, what have you done as an assemblyman to help resolve these challenges?
3. In terms of skill acquisition, are you sure the systems in place for textiles education are good enough to aid students to acquire skills to practice a vocation after school? Yes/No, Attach reason(s) to your answer
4. What do you suggest for the improvement of textiles education in the SHS to achieve its goal of providing students with the requisite knowledge and skill for further studies and also for job creation?



APPENDIX E

INTERVIEW GUIDE FOR HEADS OF SCHOOLS AND HODS

1. Are you aware of the challenges facing the textiles department? Yes /no
2. If yes, what have you done as the head to help resolve these challenges?
3. In terms of skill acquisition, are you sure the systems in place for textiles department are good enough to aid students to acquire skills to practice a vocation after school? Yes/No, Attach reason(s) to your answer.
4. What do you suggest for the improvement of textiles education in the SHS to achieve its goal of providing students with the requisite knowledge and skill for further studies and also for job creation?



APPENDIX F

INTERVIEW GUIDE FOR NACCA CO-ORDINATOR

1. Textiles education lacks an approved textbook by GES, what have you done as NaCCA to resolve the challenge?
2. In terms of skill acquisition, are you sure the systems in place for textiles department are good enough to aid students to acquire skills to practice a vocation after school? Yes/No, Attach reason(s) to your answer.
3. What do you suggest for the improvement of textiles education in the SHS to achieve its goal of providing students with the requisite knowledge and skill for further studies and also for job creation?



APPENDIX G

INTERVIEW GUIDE FOR TEXTILES LECTURERS

1. Are you aware of the challenges facing textiles education in senior high school? Yes /no
2. If yes, what have you done as a textiles lecturer to help resolve these challenges?
3. In terms of skill acquisition, are you sure the systems in place for textiles education are good enough to aid students to acquire skills to practice a vocation after school? Yes/No, Attach reason(s) to your answer
4. With your experience as a textiles lecturer, do you think textiles education in SHS provides students with an adequate foundation for further studies? Yes/No, Attach reason(s) to your answer
5. What do you suggest for the improvement of textiles education in the SHS to achieve its goal of providing students with the requisite knowledge and skill for further studies and also for job creation?

