

**THE STATE OF TEXTILES EDUCATION IN SENIOR HIGH SCHOOLS IN THE
GREATER ACCRA REGION, GHANA**

By

KNUST

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DECLARATION

I hereby declare that this submission is my own work towards the Master of Philosophy (Art Education) and that to the best of my knowledge, it contains no material previously published by another person or material which has been accepted for the award of any other degree of the University, except where due acknowledgement have been made in the text for references.

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ABSTRACT

The SHS Textiles programme in Ghana has been designed to provide Textiles students with adequate basic knowledge and skills for further education in Textiles as well as selfemployment or apprenticeship for those who might terminate their education at the Senior High School level. It is known that some SHS Textiles graduates are unable to acquire and practise the basic skills taught in the SHS Textiles syllabus. This has resulted in a number of them unable to establish for themselves any serious Textiles business at the end of the course. Textiles education is gradually collapsing at the SHS level. The objective of the study however, sought to examine the scope of content of the Textiles syllabus to understand its teaching and learning processes, in order to suggest strategic ways to make Textiles education at the SHS more interactive for students to engage in. The study used mixed methods research approach. The data were collected using convenience and judgemental sampling of 186 students, 12 teachers, three lecturers, three WAEC officials and two CRDD coordinators, in the Greater Accra Region. Data collection instruments were interviews, observations and questionnaires. The descriptive research method was used to report the findings. The study revealed that equipment and tools available in the sampled schools were either damaged or inadequate for effective practical work and demonstration. This makes the teachers to simply describe the tools and equipment that are needed for lessons without the students getting the opportunity to see or use them in class. Teachers are also not able to complete the Textiles syllabus within the stipulated three year-period due to the reduction of the teaching periods from 21 to 18 per week even though many more topics have been added to the 2008 Textiles syllabus that was previously in use. These factors have negative effects on Textiles education in the SHS, hence the poor performance of the Textiles students in the WASSCE and ultimately, their inability to engage in entrepreneurship development in Textiles and employment after they graduate from SHS. It is recommended that Ghana Education Service should make provision for schools

which offer Visual Arts and Textiles in particular to have the relevant textbooks, permanent studios, tools, materials and other equipment such as looms, padded and development tables for practical work in the schools that offer Textiles. GES should also organise periodic inservice trainings and field trips to enhance the teaching/learning methods used by Textile teachers and to introduce them to new topics that have been included in the Textiles syllabus.



DEDICATION

I dedicate this thesis to my dear husband Mr. Kwasi Okai-Mensah for his untiring support, encouragement, prayer, toil and ensuring that I submitted it in time and also my loving children Nana Kwaku, Papa Kwadwo and Nana Yaw for being so caring.



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May the Almighty God richly bless all and sundry.

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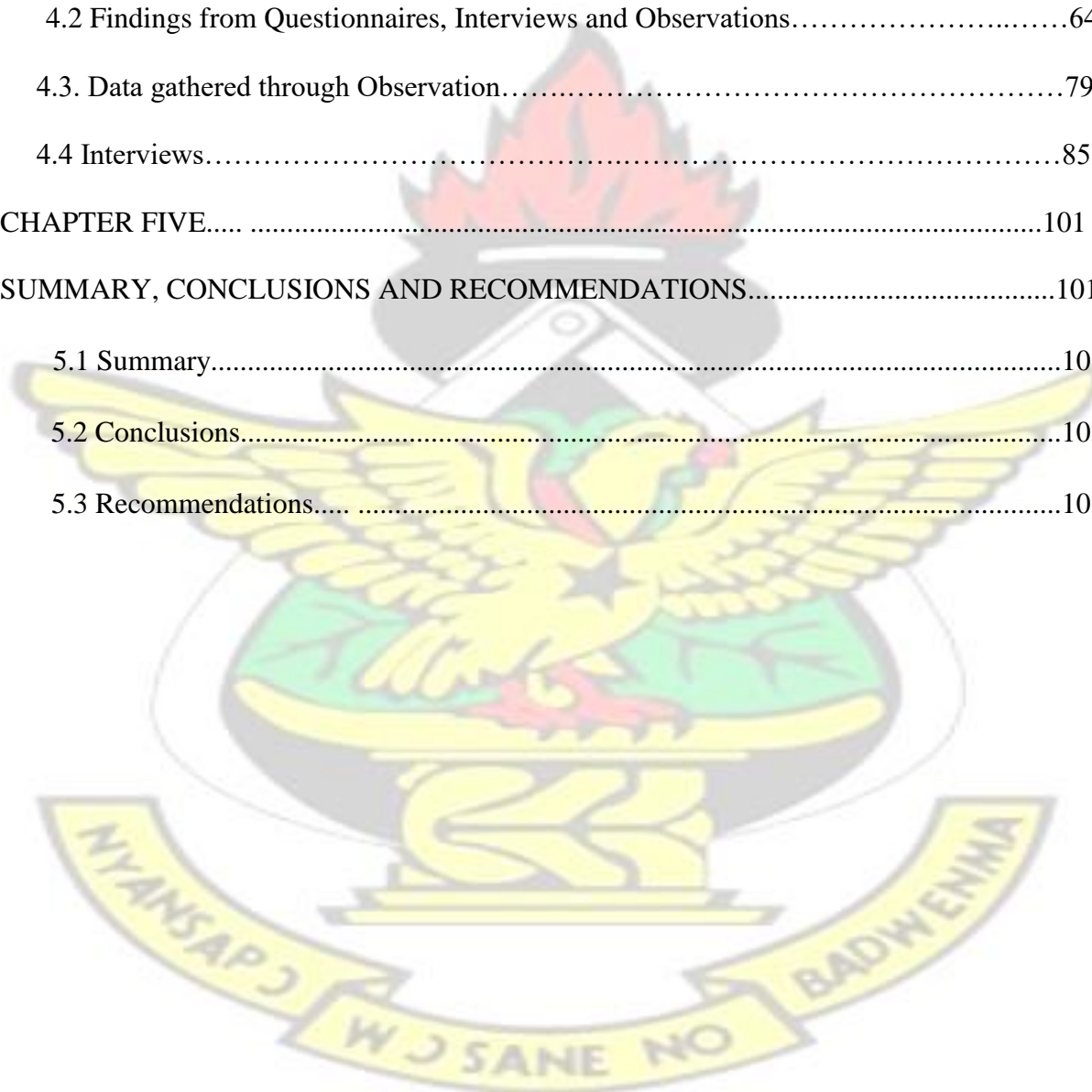
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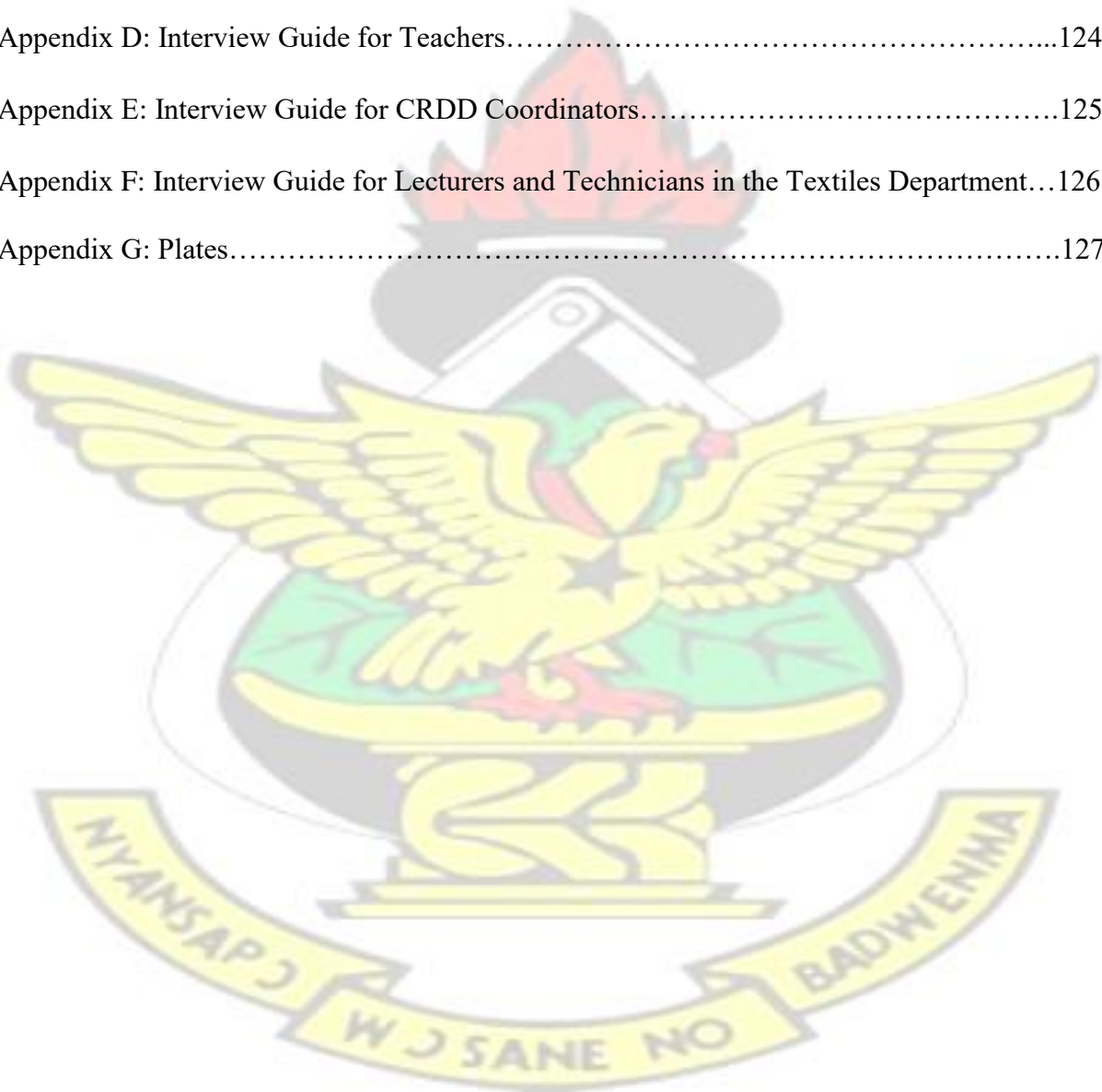
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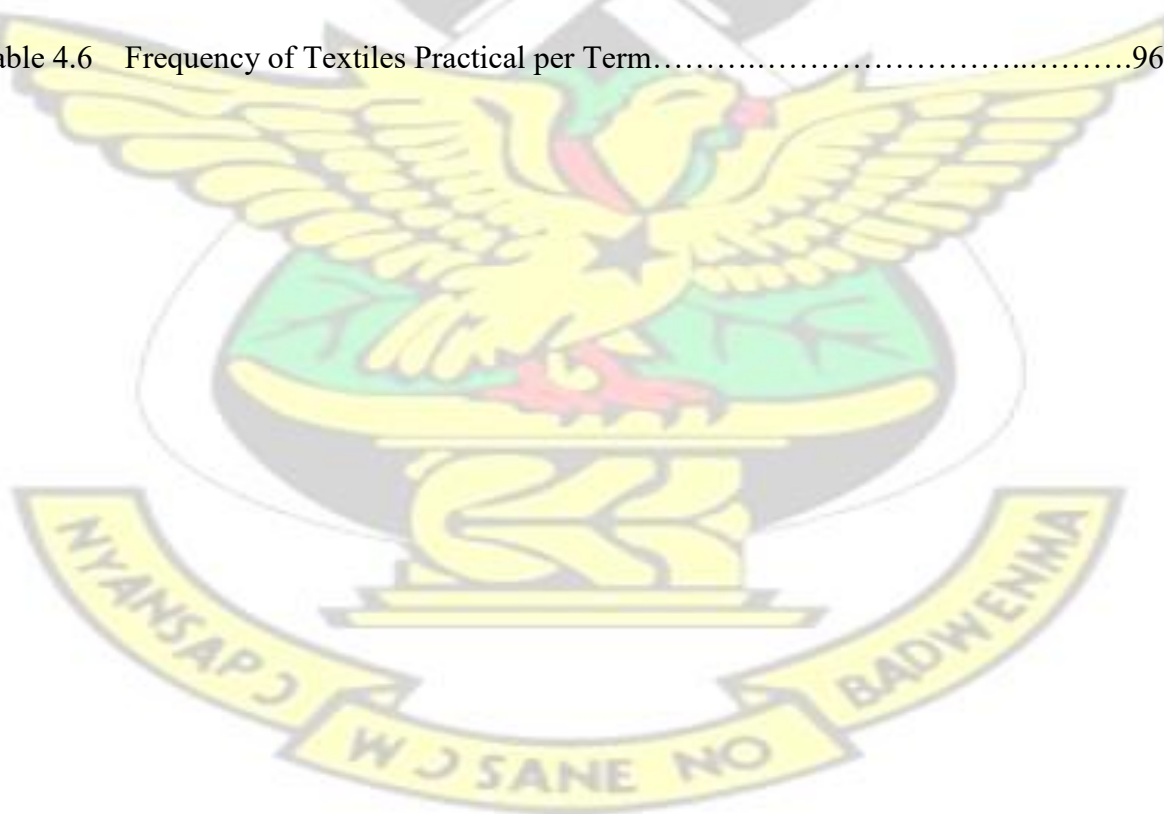
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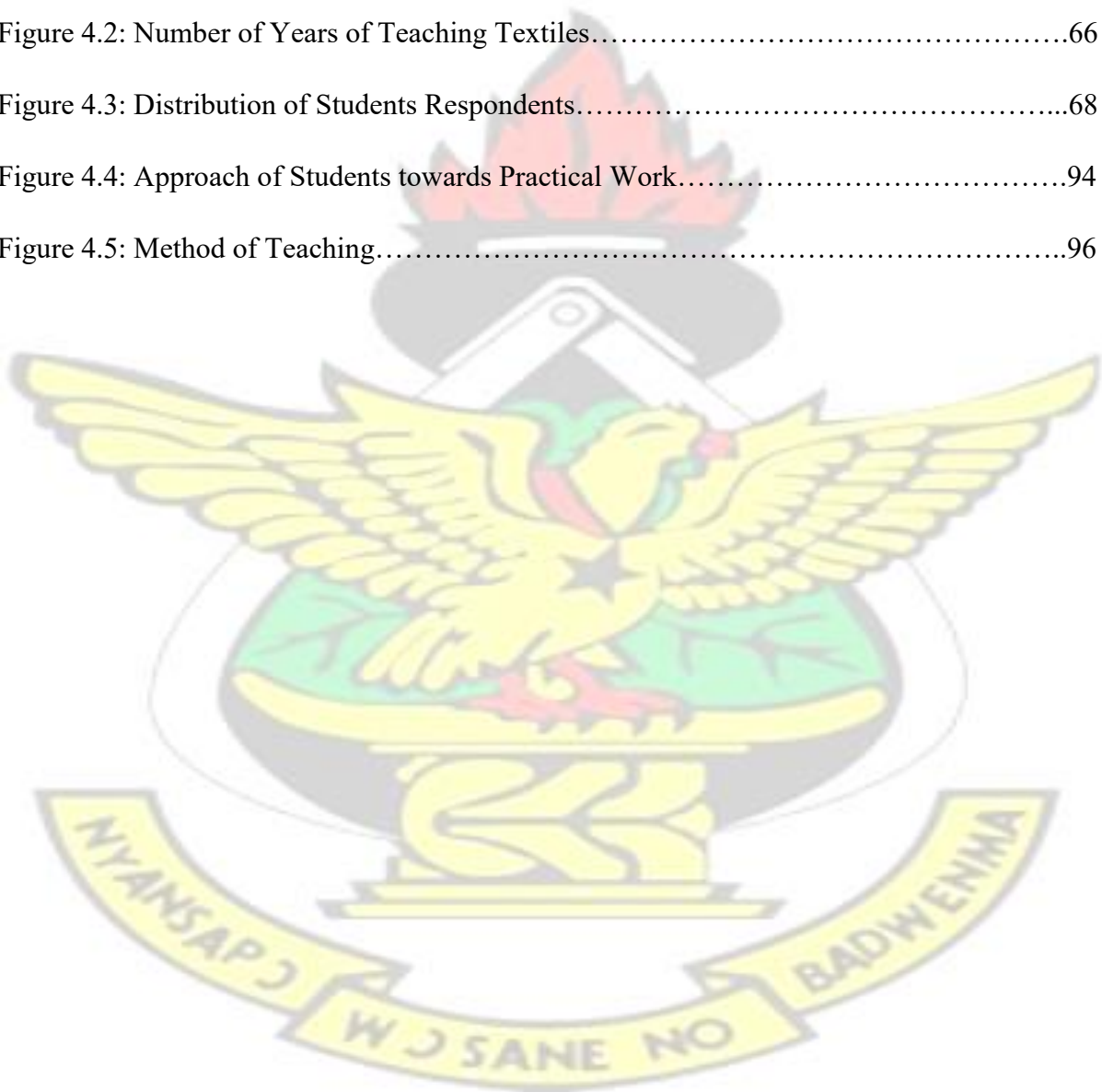
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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

As Laing (2012) indicates, a nation without technical skills cannot develop technologically. This is because technical skills have the potential of accelerating development. Any country that aspires to develop technologically must therefore develop its technical and vocational education as a prerequisite for enhancing the skills of her citizens because skills are indispensable tools for development. Making reference to the rapid development of Korea, Singapore and the other industrialised Asian nations, Laing (2012) explains the need for nations to adopt policies that are based on technical and vocational education to train a highly skilled workforce to support economic development. This brings out the significance of technical and vocational education as a prerequisite for economic development. According to Laing (2012), only a skilled workforce can help Ghana achieve her objective of joining the league of developed nations. Anthony (2014) commends Ghana for including programmes that provide entrepreneurship and employable skills in the school curriculum.

Danso-Sintim (2008) clarifies that Ghana's strategy at nurturing vocational skills in her citizens has focussed on training students to become enterprising so that they can adapt to the demands of a global-knowledge economy that is driven by science and technology. This source indicates that vocational skills development has been done through various educational reforms, which has enabled Ghana to infuse some vocational oriented programmes that provide employable skills in education so the citizens can contribute meaningfully to national development. In spite of these efforts, Anthony (2014) laments that

Ghana has not produced enough personnel with the technical and vocational skills required to support economic development. This notion seems to be the basis of the many educational reforms that Ghana has implemented over recent years in an attempt to blend general education programmes with some vocation oriented subjects.

According to the Education Act 2008, this has been done so that schools would equip their students with the right kind of knowledge, skills, values, attitudes and aptitudes they need to become productive citizens who are able to contribute meaningfully to national development. Within the context of educational reforms in Ghana, the Education Act 2008 describes the introduction of Visual Arts, Home Economics and other vocation-oriented subjects into the school curriculum as key learning areas that also provide employment opportunities.

Visual Arts education in Ghana occurs in secondary and tertiary institutions. The secondary school level programme is offered in senior high schools. Of particular interest to this study are Visual Arts and Home Economics, which are the two subjects that make up the Senior High School Vocational Skills programme (Evans-Solomon & Opoku-Asare, 2011).

However, as Evans-Solomon and Opoku-Asare (2011) have indicated, Visual Arts and Home Economics are studied as two distinct elective subjects, which means that students who choose to pursue Vocational Skills education in Senior High School (SHS) can only choose to study Visual Arts or Home Economics but not both. For the purpose of this thesis, attention has been focussed on Visual Arts education only.

As the teaching syllabus for Visual Arts (CRDD, 2008) indicates, Visual Arts comprises eight elective subjects: Basketry, Ceramics, Graphic Design, Jewellery, Leatherworks,

Picture Making, Sculpture and Textiles, which are studied alongside General Knowledge in Art (GKA), which is the core subject of the Visual Arts curriculum and therefore studied by all Visual Arts students. Of the eight elective subjects, students on the Visual Arts programme have opportunity to specialise in two elective subjects only for the three years of SHS education. GKA is described in the Teaching syllabus for Textiles (CRDD, 2010) as a subject that combines different aspects of each of the elective subjects to provide information on the history of art, creativity and appreciation, the elements and principles of design, as well as practical skills that will enable Visual Arts students to know how to apply these principles and processes to produce artefacts. Like the elective subjects, GKA also provides theory and practical subject matter.

According to the Teaching Syllabus for Visual Arts (2008), the theoretical content of the curriculum has been designed to provide a means for the students to understand and use the right vocabulary and technical terms required for them to communicate intelligently about art. On the other hand, the practical content provides the practical or technical skills that the students must acquire in order to become practitioners in the respective elective Visual Arts subjects. As expected of all Visual Arts students, the knowledge and technical skills they acquire from these subjects are designed to help them to practice as self-employed professionals or entrepreneurs of businesses in the field of art if they are not able to further their studies beyond SHS.

However, as Boadi (2002) has reported, many graduates of the SHS Visual Art programmes are not able to practise the basic skills that the programme is expected to provide its students; or establish themselves in serious Visual Arts related businesses. In relation to Textiles, Amissah (2004) attributes the problem to the SHS Textiles syllabus for example, being

unable to satisfy the basic curriculum requirement of equipping the students with specialised skills that would make the Visual Arts graduate able to practise the art forms they specialized in after leaving school. According to Anang (2011), much is expected of the Visual Arts programme yet it is given little attention and support to provide what it is designed to do. Visual Arts education therefore continues to encounter problems mainly because the constituent subjects that have been designed to include 60% or more of practical content are rather treated like theoretical subjects in many instances.

Opoku-Asare, Agbenatogbe and deGraft-Johnson (2014) have also noted ineffective teaching and learning of GKA in some schools because they do not have the required educational resources to support the programme. However, Rihani (2006 as cited in Evans-Solomon & Opoku-Asare, 2011) posits that Visual Arts has the potential of generating economic returns from the creative skills they offer, which implies that Ghana cannot fully benefit from the creativity of its citizens if Visual Arts education in particular, remains poorly resourced (the President's Committee on Education Reforms Review Report, 2002). This scenario will not make it possible for Ghana to acquire adequate numbers of young people with the right technical skills to support economic growth and national development as the nation strives to attain middle income status.

The 2010 Teaching Syllabus for Textiles describes elective Textiles as involving all art activities that result in two-dimensional and three-dimensional works. Because a society achieves its significance through the production of visual arts, which includes Textiles, the SHS Visual Arts programme provides opportunity to develop pride and patriotism in the youth of Ghana because it is important that young people acquire love for the cultural and aesthetic values in Textiles. The 2010 Teaching Syllabus for Textiles also states that because

competition in the global Textiles industry has nearly collapsed Ghana's textiles industry, studying textiles is important to revive the local industry. The SHS Textiles syllabus has therefore been designed with the local industry in mind as a means of creating employment, generating income and reducing poverty in Ghana.

The impact of Textiles is felt on education, health, communication, and in fact, on the total lifestyle of societies. Advances in art and technology depend largely on Textiles. Consequently, textiles positively impact the socio-economic development of nations and the quality of life in most parts of the world. In Ghana, the combined energy of textiles, science and technology reinforce her survival and development. Hence, it is important to inculcate artistic skills and capability in textiles to help the youth to develop their creative potentials so they can contribute meaningfully to the development of science, technology, industry, economics, social studies and the history of Ghana.

This study therefore sought to investigate the scope of content of the SHS Textiles syllabus, the methods that Textiles teachers adopt for teaching the various components of the subject, the learning strategies the Textiles students use in the different aspects of Textiles, the strategies used by Textiles teachers to assess the effect of their efforts on student learning, and how the students perform in the external WASSCE during their final year in Senior High School.

1.3 Objectives of the Study

1. To examine the scope of content of the Textiles syllabus for Senior High Schools in Ghana.
2. To explore the teaching methods and strategies used by teachers and students of

- Textiles in the selected Senior High Schools in the Greater Accra Region.
3. To identify the challenges encountered during the teaching and learning of Textiles in the selected schools and how they could be resolved.

1.4 Research Questions

1. What constitutes the scope of content of the GES Textiles syllabus in Ghana's Senior High Schools?
2. What teaching and learning methods and strategies are used by the teachers and students of Textiles in the selected schools?
3. What problems affect the teaching and learning of Textiles in the selected schools and how can they be resolved?

1.5 Delimitations

The study was limited to seven Senior High Schools which offer Textiles in the Greater Accra Region and the processes involved in the teaching and learning of Textiles in the selected schools.

1.6 Definition of terms

Creativity:	It is the power of bringing something new into being.
Curriculum:	An organized programme of courses and study arranged to provide definitive cultural or professional preparation.
Dye:	A natural or synthetic substance, which colours fibres, yarns or fabrics so that the colour becomes an additional property of them.
Dyeing:	The process of colouring fibres, yarns or fabrics with dyes.
Exhibition:	A display of works of Art—sketches, drawings, paintings, sculpture, pottery, textiles, metals etc. for appreciation and purchase.
Fabric:	The material produced with fibres or yarns through weaving, knitting, felting, braiding, laminating or bonding etc.

Fibre:	The raw material used for the production of Textiles yarns and fabrics.
Perception:	Interpretation of sensations and experiences.
Reforms:	Instance of change made in order to remove imperfections.
Syllabus:	The breakdown of the curriculum into subject areas.
Textiles:	A programme of study in the SHS visual Arts Curriculum.
Visual Art:	Any Art form that can be touched.

1.7 Abbreviations / Acronyms

SHS	Senior High School
KNUST	Kwame Nkrumah University of Science and Technology
GES	Ghana Education Service
WAEC	West African Examinations Council
GATA	Ghana Art Teachers' Association
WASSCE	West African Secondary School Certificate Examination
GKA	General Knowledge in Art
CRDD	Curriculum Research Development Division
UNESCO	United Nations Educational, Scientific and Cultural Organisation
TVED	Technical and Vocational Education
MOE	Ministry of Education

1.8 Importance of the study

The strengths and weaknesses observed in the teaching and learning of Textiles in the study schools can help teachers of Textiles to find ways of enhancing the performance of Textiles students in the subject. The suggestions and recommendations made for improving the methods of teaching and learning of Textiles can help to improve the WASSCE results of the Textiles students in Ghana. The study will also serve as a reference material for Textiles teachers and students in the Senior High Schools.

1.9 Sources of information

- Textiles teachers and students in the selected study schools.
- Books, pamphlets, journals, articles and theses.
- Internet and libraries.
- WAEC Officials in charge of Textiles.
- CRDD coordinators.
- Lecturers.

1.10 Facilities available for the study

- Kwame Nkrumah University of Science and Technology libraries, Kumasi, □
Department of General Art Studies Library, KNUST, Kumasi.
- Ghana Library Board, University of Ghana - Legon.
- Senior High Schools in Greater Accra Region.

1.11 Organization of the rest of the Text

Chapter two of the thesis focuses on the review of related literature which include the following: General concept and meaning of education, Education in Ghana, the general concept of teaching, the concept of learning, senior high school education, senior high school curriculum, vocational/technical education, visual arts education, and Textiles education in Ghana. Chapter three covers the research design, population, sample and sampling techniques, instruments, data collection and data analysis procedures. Chapter four provides analysis of data collected through observation, interview and questionnaire in the study schools. The findings are presented as descriptive statistics such as charts, graphs and

tables to explain the responses. Chapter five provides the summary, conclusion and recommendations of the study.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Overview

The section deals with the literature that was reviewed with respect to the teaching and learning of Textiles in Senior High Schools. The review was done under these sub-topics:

- a. General Concept and Meaning of Education
- b. Education in Ghana
- c. The Concept of Teaching
- d. The Concept of Learning
- e. Senior High School Education
- f. The Senior High School curriculum
- g. Vocational Education
- h. Visual Arts Education
- i. Textiles Education in Ghana

2.1 General Concept and Meaning of Education

According to Vin-Mbah (2012), education is the process of constant development of appropriate skills, knowledge and habits to allow individuals to meaningfully contribute towards development of their society. It is also an organised instruction and training which had been designed to help develop the knowledge and skills of a person. It is a means by which individuals' behaviour patterns are changed in the desired direction to benefit society. Education is therefore the fundamental instrument through which a dynamic society can be built by creating, applying, and spreading knowledge. According to Zainul-Deen (2011), education can be described as any interaction or communication aimed at promoting sustainable learning. For learners to be able to manage their resources and determine what

their future will look like for them, learning that takes into consideration the learners' skills is the kind of education that one is required to attain (Zainul-Deen, 2011).

Education has also been described as a potent driving force for the mental, physical, ideological and moral preparation of learners in order for them to be fully conscious of their tasks and purpose in life as well as how to achieve that purpose. It is also an instrument for spiritual development and material accomplishment of human beings. One of the most potent tool for alleviating poverty and inequality towards sustained economic growth is education as it creates, applies and spread knowledge (UNESCO 2000, as cited in Dorleku, 2013). According to Kumar (2008), education is a conscious or unconscious, purposive, psychological, sociological and philosophical process that brings about development of individuals to the fullest extent and maximum development of society in such a way that both enjoy happiness and prosperity. This makes education a means of developing individuals to meet the needs and demands of the society they belong to.

Furthermore, Tuan (2009) believes education is the transfer of skills and advancement of culture from one generation to another. In this regard, Tuan describes education as a process through which the intellectual and moral aptitudes of individuals are developed to make them cultural members of their society. In summary, education consists of the dual activities of teaching and learning of knowledge, proper conduct and technical proficiency. What then has been the nature of education in Ghana?

2.2 Education in Ghana

According to Atuahene and Owusu-Ansah (2013), the system of education that existed in the Gold Coast (now Ghana) was mainly informal with apprenticeship as the means by which knowledge and skills were transmitted from generation to generation. This system changed when European settlers arrived in the Gold Coast and introduced formal or school education which provided book-based education (Adu-Agyem & Osei-Poku, 2012). Among them were the Wesleyan Mission which stayed along the coast and used English as the language of school education while the Basel missionaries operated inland and used the local languages for evangelization and education (Graham, 2013). School or formal education at that time was available only to élite citizens such as the merchants of the Gold Coast (Graham, 2013). Traditional education might therefore have persisted without the mission schools.

With the support of the British government, the Missions remained the main provider of formal education until the Gold Coast became independent of British colonial rule in 1957 (Cogneau & Moradi, 2012). When the Gold Coast gained independence and assumed the name Ghana, the new government of Dr. Nkrumah, the first President of the nation, saw formal education as the way to the future and decided to establish a University to provide an <African perspective of higher education= that is backed by a free and compulsory allinclusive primary education (Akyeampong, 2007). The 1961 Education Act that was enacted led to the establishment of the University of Science and Technology (Ghana Education Service, 2004).

Since 1974, numerous attempts have been made to reform school education in Ghana. This includes the setting up of the Dzobo board of trustees which suggested the reduction of the

length of pre-tertiary education and restructuring the school system to comprise primary, junior and senior high schools (Thompson & Casely-Hayford, 2008). The reforms also suggested the inclusion of more practical content in the school curriculum (Oduro, 2000; Adu-Agyem & Osei-Poku, 2012). However, Oduro (2000) reports that these major changes were somewhat not fully executed due to financial constraints.

Successive governments of Ghana have also adopted various strategies to improve the quality of educational delivery in the country by formulating and implementing policies and constituting committees to review the educational system (Zainul-Deen, 2011). Further changes were made to the educational system in 1987 with the Education Act 1987. According to Thompson and Casely-Hayford (2008) and Macbeath (2010), the 1987 Act aimed at putting the 1974 Dzobo Committee recommendations to work. This began with the launching of the national literacy campaign followed by the reduction of the duration of pre-university education from 17 years to 12, and introduction of vocational education in the Junior Secondary School curriculum. The 1987 reforms also made Visual Arts a component of the vocational education programme to foster creativity among the citizens through the school system (UNESCO, 2001).

The most far-reaching change that has occurred in the reform of Ghana's educational system is the phasing out of the General Certificate of Education (GCE) 809 and 8A9 level British model of secondary education in 1997 and the introduction of the senior secondary school system (Oduro, 2000). As Keteku (1999) explains, adoption of this new structure was in response to the criticism that secondary education was bookish and not relevant to Ghana's human resource development agenda. At present, pre-university education in Ghana comprises a nine-year basic school cycle that involves six years of primary and three years

of Junior High School education, followed by three years of Senior Secondary Education, and two to four years of tertiary education. Vocational and technical education exists in Ghana and is offered at the three lower levels as pre-vocational, vocational and technical skills (Boateng, 2012).

2.3 The General Concept of Teaching

The educational process comprises the dual activities of teaching and learning. Facilitating learning is therefore the most important objective of teaching (Mangal, 2007). The nature of teaching has been conceptualized and explained in numerous ways. One concept defines teaching as the act of providing activities that facilitate learning (Akorah, 2011). Alorvor (2012) alludes to teaching being a system of actions and interactions that are employed by a teacher to facilitate learning among students. To Alton-Lee (2003), teaching is a pedagogical practice that facilitates access to information for heterogeneous groups of students towards developing their capacity to engage in and learn from classroom activities and assignments that are related to defined curriculum goals. To Vin-Mbah (2012), a teacher can say he or she has taught when some changes have occurred in his or her students' behaviour.

Teaching is also described as a complex, multifaceted activity that often requires teachers to tackle multiple tasks to attain objectives simultaneously (Smittle, 2003). Similarly, 8What is Teaching (2014)9 summarises the meaning of teaching as the process of imparting knowledge and skills from a teacher to a learner based on instructions. Agbenatogbe (2011) also argues that the value of teaching as an activity lies with the learner and not in the teacher, suggesting that the outcome of teaching reflects only in the learner. To James and Pollard (2006), teaching is the main means of promoting learning and achievement in pupils.

This identifies teaching and learning as the factors that make a difference in the minds of learners and also what influence the knowledge, skills and attitudes of students. It can be inferred from these definitions that teaching is an act or experience that formatively affects the mind, character or physical ability of an individual.

2.3.1 Functions of Teaching

The functions of teaching have been discussed by various authors. For Vin-Mbah (2012), eight elements that clarify the functions of teaching are explained as follows:

1. Identifying what to learn: The teacher's ability to impart knowledge to his or her learners depends largely on the use of a syllabus which breaks down the content for the learner.
2. Clarifying and informing: Good teachers are expected to know more about their subject areas and be more knowledgeable in order to communicate their knowledge well to their students.
3. Administering, inspiring, directing and guiding: Students learn well when teachers are able to inspire them. Good teachers are very responsible and good managers in the classroom. They need direction and guidance to help in maintaining order and discipline, thus making the environment conducive enough for effective learning to take place in the classroom.
4. Identifying learning problems: One quality of good teachers is that, they are able to identify problems of their learners through regular interactions. They further organise remedial classes to solve the identified difficulties.
5. School community relationship: Teaching serves as a means of communication which promotes relationship in the school and the wider community.

6. Evaluating, reporting and recording: Good teachers assess students' performance regularly and record the progress of their learning.
7. Classroom arrangement: The teacher is expected to create an environment which is good enough for effective teaching and learning to take place by arranging and setting the classroom for learning.
8. Socialisation: Teaching involves both deliberate and latent functions. The latent function of socialisation occurs as the pupils learn to gather and become intimate.

2.3.2 Methods, Techniques and Strategies of Teaching

The literature on teaching lists many methods and strategies or techniques of teaching that teachers can employ to induce successful learning among their students. The skilful and competent teacher uses a variety of such methods and techniques in the process of teaching because teaching situations differ and no single particular method can be viewed as the best for all these occasions (Vin-Mbah, 2012). As Alorvor (2012) also explains, teaching methods are processes that make learning happen. Similarly, Amissah (2004) describes methods of teaching as the structure of the activities that are commonly defined by the instructions the teacher issues to the pupils or learners. Furthermore, the University of California (2014) refers to teaching methods as the general principles, pedagogy and management strategies for providing instruction in the classroom. Consequently, understanding teaching strategy and methods of teaching is essential because such elements directly affect student learning and academic performance (Agbenatogbe, 2011).

Strategies and methods of teaching have a great influence on students who come to school with their unique set of characteristics that may assist or impede academic performance. Gardner's theory of multiple intelligences and learning styles also indicate that each student

has a unique way of learning material in different situations and that many learning problems occur because there is a mismatch of learning styles between those offering instruction and those receiving it (Gardner, 2006).

In defining teaching strategies, Dorleku (2013) refers to strategy as the sequencing or ordering of the techniques that teachers select to teach particular lessons; selection largely depends on the teacher's motivation and how he or she has planned that lesson (De Bortoli & Thomson, 2010). These authors posit that in selecting teaching techniques, the teacher should be guided by the opportunities each strategy provides for actively engaging the students and motivating them to participate fully in the teaching-learning process. Thus, teaching, which essentially implies preparation for someone else's learning, demands that the teacher demonstrates how the tasks to be assigned the student ought to proceed, the exercises and activities that would be employed to assess the learning outcomes, and the resources that would be used to enable the students to work in order to show evidence of learning and understanding of what has been taught by the teacher.

Alorvor (2012) posits that methods of teaching emanate from the variety of interactions that occur between teachers and students and the interplay of activities the teacher and students engage in. This makes it necessary for teachers to have specific guidelines on what is appropriate to do in the teaching situation so they can function effectively towards achieving the objectives set for their lessons. The underlining principle, according to Gray, Griffin and Nasta (2005), is that teaching methods exert much influence on students since the methods used determine the frequency of teacher-student interaction in the classroom and the success of student learning. This implies that for teachers to meet the different needs of their students, they must use teaching methods that can encourage students' involvement in

learning activities; among which are group work, discussion, question-and-answer sessions, drill, projects, demonstration, and individualised instruction (Dorleku, 2013).

To Vin-Mbah (2012), there are two categorises of teaching methods: those that are studentcentred and those that are teacher-centred. Examples of student-centred methods that offer students opportunity to actively engage with the content of lessons are assignments, supervised study, discussion, field trip, projects, play and games, brainstorming and debates. In contrast to these methods, Vin-Mbah (2012) categories the lecture, questioning and demonstration as teacher-centered methods of teaching, which negate the view that learning is an active process. The simple reason is that learning-by-doing is the best means of learning.

2.3.3 Effective Teaching

Swenson (n.d) suggests that effective teaching means different things in different environments. To Dorleku (2013), effective teaching refers to a set of skills that talented teachers work hard to perfect to nurture effective learning among their students. Similarly, Hanly (n.d.) describes effective teaching as a process that helps a student to become successful in acquiring the skill for the efficient use of appropriate tools and materials to achieve results as well as opportunity to question situations. These sources of literature have identified some common characteristics of effective teaching which focus on creating the environment for successful learning, teaching methodologies, and the behaviour of instructors, the Instructional configurations and inputs. These are clarified in the following sections.

2.3.4 Characteristics of Effective Teaching

The literature on effective teaching is replete with several of its characteristic features. Among these are the 8Four Aces9 (Autcomes, Clarity, Enthusiasm and Engagement) of effective teaching that was put forward by Bulger, Mohr and Wall (2002), which describes the extent of teaching that teachers can provide and the level of learning that students can attain from it. The concept suggests that lessons that are based on the four levels of 8ACES9 make it possible for students to learn what is taught better and faster and to also retain what they have learned longer. In this regard, Swenson (n.d.) posits that effective teachers9 classroom functions include the following features:

Use of several pedagogies

Effective teachers help their students to learn on their own and from others; they also make sure they learn from sources outside the school and encourage them to use the various forms of technology now available. Effective teachers use technologies that best serve the learning needs of their students and believe that students can learn through discovery if they are exposed to learning opportunities and things that must be taught through direct instruction because it is important for all students to know. Likewise, they understand that some students will learn things quickly with minimal direct teaching but others will need concerted direct teaching and correction before they are able to master the learning required of them

Inspiring student responsibility

Effective teachers teach and help their students to take greater responsibility for their own learning and also make sure they are actively involved in evaluating their own learning as they make them understand the goals of the learning that is required of them. Because they

know how these goals will be assessed, the students can ascertain whether they are on track to achieve success or not.

Having high expectation

Effective teachers believe that every student has the ability to become successful at school so they find ways of helping such students to do well by engaging and motivating them to learn rather than simply accepting that some students cannot be engaged and are destined to do poorly.

Recognising individual differences

Effective teachers always adapt various methods and technologies to help their students to work on tasks that challenge and engage them to achieve their personal best. These teachers know that students learn best when they are presented with material that enables them to connect new information to what they already have and to know how to do them. Also, when teachers acknowledge the culture, background and abilities of their students, they understand them better and help them to learn. Effective teachers recognize the learning needs of their students and work hard to help them. They understand that students develop at different rates and that in every classroom there will be a range of student abilities and aptitudes.

Having mastery over teaching content

Effective teachers teach in such a way as to make their students love learning and they also understand the best ways in which their students learn concepts, content and skills. These teachers are able to use their knowledge of learning processes to determine the most effective means to help particular students in their classrooms to learn successfully.

Effective teachers have a thorough knowledge and understanding of their subject matter and have the skills to deliver the content to their students understanding.

Building positive relationships

Effective teachers create productive relationships with their students; they work cooperatively with them, approach the students with deference and anticipate that students will regard them consequently. Effective teachers become more acquainted with their students and take specific enthusiasm for their general advancement. They do these to advance student learning and accomplishment while realizing that a strong link exists between the teaching that teachers do and the learning that students achieve.

Providing safe environment

Effective teachers normally provide positive classroom environments that are orderly, physically and emotionally safe for their students so that they can achieve their potential, even if they feel unsure and insecure for the first time. Learner achievement depends largely on the learning environment, which is known to exert a significant effect on them. An efficient, comfortable, well-lit space is important but the learning atmosphere created by the teacher seems to have an equal or greater impact on student learning and achievement based on the knowledge that students learn best if they are in a classroom where they feel safe and confident to attempt new tasks.

Providing feedback and monitoring student progress

Effective teachers constantly reflect on how well they are getting through to their students and look out for better ways of managing those who are not doing well as well as those who perform well. They also understand the standards the students are expected to accomplish

and use a variety of assessment methods to determine the extent to which learning standards are being met and use this knowledge to plan for subsequent stages of

Effective teaching provides feedback for both teachers and students by closely monitoring each student's achievement so they can give all their students regular feedback on their performance to motivate both students and teachers, promote active learning as well as provide valuable information to enable students to assess the impact of the teaching. Feedback could be done through discussion, verbally and in writing, in addition to testing to find out if any learning has taken place.

2.4 Concept of Learning

According to Mahar and Harford (2004), learning is an arrangement of socio-cultural and institutional procedures that occur throughout the life of every person. This concept of lifelong learning happens both within formal education in early childhood centres, basic schools, secondary, tertiary and adult training organisations. It likewise happens in working environments where learning is integrated in the organisation's structure as a means of attaining its goals. The concept of learning also refers to the procedure of obtaining aptitudes, information and states of mind towards moulding learners through experiences that have been designed to mould them to become what society expects of them (Teaching and Learning 2, 2014). Vin-Mbah (2012) considers learning as observable changes in individual's life after going through some training. In the opinion of Santrock (2004), learning is the acquisition of new knowledge and thinking derived from experiences an individual gains from situations they encounter. These definitions of learning imply transformations that occur in an individual's actions which reflect different attitudes or aptitudes due to new skills, values, knowledge, ideas or experiences gained. Smith and Blake

(2005) suggest that learning implies increase in an individual's knowledge that enables increased capacity for new actions. This definition however, views learners as passive receiving of information or learning as empty vessels to be filled by teachers. It also implies three aspects of learning: learning as a change in behaviour, for better or worse; learning as a change resulting from experience or education; and learning as a change in behaviour that is relatively permanent. As Kendra (2014) concludes, learning is a relatively lasting change in an individual's behaviour due to experience whereas Vin-Mbah (2012) aligns with the general definition of learning as a process through which one acquires progressive changes in skills, knowledge, and attitudes due to overall changes that occur in the individual's life.

2.4.1 Styles of Learning

Gardner's theory of multiple intelligences and learning styles indicate that each student has a unique way of learning material in different situations and that many learning problems occur because there is a mismatch of learning styles between those offering instruction and those receiving it (Gardner, 2006). Giles, Pitre and Womack (2003) refer to learning as the ways in which an individual receives sensory information and applies it. The different ways in which individuals process such information are termed 'learning styles' which refer to the combined effect of intellectual, affective and physiological factors that point to how a learner sees, associates with, and reacts to learning environment. Although every individual has preference for particular learning styles, culture, experience and environment exert some influences on these personal inclinations.

Alover (2012) has outlined three kinds of learning as follows:

- a. Cognitive learning which involves information processes that involve recall and application of knowledge and development of intellectual abilities and skills.

- b. Psychomotor learning which concerns behaviour that deals with skills, muscular coordination and development of physical skills.
- c. Affective learning which involves feeling, attitude, emotions and values through such activities as discussion, role play or case study methods.

The Bepko Learning Center (2006) also discusses visual, auditory, and kinaesthetic learning styles, which emphasise common characteristics of such learning styles as follows:

- a. Auditory Learning Style: This involves retention of information through hearing and speaking. Auditory learners prefer being told how to do things and have summary of main points told them to aid information. They often use soft music to help them concentrate on what they learn.
- b. Kinaesthetic Learning Style: This involves hands-on approaches to learning new material. Kinaesthetic learners are generally good in mathematics and science and would rather demonstrate how to do something rather than verbally explain it. Usually they prefer to work in groups.
- c. Visual Learning Style: This involves the use of visual objects such as pictorial illustrations to visualize, memorize and recall new information. Visual learners tend to remember things that are written down and learns better by watching actions.

Diversity of learning styles implies different ways to prepare individuals⁹ distinct psychological aptitudes as cognitive skills underlie each learning style (Bepko Learning Center, 2006; Sequeira, 2014). The understanding is that teaching should prepare learners psychologically to equip them to utilize or exploit the other learning styles adequately.

Essentially, learning is an individual responsibility so teachers ought to encourage students to take responsibility for what they are taught irrespective of the internal and external factors that are known to influence learning.

2.4.2 Factors that Affect Learning

Several factors affect students learning positively and negatively. These include socioeconomic status, parents' education, school infrastructure and resources, safety, language, teachers' skills and the willingness of the students to learn (Agbenatoe, 2014). Socioeconomic status and parental education can significantly affect student learning. Agbenatoe explains that students who come to school from wealthy homes are likely to have parents who are professionals or highly educated, and may expose their children to such backgrounds of educational support and resources to help them through school. Wealthy parents would want to educate their wards directly or indirectly, have higher regards for education and therefore set educational goals for their children. School with spacious well equipped classrooms that experience less interruption also help students to focus on instruction. The sense of feeling safe also makes students concentrate during learning while fear or anxiety takes students' minds away from lessons.

With regard to the influence of language, Opoku-Asare, Agbenatoe and de-Graft Johnson (2014) emphasise the importance of students being conversant with the language of instruction so that they can comprehend what is being taught. The idea is that if students have language limitations, they may also have problems retaining what is taught in lessons. Teachers' skill and expertise also affect student achievement in the sense that students respond well to teachers who serve as ideal role models and demonstrate competence as well as confidence in the subject they teach. Of all the factors that influence students'

achievement the most is students' willingness to learn, implying that students who are eager, motivated or goal-oriented are set to learn. It can therefore be concluded that successful learning in secondary education can be affected by several factors but the individual's readiness to overcome difficulties that are likely to be encountered during studying to reach one's educational goals depends on the individual's motivation.

2.5 Senior High School Education in Ghana

Secondary education in Ghana, since 1999, has been offered in Junior and Senior High schools, both of which last three years. Junior High School is the first stage of secondary education in Ghana and also the last stage of the Basic School cycle. According to AduAgyem and Osei-Poku (2012), Senior High School education exposes students to a variety of relevant vocational skills necessary for human and national development. Additionally, it helps to develop interest for lifelong learning in students. The curriculum at this level is therefore diversified to cater for the different aptitudes, abilities, interests and skills of students.

The Senior High School (SHS) system has had its challenges since the implementation of the 1987 Education Reform programme. In 2008, another reform in Ghana's educational system occurred and Junior and Senior Secondary Schools were renamed Junior and Senior High Schools respectively. The duration of SHS education was also extended from three to four years. The four-year period was reverted to three years after a new government assumed office in 2009. The 2008 and 2010 reforms have attracted the most criticisms, which includes whether SHS should be three or four years' duration. The key issue is the fact that SHS serves as preparatory grounds for entry into tertiary institutions as well as an exit point for students who terminate their education at the end of SHS (CRDD, 2010).

2.5.1 The Senior High School Curriculum

Curriculum refers to the educational concepts and foundation that include the classification of the amount of time allocated for the teaching and learning activity, the characteristics of the schools and methods of teaching to be used, the resources for teaching and learning, evaluation and teachers' profiles (Oduro, 2000). The curriculum implies the sum total of all the consciously planned educational experiences that the school should provide to those who enrol (National Council of Educational Research and Training, 2006). The literature point to curriculum having the following features:

- a. The overall objective of education at a particular stage or class
- b. Content and subject-wise instructional aims
- c. Courses apportion and courses of study
- d. Teaching learning experiences
- e. Instructional aids and materials
- f. Evaluation of learning outcomes, and feedbacks to pupils and teachers as well as parents.

Curriculum is also understood as a socio-cultural process that comprises a series of pedagogical actions which are planned, developed and assessed in a critical and transformative educational programme that integrates what should shape teaching and learning processes, practices and experiences (Joséfandiño, 2010). To Winch (2008) and Akubia (2014), however, curriculum refers to the plan for the implementation of educational aims and the sum total of all experiences that a pupil undergoes in his or her school; what happens inside and outside the classroom which are termed co-curricular activities. The SHS curriculum is discussed in the next section.

2.5.2 Ghana's SHS curriculum

Ghana's SHS curriculum is made up of core and elective subjects. The core subjects comprise English language, Mathematics, Integrated Science (which consists of Science, ICT and Environmental Studies), and Social Studies which integrates Economics, Geography, History and Government. In addition to these core subjects, SHS students study three or four subjects that they select from one of the following elective programmes:

1. Agriculture and Business.
2. General Programme consisting of arts and science subjects.
3. Technical Programme which includes wood work, building construction, and auto mechanics.
4. Vocational Programme which consists of Home Economics and Visual Arts.

2.5.3 Vocational / Technical Education in SHS

Boateng (2012) refers to Vocational/Technical Education as educational processes that embrace the study of technology and related sciences and the acquisition of practical skills and knowledge which aims at discovering and developing the individual employment in various sectors of economic and social life= (p.1). According to CRDD (2010), the justification for universal vocational/technical education is to provide occupational or career skills for employment. Ghana's desire to attain middle income status requires Vocational and Technical Education hence the decision to include vocational/technical education in the general school curriculum. At the secondary level vocational/technical education aims at preparing young men and women with relevant creative skill training that will enable them fulfil the country's manpower needs in the field of technology, industry, commerce, agriculture and business.

Boateng (2012) discusses the following as requirements in institutions that offer vocational/technical subjects:

- a. Workshops, tools/equipment, and materials to work with.
 - b. More instruction and practical time than arts and science education.
 - c. The training of appraisers who can assess students' capability in the classroom and in the workplace.
 - d. Skilled and proficient teachers.
 - e. Constant in-service training for teachers to upgrade their skills in addition to industrial training periodically in order to ensure that they are well-informed with technological changes that happen in the industry.
 - f. Development of strong co-operative connection between the school and industry in order to design and implement programmes that will meet the needs of the industry.
- This implies that for Ghana to ensure the success of the vocational/technical programme in the various institutions to help the Nation attain middle income status, the institutions must be provided with the listed requirements.

2.5.4 Challenges of Vocational / Technical Education in Ghana

Vocational and Technical Education in Ghana encounter difficulties. According to Boateng (2012), the government of Ghana set up a board to examine the education system towards framing a strategic plan from 2003 to 2015. The board that was set up in 2003 reported the disregard of vocational/technical education and several challenges the sector was encountering as a result of poor state of training facilities, inadequate number of institutions and outdated training content. According to Boateng (2012), the report expressed also that

vocational/technical education is viewed to be more costly when compared with general education.

Another factor was the general perception that vocational/technical education was suitable for individuals who cannot deal with scholarly work, which is aggravated by the absence of mobility courses for professional specialist training for those who desire advanced training. Although vocational/technical education traditionally refers to studies in technology, applied sciences agriculture, business studies and Visual Arts. The discussion of vocational/technical education focuses only on visual arts education.

2.6 Visual Arts Education in Ghana

Visual Arts Education was first introduced into the Gold Coast school curriculum in 1908 (Edusei, 2004). One of the reasons assigned for including Visual Arts Education in the Ghanaian school curricula was the need to foster creativity in the lives of her citizens to help solve the country's problems. Visual Arts education at the basic school level is mainly practical in nature with no vocational objective. At the Senior High School level however, Visual Arts consist of optional elective subjects for the studied for the West Africa Senior Secondary Certificate Examination [WASSCE] (Edusei, 2004).

The Teaching Syllabus for Visual Arts (2008) additionally groups the elective subjects under two-dimensional (2-D) and three-dimensional (3-D) art forms. Subjects designed as 2-Ds are Graphic Design, Picture Making and Textiles while Sculpture, Ceramics, Jewellery, Basketry and Leatherwork constitute 3-Ds. Every student is required to study two electives: one each from the 2-Ds and 3-Ds to complement General Knowledge in Art, which is a core subject and hence studied by all students on the Visual Arts programme.

According to Evans-Solomon and Opoku-Asare (2011), the study of these subjects over the three years of SHS education leads to WASSCE qualification which gives access to advanced education and employment.

Although schools that offer Visual Arts have the responsibility to offer their students only two elective subjects, local research study shows that the schools have challenges satisfying this condition because getting specialist subject teachers for all the elective Visual Arts subjects is difficult; studio facilities, essential tools and equipment and the necessary raw materials for those subjects are also either inadequate or lacking (Evans-Solomon, 2004; Owusu-Afriyie, 2009; Evans-Solomon & Opoku-Asare, 2011). This means all the schools cannot offer the range of elective subjects that will enable them to provide tuition in many of the elective subjects in order to expose the students to the rich variety of vocational/technical skills they need. This also means students' selection of elective subjects is constrained by the number of subjects their schools can offer, and ultimately, the extent of learning experiences the students would have to enable them practice the relevant skills related to the particular vocations the Visual Arts programme prepared them for.

These limitations also extend to the fact that the subjects that Visual Arts students have opportunity to study in SHS also directly influences the development of the students' creative potentials, as well as their educational and career goals (Evans-Solomon & Opoku-Asare, 2011). As Edusei (2004) recommends, more hands-on experience can make the SHS graduate able to practise their art specialization very well as a vocation. Subjects students choose to study in the SHS therefore have far reaching implications for the students' ability to further their education or pursue the career paths in the arts.

2.6.1 Rationale for the Visual Arts Education at the SHS in Ghana

According to the teaching syllabus for the Visual Arts (2008), the SHS Visual Arts programme was designed to foster creativity and problem-solving skills among the youth so they can contribute their quota to national development. The idea is that engaging in art activities makes it possible for learners to think, act and feel creatively as they manipulate different art materials. The introduction of Visual Arts programme into the school curriculum in Ghana was also meant to provide each student with adequate basic knowledge and skills for further education in the elective subjects as well as preparing them for selfemployment or apprenticeship for students who are unable to continue their education at the SHS (Evans-Solomon & Opoku-Asare, 2011).

As Edusei (2004) reiterates, the basic understanding of infusing art into the school curriculum was the fact that art has an integration effect on the personality of those who study the subjects mainly because the subject offers unique learning processes that include avenues for exercises that aid the development of the mental, spiritual and physical faculties of its students. Moreover, art develops the intuitive and subjective thinking capacities of individuals which are very relevant and necessary skills required in this age of automation and computerisation. Art also serves as a therapy that helps in the correction of psychological problem that mentally challenge children experience and also assist in providing occupational therapy towards the rehabilitation of mental patients.

2.6.2 Scope of the Visual Arts Education in the SHS

Visual Arts education covers drawing and painting, sculpture, pottery and ceramics, textiles, graphic design and metal product design. Other areas are basketry, calabash designing,

embroidery making, collage work and mosaic making (Edusei, 2004). According to this source, art at the basic school level in Ghana centres on drawing and painting using coloured pencils and powder colour or some other water base colours. Some clay work is also done and involves the modelling of animals and domestic objects. According to Oduro (2000), the introduction of Junior High School system of education in Ghana, which includes subjects that facilitate the development of fundamental vocational skills have opened the way for a number of creative activities to be learned by students and continue at the SHS level in preparation for higher education and job market.

2.6.3 Time Allocation for teaching the Visual Arts at the SHS

Siaw (2009), Owusu-Afriyie (2009) and Evans-Solomon and Opoku (2011) indicate that Senior High Schools in Ghana can offer as many Visual Arts subjects as possible as long as they have the specialist teachers and relevant resources. The premise is that by offering a wide range of elective Visual Arts subjects, their students would have opportunity to choose their most preferred two electives that they would want to study in addition to the core General Knowledge in Art (GKA). With respect to the centralized schools' timetable, the three subjects that Visual Arts students must study have been allocated six (6) periods of 40 minutes per week which gives them a total of 18 instructional periods each week (The Teaching Syllabus for Textiles, 2010). This is different from the 2008 syllabus which allocated seven (7) periods, which adds up to 21 instructional periods a week for the teaching and learning of the two elective subjects and GKA. This shows a reduction in the number of instructional time allocated to the three subjects, which allows less time for teachers to engage their students in the required theory and practical lessons. The scenario has negative consequences for the output of the teachers and the extent of knowledge and skills to be

acquired by the Visual Arts students, as well as their performance on the programme in general, and their achievement in WASSCE and careers as practitioners in particular.

2.7 Textiles Education in Ghana

The CRDD Teaching Syllabus for Textiles (2010, p.5) defines Textiles as <the process of producing fabrics, which involves twisting of fibres into yarns interlacing or otherwise of yarns to form fabrics, decoration, finishing and how to care for the fabrics=. Sackey (2002, p.1) also defines Textiles as <the act of producing, decorating and improving the efficiency and value of fibres, yarns, and fabrics to serve the needs of man=. According to Adjekum (2010), Textiles refers to fabrics produced by weaving. The word *Textiles* was derived from the Latin word <Texere= meaning 8to weave9. Adu-Akwaboa (2010) also describes Textiles as the manufacture of clothing and all the material that can be formed or have been formed into yarns or fabricated into cloth. The teaching syllabus for Textiles (CRDD, 2010) also describes the Visual Art subject also named 8Textiles9 as embracing activities that result in two-dimensional and three-dimensional art works that depend on fabric, fibres and yarns. Based on the definitions above, Textiles may be summed up as the production of fibres, yarns and fabrics and the decoration, finishing and care of fabrics woven from the yarns.

According to Amissah (2004), Textiles materials vary due to changes in taste, fashion and differences in the use of Textiles products which have also re-defined the concept of Textiles to cover non-woven products. Textiles is no more limited to the art of weaving cloth but now includes any means by which cloths could be made to serve specified need. As such all persons who engage in Textiles production, fashion design, interior decoration, laundering and other operations therefore must have a good knowledge of Textile technology. In view

of this, Textiles education in schools and colleges must include Textiles design and technology. It is very much appropriate therefore that the study of Textiles is emphasized right from the basic education level and carried through to the tertiary level in the Ghanaian education system.

2.7.1 Introduction of Textiles Education in Ghana

A society achieves its significance through its production in the Visual Arts. Societies are identified also by their art works. To develop pride and patriotism among young people in Ghana, it is important that the education of the youth includes providing opportunity for them to acquire love for the cultural and aesthetic values in indigenous Textiles, which forms part of the school syllabus. The SHS Textiles syllabus is therefore structured with diversification of the local Textiles industry in mind so that those who study Textiles can generate jobs to alleviate poverty in the country. This is because Textiles has enabled many nations to improve their socio-economic status as well as the quality life of their people (CRRD, 2010).

The Textiles syllabus explains that the combined energy of Textiles, science and technology reinforce Ghana's survival and development. To this end, it is important to help young people to develop their creative skills and capabilities in Textiles so that they can contribute meaningfully to enhance industry, social well-being, as well as understanding of the culture and history of Ghana.

2.7.2 Reasons for Teaching Textiles in Ghana

A society achieves its significance through its production in the Visual Arts. Ghanaians are identified through their art works. To develop pride and patriotism in the youth, it is

important that they acquire love for the cultural and aesthetic values in Textiles. The competitive nature of the Textile industry globally has resulted in the suppression and near collapse of the Ghanaian indigenous Textile industry. The Textiles syllabus therefore is structured and geared towards the diversification of the industry in order to generate more jobs and alleviate poverty (CRDD, 2010).

2.7.3 Rationale for Studying Textiles in Schools

According to CRDD (2010), the study of Textiles provides information on the following:

- a. Understanding of the behaviour and characteristics of fibres, yarns and fabrics when in use.
- b. Fabric designing, construction, decoration and finishing processes.
- c. Why certain fabrics are more durable and serviceable for specific purposes.
- d. Why certain fabrics are cool or warm to wear as well as the impression of coolness or warmth when used as decoration.
- e. The use of Textiles to promote, preserve, transmit and sustain culture.
- f. Intelligent appraisal of standards and brands of merchandise for making appropriate choices.
- g. Proper use of different fabrics to suite specific purposes and occasions.
- h. How to care for and maintain fabrics to increase their life span.
- i. Textiles as a vocation for earning a living.
- j. How Textiles are used to foster community, national and international relationships.
- k. Textiles as a foundation for further education at the tertiary level.

2.7.4 Careers in the Textile Industry

Evans-Solomon (2004) and Sottie (2007) have outlined several forms of careers in Textiles.

Students who study the subject can work in the capacity of Textiles designer, Textile Engineer, Textiles retailer, Textile Technologist, Textile Chemist, Quality Controller / Supervisor and Textiles Teacher. These career areas are discussed as follows:

- a. **Textile designer:** A textile designer combines his or her Textiles knowledge with good Visual Arts principles to produce designs and then interprets or use them to produce textile products in the form of tie and dye, wax print and batiks. Another type of designing is the use of the principles of the loom to produce different fabrics such as plain weave satin and twill weave fabric.
- b. **Textile Technician:** This is a person trained in special skills to assist in different areas in Textile manufacture. He supervises production processes, repairs and maintains Textile machinery.
- c. **Textile Engineer:** This is a person who has specialized in the production, installation and repair of Textile machinery and equipment such as looms and bobbin winders.
- d. **Textile Retailer:** This is a person who trades in textile goods. They act as middlemen between the wholesaler and the consumer. A good knowledge of Textiles promotes this business since the retailer is able to guide both the consumer and producer. The retailer sends information on the goods, and criticisms for the improvement of the textile products, therefore a good knowledge in Textiles will enable the retailer to render better services to both the consumer and manufacturer.
- e. **Textile Consultant:** He or she is an expert in Textiles who helps people to solve problems they have in the Textile manufacturing and distribution.
- f. **Textile Chemist/ Quality Controller:** This is a person who handles chemical processes of Textiles like the preparation of spinning solution and chemical finishing processes of fibres and fabrics such as scouring bleaching and colouring. Every

textile process requires the service of a textile chemist who will ensure that the manufactured products are of the required standard.

- g. **Textile Teacher:** Students who study Textiles can be employed to teach the subject in Senior High schools and Tertiary Institutions.

2.7.5 The SHS Textiles Syllabus

A syllabus simply refers to the breakdown of the curriculum into subject areas. The school curriculum is implemented through the syllabus for individual subjects (Akubia, 2012). Graves (2009) and Joséfandiño (2010) explain syllabus as the specification and ordering of content or subject matter of an individual subject or course. A syllabus entails the detailed, operational articulation of teaching and learning components which interpret the curriculum into a step-by-step sequence of activities that clearly define the basic objectives for each level of teaching (Joséfandiño, 2010). Slattery (2006) explains the syllabus and educational programmes with respect to objectives or goals, content, exercises, materials and appraisals as follows:

In terms of goals:

- a. They redirect schooling to the development of autobiographical, aesthetic, and intuitive experience, and the sociocultural and sociopolitical relations emerging from an understanding of the individual in relation to knowledge, other learners, the world, and ultimately the self.

In terms of content, activities and materials they:

- a. Promote a creative search for deeper understanding through interdisciplinary and inclusive tasks, projects and narratives.
- b. Include hermeneutics, gender studies, cultural studies, and critical literacy.
- c. Problematize, interrogate, contextualize, challenge any kind of text (written, visual, etc).

In terms of assessment, they make one:

- a. Understand knowledge as reflecting human interests, values, and actions that are socially constructed and directed toward emancipation and human agency.

As the Teaching Syllabus for Textiles (CRDD, 2010) emphasises, the programme generates 2D and 3D art forms. The intent is that the content, instruction and students' learning outcomes should increase at each succeeding form. The syllabus therefore provides teachers with a reference point from which to plan, implement and evaluate the instructional programme for the Textiles in the respective Senior High Schools.

2.7.6 Scope of Content of the Textiles Syllabus

The subject covers the history, principles and practice of Textiles as a vocation. The scope of Textiles has been designed in such a way as to provide adequate foundation knowledge and skills for students who will pursue further education in Textiles. The programme also offers enough knowledge and skills to students terminating their education at the end of SHS to enable them practise Textiles as a vocation (CRDD, 2010).

2.7.7 Structure and Organisation of the 2008 and 2010 SHS Textiles Syllabi

The 2008 and 2010 Textiles syllabi were organised to cater for three consecutive years of

SHS education as in Appendix G. The details are as follows:

The general objectives of each section have been listed at the beginning of the section's activity. They specify the skills and behaviours students should acquire as a result of instruction in the units of a section (CRDD, 2010). According to Danso-Sintim (2008), the SHS Textiles syllabus has <Textiles as a vocation= which does not include topics on safety

precautions, care and maintenance of tools and materials for Textiles. Danso-Sintim (2008) therefore recommends that these topics should be taught so that Textiles students who terminate their education at the SHS could use the knowledge to enter the business of textiles production. Fortunately, Unit 3.3.1 of the Textiles Syllabus (CRDD, 2010), which focuses on management addresses this recommendation.

The reason is simple: many young people start their businesses or trading enterprises without any knowledge on management; lack of knowledge in basic business principles is the reason for the failure of many enterprises. The syllabus however, suggests that the Textiles teacher gets a supervisor to help with the teaching of this unit of the syllabus.

2.7.8 Suggested Basic Tools / Equipment and Materials for SHS Textiles

CRDD (2010) Textiles syllabus suggests that every SHS offering Textiles should be provided with a studio furnished with at least a set of Textiles equipment needed in all the areas of the syllabus; they should include equipment for weaving, printing, dyeing, embroidery and appliqué. Equipment requirements for these units of the syllabus for Textiles are stated in the following sections.

Weaving

- a. Traditional Kente looms.
- b. Table looms and broadlooms.
- c. Weaving accessories (reed, heddle hook, reed hook, warping mill, skeinner, bobbin winder, shuttle, and warping /shedding sticks.
- d. Yarns (hanks/cones/cheeses).

Printing/Dyeing

- a. Printing tables (padded)
- b. Wooden frames/screens
- c. Squeegees, spoons, bowls/buckets
- d. Large coal pots, stoves (kerosine /gas/electric)
- e. Hand gloves and face masks
- f. Chemicals: Photo-emulsion, dichromate, hydrosulphite, casuistic soda, common salt.
- g. Fine mesh or silk organdie
- h. Plain fabrics (poplin/calico/linen)
- i. Waxes, raffia threads, <mkokonte= powder.
- j. Dyes (Vat, Procion, etc.)

Appliqué /Embroidery/Crocheting/Knitting

- a. Knitting pins/needles
- b. Crocheting pins
- c. Hand-sewing needles (assorted sizes)
- d. Stranded cotton/cotton-a-border /metallic threads
- e. Sequins/beads
- f. Fabrics (decorated / undecorated / coloured).

The discussions so far show that Textiles education as outlined in the SHS Visual Arts curriculum is in the right direction to help solve part of the nation's unemployment situation. This could be possible if the schools or institutions offering Textiles are provided with the requisite tools and materials, adequate qualified teaching personnel to handle the Textiles

courses as well as allocating adequate time on the school timetable for teachers to engage their students in practical work.

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CHAPTER THREE

METHODOLOGY

3.0 Overview

The chapter three of this study discusses the methodology used in collecting and analysing the data needed to answer the research questions that guided the study. The study aimed at examining the challenges that teachers and students of Textiles in Senior High Schools in Ghana face in order to recommend possible remediation strategies. The information provided explains the research design, population studied, the sampling techniques adopted for data collection and analysis, the various types of data collected with the identified research instruments, data analysis procedures and plan used in order to achieve the objectives of the study.

3.1 Research Design

According to Cooper and Schindler (2011, p.139) research design <is arrangement and organisation of study so as to gain answers to research questions=. This also explains the entire plan of the research study which includes an outline of what the researcher will do from the propositions and their functioning implications on the results from the collection to the analysis of the data required for answering the research questions. In this study the mixed methods research designs has been used.

3.1.1 Mixed Methods Research

A research design that integrates both qualitative and quantitative research methods to collect and analysis data to solve a research problem in the same study is known as mixed methods research. According to Creswell and Plano Clark (2011), combining the different procedures in the different approaches helps to access the strengths in each method to

strengthen the entire research design, mainly because the strengths of one procedure offsets the deficiencies of the other, leading to a more comprehensive understanding of the phenomenon or event being studied than if only one research method was used. Mixed methods research design therefore promote interdisciplinary cooperation and use of multiple approaches of inquiry. Mixed methods that combine both quantitative and qualitative approaches have been employed that looked at the teaching and learning of textiles in some Senior High Schools in the Greater Accra Region. How the two research approaches have been used in the study are explained in the following sections.

3.1.2 Qualitative Research

In qualitative research, researchers seek to appreciate the thought people have developed, as in how they perceive their world and the experiences they have in the world (Merriam, 2009). Quantitative research according to Denzin and Lincoln (2005), is enquiry that locates the researcher as a unique setting which provides evidence about the culture of that part of the world. Qualitative research is a study that collects and analyses data that are mostly narrative and non-numeric (Nkwi, Nyamongo, & Ryan, 2001). For these authors the defining criterion that defines approach to research is the type of data generated and / or used. Thus, the outcome-oriented definition that Nkwe et al. (2001) put forward allows for the use of different theoretical and epistemological frameworks that relate to qualitative research as well as the use of many different kinds of data collection and analysis instruments.

Advantages of Qualitative Research

The biggest advantage of the qualitative research is its ability to obtain more detailed explanations and descriptions of incidents, behaviours, and ideas as it investigates by direct

observation and responses to interviews. As Saunders, Lewis and Thornhill (2007) have explained, another advantage comes through the process of collecting qualitative data and the flexibility for validation of data collected. Qualitative research allows for more probing by asking questions in diverse ways in order that the researcher gets to understand the respondents very well and is therefore able to present valid information as the respondents provided.

Disadvantages of Qualitative Research Design

Qualitative research involves extensive periods of data collection and has the likelihood of containing researcher unfairness and perception management in the data collected thus making it more labour intensive. According to Bogdan and Biklen (2003) processing of data collected is time demanding, tiresome and difficult to generalise or draw conclusions from when only a few cases can be managed.

In this study, the qualitative method have been used to gather information on teaching and learning of Textiles in seven schools in the Greater Accra Region to understand the topics outlined in the Textiles Syllabus, the details of the topics, how they are to be taught and to identify the specific skills Textiles students are expected to acquire from the teaching of the subject. The descriptive and case study methods of qualitative research have been used to enable the researcher gain an in-depth knowledge of the methods and strategies Textiles teachers use to teach and how their student learn what is taught in the selected Senior High Schools that offer Textiles in the Greater Accra Region.

3.1.3 Quantitative Research

Aliaga and Gunderson (2000), have described quantitative research as a means by which numerical information is collected and statistically analysed to enable further understanding of issues studied. Quantitative research emphasises the collection of numerical data that enables findings to be generalised across groups of respondents (Babbie, 2010). In contrast to qualitative methods that seeks to unearth the meaning of particular events or circumstances, quantitative methods focus on cause and effect relationships between circumstances surrounding the events.

Disadvantages of Quantitative Research

A disadvantage of quantitative research is that it may not allow researchers to explore a problem in depth. This method is suitable for collecting data on a large scale but not for delving deep into the 8why9 of the research problem. This is partly because in quantitative research, the researcher defines the variables to be studied before engaging in field work. The method also places a limit on the number of variables that can be verified in any one study.

The quantitative method was adopted to define the target variables of interest to the study through the use of questionnaire which is best suited to the collection of data from large groups. According to Malhotra and Birks, (2007), questionnaire can be administered to a large group of individuals at the same time and respondents are free to express their views without being intimidated by the researcher. Copies of questionnaire which had both quantitative and qualitative items were used for the collection of data because of the large number of respondents who constitute the population studied, with respect to the teaching and learning of Textiles in senior high schools.

3.2 Research Method and Strategy

The researcher used descriptive research methods. According to Saunders, Lewis and Thornhill (2007) exploratory study is an important means by which a researcher can find what is going on, look for new insight, and question situations to evaluate phenomena in a new light. The exploratory strategy was chosen because the researcher wanted to understand how the perceived challenges associated with the teaching and learning of Textiles in Senior High Schools affect the students' learning and performances in the WASSCE. Descriptive research has the aim to describe a precise profile of persons, events or situation and it is flexible to changes in the course of the study.

The case study research strategy was also employed in the research. Robson (2002) and Saunders et al. (2007) describes case study as an approach for doing research which involves an empirical study of particular phenomenon within its real life context using multiple sources of evidence. The case study strategy used incorporated multiple cases, that is, the study of seven different schools in the Greater Accra Region that offer Visual Art Education in Textiles. The rationale for using multiple cases arises from the need to establish whether the findings of the first case occur in other cases as well, therefore the need to generalise the scenario of teaching and learning of Textiles in other schools from such findings.

Triangulation, which involves the use of different data collection techniques (interviews, observations and questionnaires) in combination within the study was used in order to ensure that the information so gathered told the story of the teaching and learning situations in Ghana's Senior High Schools with regards to Textiles. Triangulation can be used to gather varying opinions on the same issue, to use the advantages of one technique to counteract the

deficiency or weakness of the other, in order to achieve validity and reliability of the highest degree (Badu-Nyarko, 2012).

3.3 Population for the Study

Population is the set of possible cases within which a sample is selected for study (Saunders, et al., 2007). Also Welsh (2006), describes population as any group of individuals that have one or more characteristics in common that in the view of the researcher may be of relevance of the study. The accessible population for the study was all the students in the selected Senior High Schools in the Greater Accra Region. For purposes for confidentiality, the participating schools are coded as follows:

1. School A
2. School B
3. School C
4. School D
5. School E
6. School F
7. School G

3.3.1 Target Population for the Study

The study focused on seven selected Senior High Schools located in the Greater Accra Region which has a total of 130 Senior High Schools that offer Visual Arts programmes. Out of these only 30 schools offer Textiles. The target population consisted of 200 students, 12 teachers, five WAEC officials, five CRDD coordinators, six lecturers and seven Heads of the sampled schools. The total number of respondents was 235.

3.3.2 Accessible Population

The accessible population for the study formed 88.94% of the target population comprising of 186 students, 12 teachers, two head teachers, three lecturers, two CRDD officials and 3 WAEC officials as shown in Tables 3.1 and 3.2. The percentage distribution of student respondents in the sampled schools are as follows: School A = 16.7%, School B= 11.8%, School C = 5.4%, School D = 8.6%, School E = 32.8%, School F = 8.6% and School G = 16.1%.

Table 3.1 Target and accessible population of respondents

Category of respondents	Target Population	Percentage of Target Population	Accessible Population	Percentage of Accessible population
Students	200	85.1%	186	93.0%
Teachers	12	5.1%	12	100.0%
Heads of SHS	7	3.8%	3	42.9%
Lecturers	6	2.6%	3	50.0%
CRDD Officials	5	2.1%	2	40.0%
WAEC Officials	5	2.1%	3	60.0%
Total	235	100.0%	209	88.9%

Table 3.2 Accessible students from the selected SHS

School	Accessible population	Percentage
School A	31	16.7%
School B	22	11.8%
School C	10	5.4%
School D	16	8.6%
School E	61	32.8%
School F	16	8.6%
School G	30	16.1%

Total	186	88.9%
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3.4 Sample and Sampling

Sampling techniques offer a range of methods that allow the researcher to lessen the number of data required to be collected by considering only data from a sub group rather than all possible cases or elements. The sampling technique used for this study was judgemental or purposive sampling. According to Saunders et al. (2007), purposive or judgemental sampling allows one to use ones judgement to select cases that will best assist one to answer research question(s) and to meet one9s objectives. This form of sampling is often used when working with very small samples such as in case study research and when one wishes to select cases that are particularly useful.

In the study the purposive sampling technique was used to select the seven schools that offer Textiles in the Greater Accra Region, Art educators, Lecturers, WAEC officials, administrators and Textiles students who would be either interviewed or given copies of questionnaire to respond to. The convenience sampling technique was used to select participants who were not too far away yet could provide adequate information needed to answer the research questions of the study. According to Saunders et al. (2007), convenience sampling involves randomly selecting those cases that are relevant and easiest to gather for the sample.

3.5 Research Instruments

The instruments used for data collection were interviews, questionnaire and observation. The questionnaire was designed using a combination of closed and open ended questions. The closed ended questions allowed the respondents to choose from a pre-determined set of answers. Multiple choice questions with an option for <other= to be filled in, or ranking

scale response options was used. The study also made use of open ended questions which encouraged the respondents to explain their answers and reactions to the questions (BaduNyarko, 2012).

3.5.1 Questionnaire

Frankael and Wallen (2003) have defined questionnaire as predetermined issues, orderly written out, well planned and systematically arranged, typed and sent to respondents to solicit answers. Badu-Nyarko (2012) describes questionnaire as a methodical and logical planned, pre-conceived questions sent out to people to solicit their views on attitudes, behaviour and social issues. Some strengths and weakness outlined by Saunders *et.al* (2007) are as follows:

- They allow respondents time to think about their responses carefully without being led or coerced by anyone for instance the interviewer in the case of interviews.
- It is possible to provide questionnaires to many respondents at the same time.
- It allows identical sets of standardized questions with closed form of questions to be given to individual respondents.
- There is the possibility of a high response rate as it addresses a large number of issues in an efficient way.
- They permit anonymity.

The weaknesses of questionnaires are:

- Often there is no strong motivation for respondents to respond, hence it may be difficult to obtain a good response rate.
- Can be misleading if badly designed.

- There is no room to probe further and it does not allow for follow-up on answers provided by the respondents.
- Quality of information collected is not as high as compared to interviewing.

There were two sets of questionnaires: Questionnaire for SHS Textiles Teachers and Questionnaire for SHS Textiles Students (see Appendices A and B). The questionnaires aimed at soliciting information that would make it possible to suggest how to enhance the teaching and learning of the content of the Textiles syllabus in the Senior High Schools. The questionnaires were aimed at soliciting information on how the teachers and students regard teaching and learning situations in the respective schools and what they think would help improve the delivery and learning of the content of the Textiles syllabus so that Textiles students would do well in the final SHS examinations and WASSCE. In all 240 copies of the students' questionnaire were sent to the Textiles students in the seven schools out of which 218 valid copies of questionnaire were returned. For the teachers, 12 copies of the questionnaire were sent out to the potential respondents, out of which 11 were returned.

3.5.2 Interviews

According to Gall, Borg and Gall (2006) interviewing is the gathering of information through direct interaction between the researcher and participants from whom information is needed. Interview can be defined as an oral questionnaire used to request the views of people concerning given issues or events. Welsh (2006) also views interviews as an instrument that can be used to gather and present data on activities, events, people, feelings, motivations, and concerns. Non standardized (qualitative) research interviews are made up of two broad types: in-depth or unstructured interview and semi-structured interviews. In

this study non-standardized type of interview was adopted to solicit useful and exhaustive set of data by investigating topics and explaining other findings (Saunders et. al., 2007).

Interviews are a valuable way of triangulating data collected through the questionnaire and observation and is also used as a follow-up tool to collect additional data to complement data collected with the questionnaire in order to clarify issues raised.

The advantages of interviews are:

- a. It allows for repeating or rephrasing the questions thereby ensuring that the responses are properly understood.
- b. Non-verbal cues from the respondent can be taken by the researcher.
- c. Any discomfort, stress and problems that the respondent experiences can be detected through frowns, nervous taping and other body language, unconsciously exhibited by any person.
- d. It helps the interviewee to get the desired results.

The disadvantages of interviews are:

- a. There are differences in questioning methods.
- b. Interviewers can be biased.
- c. It is costly to use this technique as compared to other evaluation techniques.
- d. Respondents might feel uneasy about the anonymity of their responses when they interact.

In this study, the interviews conducted enabled the collection of data from the past, present and future based on participants⁹ (teachers) methods of teaching and learning, challenges facing Textiles education in Ghana, and other suggestions on how teaching and learning of Textiles could be improved. Collecting data from multiple sources increased the credibility

of the results and afforded the researcher the opportunity to understand how the participants interpreted their experiences. Letters seeking formal consent were sent to all interviewees before the interviews began and the participation was totally on voluntary basis. The interviewees were told that any information given would be treated as confidential before the interviews commenced.

The people interviewed included the WAEC officials, CRDD coordinators, Students, Teachers, Lectures and School Administrators. The interviewees were first informed and dates were arranged for the main interviews to be conducted. During the interviews, the researcher took notes as well as recording precise data. Unstructured interview guide in all cases were administered and it was one on one. The interviews took between twenty to thirty minutes and were conducted in English.

3.5.3 Observation

According to Saunders et. al. (2007), observation is the logical study, recording, narrative, analysis and interpretation of people's behaviour. Badu-Nyarko (2012) views observation as critically looking at events and activities in order to understand or interpret how people act in real life situations. This process assists researchers to get a vivid and visual insight into the problem being investigated. Some of the important advantages of observation are:

- a. it provides valuable means to gather data objectively and reduce or eliminate situations that are irrelevant to the problem or investigation,
- b. It provides the researcher with what is often a logical approach to the study of specific behaviours.

- c. In education, institutions and other social phenomena, it can be used to supplement information gathered through questionnaires and interviews as people may act differently and report differently.

The main disadvantage of observation is that it is expensive because the researcher has to visit the site often to get the required information or data to establish conclusions. In spite of this disadvantage, this study adopted the 8participant as observer9 approach and participated fully in the teaching and learning activities studied. Participant observation is where the researcher becomes a member of the group, organization or community by attempting to participate fully in the lives and activities of subjects. This enables the researcher to avoid the mere observation of what was happening but also share their experiences (Gill & Johnson, 2002). The Textiles teachers were informed in advance that their lessons would be observed alongside the students9 works. Observation in the selected schools of students, teachers and the exercises given to students, the methods and strategies used by the teachers as well as the tools and materials available for the study of Textiles were done personally without any assistance. Collecting data from multiple sources made triangulation possible to increase the credibility of the results, it afforded opportunity to understand the critical issues identified in the study relate to how the teachers and students of Textiles in the sampled schools interpret their own experiences (Leedy & Ormrod, 2005).

3.6 Types of Data Collected

a. Primary Data

Primary data refers to information gathered or obtained from first-hand experience in a research. It is often undertaken after the researcher has gained some insight into the issue by reviewing secondary research or by analysing previously collected primary data. Primary data can be collected through various methods, including questionnaire, interviews and

observations (Leedy & Ormrod, 2005). Primary data were collected in the form of words from the interviewees and photograph of activities that were observed as well as data from responses given to the questionnaire. Primary data collected for this study included narratives from the interviews held with the CRDD and WAEC officials, heads of the schools and lecturers in some polytechnics, photographs taken during the observation of teaching and learning activities in the selected schools, and transcripts of the responses derived from the questionnaires that were given to the teachers and students.

b. Secondary Data

Secondary data is any information collected by someone else other than its user. It is data that has already been collected and is readily available for use (Leedy & Ormrod, 2005). Secondary data saves time as compared to primary data which have to be collected and analyzed before use. In this study, secondary data were elicited from documents such as journals, textbooks, manuals, dissertations and theses sourced from libraries and from the internet.

3.7 Data Collection Procedure

The researcher used the mixed methods research approach consisting of interviews, questionnaire administration and direct observation that enabled triangulation. The interviews were a valuable way of triangulating data collected through questionnaire and observation. Letters seeking formal consent of the study participants were sent to all the interviewees before the interviews began. They were informed that their participation was voluntary. The interviewees were assured of the confidentiality of the information they would give for the study before the interviews commenced. They were also told that the data they provide would only be accessible to the researcher and the research supervisors.

Participants were told they could withdraw from this research at any time they wished. Letters of introduction taken from the researcher's Head of Department were sent to the Heads of the sampled schools asking their permission prior to data collection. No interviews were recorded. The information obtained was written manually and verified by the interviewees.

3.8 Reliability and Validity

The validity and reliability of the data one collects and the response rates they achieve depends, to a large extent, on the design of the questions, the structure of the instrument and the rigidity of the pilot testing. A suitable instrument will enable accurate data to be collected, and one that is reliable will mean that data collected time and again will give the same results (Saunders et. al., 2007). Reliability is the degree to which data collection technique(s) will provide unswerving findings, similar observations will be made or conclusions reached by other researchers or there is transparency in how sense was made from the raw data (Easterby-Smith, Thrope, & Lowe, 2002).

The questionnaire that was designed for the study was pre-tested in Accra High School, which was a non-case study school purposely to ensure reliability of this data collecting instrument. This was done with 37 copies of the questionnaire for the Textiles students (see Appendix B) and three copies of the questionnaire for Textiles Teachers (see Appendix A) and helped to check for consistency and dependability of the research instrument and its capability to attract data that would give precise answers to the research questions and also satisfy the objectives set for the study. Raw data obtained from the instruments were subjected to a reliability analysis from which the study was carried out to judge the teaching and learning of Textiles in SHS.

3.8.1 Validity

Validity is the extent to which data collection method(s) accurately measure what they were intended to measure. Participant observation is very high on ecological validity because it involves studying phenomena in their natural context. The greatest danger to the reliability of the research conclusions produced as a result of participant observation study is that of observer bias (Saunders et al., 2007). Robson (2002) notes two strategies for overcoming observer effect as 8minimal interaction9 and 8habituation9. Minimal interaction means that the observer tries as much as possible to 8melt into the background9 – having as little interaction as possible with the subject of observation. In this study, the researcher sat in unobtrusive positions in the classrooms and avoided eye contact with the teachers and students who were being observed. The next strategy was habituation where the subject being observed becomes familiar with the process of observation so that they take it for granted. In this research, there were several observation sessions occurred in all the seven schools sampled in the Greater Accra Region with the same teachers and students.

The design of the questions, the structure of the questionnaire and the rigour of the pilot testing affect the internal validity and reliability of the data collected and the response rate achieved (Saunders et al., 2007). Often when discussing the validity of a questionnaire, researchers refer to content validity, criterion-related validity and construct validity (Blumberg, Cooper, & Schindler, 2005). The questionnaire that was designed for this study was pilot tested using Accra High School teachers and students of Textiles, then the questionnaire was reviewed and the recommendations infused in to reformulate the instrument so that it would have the ability to obtain the expected relevant data.

3.9 Ethical Issues Relating to Data Collection

According to Easterby et al (2002) and Saunders et. al. (2007), the capability to investigate data or to seek clarification through interview-based techniques means that there will be greater scope for ethical and other ethical issues to arise in relation to this approach.

However, in research the resulting personal contact, scope to use non-standardised questions or to observe on a face-to-face basis, and capacity to develop one's own knowledge on an incremental basis mean that one will be able to exercise a greater level of control (Saunders et. al., 2007). According to Sakaran (2003) and Saunders et. al. (2007), the relatively greater level of control associated with interview-based techniques should be exercised with care so that one's behaviour remains within appropriate and acceptable parameters. In a face-to-face interview, one should avoid over-zealous questioning and pressing the participant for answers. Doing so may make the situation stressful for the participant. Participants are to be informed that they have every right to decline to respond to any question (Blumberg et. al., 2005). The letter of consent sent to the participants indicated that they had the right to withdraw from the research at any time and also refuse to respond to any question they deemed not appropriate.

The use of observation raises its own concerns. The boundaries of what is permissible to observe need to be clearly drawn. Without this the principal participant may find that their actions are being constrained. The researcher assured the participants about the confidential use of the data collected.

3.10 Data Analysis Plan

Both qualitative and quantitative data were analysed to provide findings which were statistically reliable and also allowed in-depth interpretation. The findings were organised

and presented in the form of descriptive statistics such as charts, graphs and tables to enable examination and description of the pattern of the responses derived from the study participants. The data were processed using the Microsoft Excel software. Being aware of the large amount of data qualitative studies can generate, strategies were applied for data reduction by focusing on the research aspects which were relevant to the research questions before, during and after the data collection.

3.11 Ethical Issues Relating to Analysis and Reporting

Ethical issues of confidentiality and anonymity also come into play during the reporting stage of the research. Allowing a participating organisation to be identified by those who can piece together the characteristics that the researcher would review may result in embarrassment and also refusal of access of those who may seek that after him/her. Great care is therefore needed in the exercise to avoid such situation. This level of care also needs to be exercised in making sure that the anonymity of the individual participant is maintained (Blumberg et. al., 2005; Robson, 2002). Knowing that respondents could be embarrassed or even harmed by the reporting of data that are clearly attributable to a particular individual, much care was taken to protect those who participated in any research. For this reason, the schools that took part in the research were identified only by codes as Schools A, B, C, D, E, F, G and H. Details of the discussions and analysis of the research findings are provided in chapter four.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

4.0 Introduction

The chapter provides the analysis and findings of this study. It presents a clear description of the contexts in which teaching and learning were examined in the study schools. In addition, the chapter examines the SHS Textiles syllabus, describes the teaching strategies used by the teachers in the selected seven schools. The findings have been organised and presented in the form of descriptive statistics using charts, graphs and tables to enable examination and description of the pattern of the responses.

4.1 Characteristics of the Sampled Schools

4.1.1 School A

The School is located in the Adentan part of Accra Metropolis. The school was founded in 1946. Currently the population of the school is 2,092 with 994 males and 1,106 females. There are 85 teaching staff with 30 non-teaching staff. Programmes offered by the school are Visual Arts, Home Economics, General Arts, General Science, General Agriculture and Business. The Visual Arts curriculum involves specialized studies in Graphic Design and Textiles, Leatherwork and General Knowledge in Art. A total of 258 students offer Visual Arts with 73 of them offering Textiles.

4.1.2 School B

The school started in 1956 in Osu Salem, Accra. It has 1,700 students with 104 teaching staff and 30 non-teaching staff. Seven of the teachers teach Visual Arts and two of them teach Textiles. Programmes offered are Visual Arts, Home Economics, General Arts, General Science and Business. The Visual Arts curriculum involves specialized studies in Graphic Design, Textiles (which is being phased out), Picture-Making, Sculpture, Ceramics and General Knowledge in Art. A total of 31 students offer Textiles. The school has decided

to discontinue offering Textiles in the 2014/2015 academic year. The reason given was that the students do not perform well at WASSCE as a result of inadequate tools and equipment for practical work.

4.1.3 School C

The School was established in 1947 at La Abormi in Accra. It is situated in the Dade Kotopon electoral constituency in the Greater Accra Region and in the Kpeshie sub unit of the La Dade Kotopon Municipal Assembly. The school has 2,769 students of which 1,415 are males and 1,354 females. It has 108 teaching staff and 58 non-teaching staff.

Programmes offered are Visual Arts, Home Economics, General Arts, General Science and Business. The Visual Arts curriculum involves Graphic Design, Picture Making and Textiles (recently introduced), Jewellery, Leatherwork and General Knowledge in Art. The school has acquired some of the tools and equipment required for the teaching and learning of Textiles. The total population of the Visual Arts students is 286, 11 of whom are first year students offering Textiles.

4.1.4 School D

The School was established in 1961 with six teachers and 105 students by Dr. Kwame Nkrumah as a boarding co-educational institution. Currently, it has 106 teachers with 66 non-teaching staff, 2,260 students made up of 1,243 males and 1,017 females. Programmes offered are Visual Arts, Home Economics, General Arts, General Science and Business. The Visual Arts curriculum involves Graphic Design, Textiles, Ceramics, Basketry and General Knowledge in Art. The total number of students offering Visual Arts is 276 of which 30 offer Textiles.

4.1.5 School E

The school started in 1978 as a Junior Secondary School. In 1982 it was upgraded into to a Senior High School jointly by the Ministry of Education. It is situated in the La Dade Kotopon Municipal Assembly in the Greater Accra Region. The school has 63 teachers; five of them teach Visual Arts and one teaches Textiles. The total population of the school is 1,300 students with 700 boys and 600 girls. Programmes offered in the School are General Arts, General Science, Technical and Vocational Programmes. The Visual Arts elective subjects are Graphic Design, Textiles, Picture-Making and Ceramics. Those offering Clothing & Textiles at the Home Economics section also offer Textiles and General Knowledge in Art. The total number of students offering Visual Arts is 91 out of which eight (8) students are in Visual Arts and 53 are in the Home Economics department; giving a total of 61 students who offer Textiles.

4.1.6 School F

The school was started in 2003 by Rev. Moses Adu-Gyimah. The School is located at East Legon. The programmes offered are General Science, General Arts, Business, Visual Arts and Home Economics. The Visual Arts electives offered by the school are Graphic Design, Textiles, Leatherwork and General Knowledge in Art. The school has 326 students with 15 teachers. The total number of students offering Visual Arts is 20; all of them offer Textiles.

4.1.7 School G

The school was established in 1971 by Rev. Dr. Emmanuel Adu-Gyamfi. The school has 28 teachers and 12 non-teaching staff. Three teachers teach Textiles. It is located at Caprice in Accra. It has 600 students with 77

SHS 2 and SHS 3 students offering Visual Arts. The SHS 1 students had not reported to school at the time of data collection. The programmes offered are General Arts, Business, and Visual Arts. The Visual Arts electives are Graphic Design, Textiles, Ceramics and General Knowledge in Art.

4.1.8 Observation and Reflective Comments on the Characteristics of the Schools

Visits to the sampled schools revealed that out of the 130 registered SHSs in Accra, only 30 of them offer Textiles. Although the WAEC list of schools indicate that 30 schools offer Textiles in Greater Accra Region, most of them had stopped offering Textiles. Other schools such as School B were also in the process of collapsing the Textiles programme and had not admitted first year students. School C had previously stopped offering Textiles but had begun it again by admitting 11 students. From the information gathered many Visual Arts students do not like the elective Textiles as compared to Graphic Design. The reasons for many schools discontinuing the offer of Textiles have been discussed in the ensuing sections.

4.2 Findings from Questionnaire, Interviews and Observations

4.2.1 Socio-Demographic Characteristics of Textiles Teachers

The socio-demographic characteristics of research respondents are very important as they could have some impact on a person's behaviour and consequently help to explain a person's views on issues and why he or she does what he or she does (Yeboah, 2014). The sociodemographic characteristics which were used for the study include gender, age, years teachers had spent in the teaching service and the educational background of the study respondents.

Gender

The study revealed that seven of the 12 Textiles teachers were males and five were females which represent 58% and 42% of the total number respectively. This indicates that the Visual Arts departments of the in the selected study schools have more male teachers in the Textiles units than females. This disparity does not offer female students with positive role models they can emulate among the Textiles teachers.

Level of Education of Teachers

The study revealed that out of the 12 teachers surveyed, six (representing 50%) hold Master's degrees while five (41.7%) others hold first degree qualifications. Only one teacher

(representing 8.3%) of the total respondents holds the HND in Fashion Design and Textiles. This shows the Textiles teachers have adequate high level education to provide the tuition needed by the students to do well in school and in the WASSCE. Figure 4.2 shows the graphical representation of the professional status of the Textiles teachers surveyed. Figure 4.2 shows the Professional Status of the teachers surveyed.

Figure 4.2: The Professional Status of the teachers surveyed.

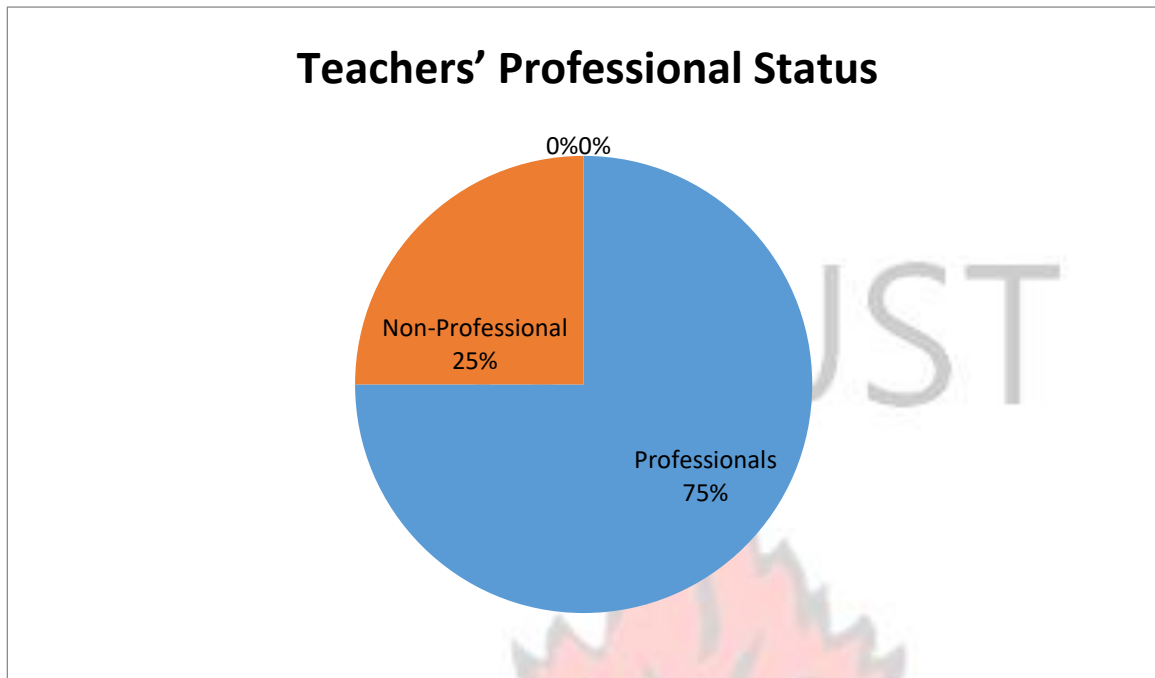


Fig. 4.1: Teachers' Professional Status

The data collected revealed that nine of the teachers, 75% were professionally trained and hold the Bachelor of Education, Postgraduate Diploma in Education or Teachers' Certificate 8A9 while three were non-professionals by Ghana Education Service (GES) standards. The non-professional teachers would need to be trained to become professional teachers because the rules and regulations of the GES and Ghana National Association of Teachers (GNAT) stipulate that all teachers in the GES-governed schools should have adequate professional training; the minimum professional grade being the Teachers' Certificate 8A9 (Agbenatoe, 2011). Deficiencies in the education and training of the teachers could affect the quality of their teaching and the students' performance in Textiles.

Number of years of Teaching Textiles

With regards to how long the teachers had taught Textiles in Senior High Schools (SHSs), the lowest number of years served is up to three years for one teacher (representing 8.3%) while the highest number of six teachers (representing 50%) of the 12 teachers had taught for over 10 years as shown in Figure 4.2.

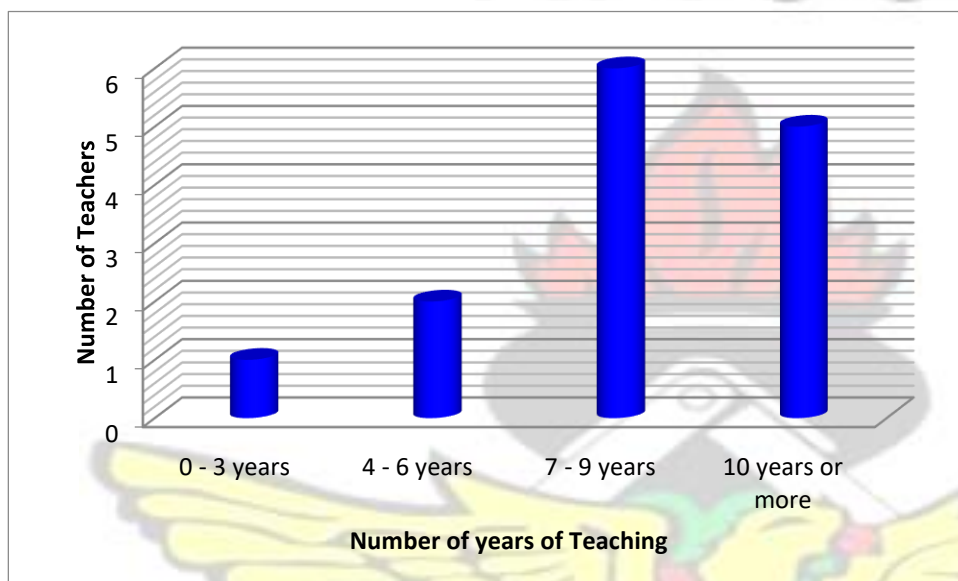


Fig. 4.2: Number of years of Teaching Textiles

Having more experienced teachers (with 10 or more years in classroom teaching) in the schools could positively affect the students' performance since the large number of teachers would have acquired adequate teaching skills over the years and also gained more experience to effectively teach to raise academic standards in the schools. However, in some cases, long years of teaching may not necessarily mean high performance if there is inadequate in-service training to update their teaching methods. Perhaps the experienced teachers were not using their experience to help the Textiles students to do well at WASSCE that is possibly the reason why some of the schools had stopped offering this Visual Arts elective.

Socio-Demographic Characteristics of Students

From Table 4.1, it is seen that apart from School E, all the schools have more male students offering Textiles than females, which also shows a marked gender imbalance among both teachers and students. It is only in Schools A and E that the females greatly outnumber the male students. It was realised that in School E, the students who offer Clothing and Textiles are mostly females. This is similar to the finding by Evans-Solomon and Opoku-Asare (2011) that more girls prefer to offer Textiles which they perceive as a <girl friendly= subject.

Table 4.1: Gender of Students

Schools	Females	Males	Total
School A	18	13	31
School B	10	12	22
School C	4	6	10
School D	6	10	16
School E			
Visual Arts	3	5	61
Home Economics	53	0	
School F	2	14	16
School G	7	23	30
Total	98	88	186

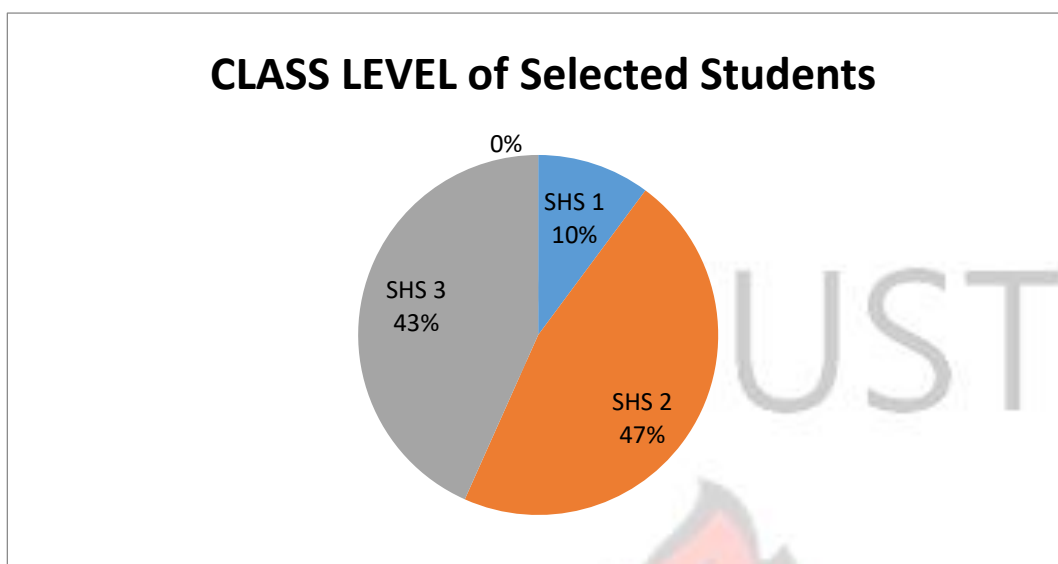


Figure 4.3: Class distribution of Selected Students

From Figure 4.3, the highest of 87 students (representing 47%) of the population sampled were in SHS 3 while the least of 19 student (representing 10%) of the respondents were in SHS 1. The low number of SHS 1 students could be attributed to the fact that new students admitted to the Visual Arts departments were still reporting to school at the time of data collection.

The following sections focus on the analysis and discussion of the findings of the study which has been organised according to the objectives specified for the study.

Objective One: *To Examine the Scope of Content of the Textiles Syllabus in the Senior High Schools*

Scope of Textiles Syllabus Content

The Textiles syllabus covers the history, principles and practice of Textiles as a vocation and offers enough knowledge and skills to students who will terminate their education at the end of Senior High School so they would practise Textiles as a vocation. The scope of

content of Textiles has also been designed in such a way as to provide adequate foundation for students who will pursue further education in art.

The Teaching Syllabus for Textiles

A careful study at the teaching syllabus for the elective SHS Textiles reveals that students of Visual Arts choose three Art subjects: General Knowledge in Art (compulsory subject for all Visual Arts students) and two other Art subjects. The syllabus has allocated General Knowledge in Art (GKA) and each of the two other elective subjects six periods (40 minutes per period) of instructional time per week, giving a total of 18 periods study time each week (CRDD, 2010). However, according to CRDD (2008), each of the three subjects had seven periods of 40 minutes, which amounted to 21 periods for teaching per week previously. This means that there has been a reduction in the time allocated to the teaching and learning of the Textiles topics outlined in the syllabus. This implies that the instructional periods allocated for teaching Textiles before the current Textiles syllabus was introduced has been reduced by three periods or 120 minutes per week of teaching time for Textiles yet further study of the 2010 teaching syllabus shows that more topics have been added to the 2008 content.

As Agbenatoe (2011) indicates, vocational and technical subjects like Textiles require more instruction and time for practical work than in general arts and science education. Textiles being a vocational oriented programme therefore needs to be allotted sufficient time to enable the schools to satisfy their practical goals.

On whether the skills specified to be taught in the syllabus provide the competencies required for the students to perform effectively after the SHS education, all the 12 teachers

responded positively that the skills could provide the competencies. Some of the skills which could be acquired by the students include the following:

1. Dyeing skills for batik and tie & dye production.
2. Basic Drawing, idea development, motif arrangement, painting.
3. Mixing and application of colours, tying, ironing, folding, waxing and de-waxing.
4. Weaving skills - planning and designing, warping, beaming, heddling, tying-up, and weaving.
5. Printing skills for T9 shirts, cloth or fabric, handkerchiefs and banners.

On whether the skills specified in the Textiles syllabus can provide the competencies required by them for after school employment, the students affirmed that the skills indicated in the syllabus are those needed to make them perform effectively after completing SHS if they decide to go into small-scale business or even when they decide to further their education. This confirms the fact that the Visual Arts programme has been designed to provide its students with adequate basic knowledge and skills for further education as well as for self-employment or apprenticeship with respect to those terminating their education at the SHS level (Evans-Solomon & Opoku-Asare, 2011).

The content of the 2008 Textiles Teaching syllabus has been enhanced to include several units or topics although the time allocated for the completion of the syllabus has been reduced instead of being allocated additional hours to give enough time for the teachers to complete the syllabus. There has been a reduction of three periods of 120 minutes (CRDD 2008, 2010) even though Amissah (2004) reported years earlier that the 21 periods allocated per week for teaching Textiles was inadequate for the teachers to fulfil the theoretical and practical aspects of the syllabus.

Reasons given for the inability to complete the Textiles Syllabus within the three-year period

Out of the 12 teachers questioned, 10 said they would not be able to complete the Textiles syllabus within the three year period. The two teachers who said they can complete the syllabus within the allotted time also said they rush through to finish the syllabus for the sake of WASSCE, and that they do not cover specific skills the students have to learn during the practical aspects because they lack the required tools such as looms and the materials.

Some other reasons the teachers cited for not completing the syllabus are:

1. The syllabus is broad and it is difficult to complete it within the scheduled time.
2. Students do not report to school on time – this makes the students spend less than the three years in school.
3. Co-curricular activities such as sports and athletics which the school organises take part of the instructional time.
4. Strikes and demonstrations by teachers also distract classes and make both students and teachers spend less time in the teaching and learning process.

Though a curriculum serves as guidance, it must be completed in time to fully accomplish its aim (Dorleku, 2011). In analysing the 2010 Textiles syllabus it was detected that it has been enhanced to include several units / topics which make it bulky and broad. Table 4.2 shows the syllabi for 2008 and 2010 SHS1-3 and the additions that reflect in the 2010 syllabus. The places coloured yellow are the additions or new topics in the 2010 Textiles syllabus.

Table 4.2: 2008 and 2010 Textiles Syllabus

2010	2008
Year One	
INTRODUCTION TO TEXTILES (Pg. 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: INTRODUCTION TO TEXTILES (pg. 1 – 8) Unit 1: Rationale for studying textiles Unit 2: Textile developments and careers Unit 3: Renowned Ghanaian Textile Artists SECTION TWO: FIBRES (CELLULOSIC) (Pg. 9 -11) Unit 1: General properties of fibres Unit 2: Cellulosic fibres (cotton, linen) Unit 3: Exploring the Environment for textile fibres
SECTION TWO: FIBRES (CELLULOSIC) (Pg. 13 – 14) Unit 1: General properties of fibres Unit 2: Cellulosic fibres (cotton, linen) Unit 3: Exploring the Environment for textile fibres	

SECTION THREE: YARN PREPARATION (CELLULOSIC) (Pg. 15 – 16) Unit 1: Traditional Yarn preparation (Cellulosic)	SECTION THREE : YARN PREPARATION (CELLULOSIC) (Pg. 12 – 13) Unit 1: Traditional Yarn preparation (Cellulosic)
Unit 2: Contemporary yarn preparation. (Cellulosic)	Unit 2: Contemporary yarn preparation (Cellulosic)
SECTION FOUR: LOOMS AND ACCESSORIES (Pg.17) Unit 1: Types of Man-power looms and Functions Unit 2: Weaving accessories and uses Unit 3: Fabric construction techniques	SECTION FOUR : LOOMS AND ACCESSORIES (Pg. 14) Unit 1: Types of Man-power loom and Functions Unit 2: Weaving accessories and uses
SECTION FIVE: FABRIC CONSTRUCTION PROCESSES Unit 1: Designing (Plain Weaves) Unit 2: Preparatory Processes for fabric Construction (Weaving) Unit 3: Broadloom Weaving Unit 4: Traditional Weaving	SECTION FIVE: FABRIC CONSTRUCTION PROCESSES (Pg. 15 – 17) Unit 1: Designing (Plain Weaves) Unit 2: Preparatory Processes for fabric Construction (Weaving) Unit 3: Broadloom Weaving Unit 4: Traditional Weaving

<p>SECTION SIX: FABRIC DECORATION TECHNIQUES (Pg. 21-27)</p> <p>Unit 1: Basic Drawing (Designing)</p> <p>Unit 2: Designing for Fabric Decoration (Manual or Computer Aided)</p> <p>Unit 3: Printing from Surfaces (Direct Printing)</p> <p>Unit 4: Plant Dyes (vegetable Dyes)</p> <p>Unit 5: Fabric Preparation/Dyeing Processes</p> <p>Unit 6: Appreciating and criticizing specific Textile product</p>	<p>SECTION SIX: FABRIC DECORATION TECHNIQUES (Pg. 18 – 22)</p> <p>Unit 1: Basic Drawing</p> <p>Unit 2: Designing for Fabric Decoration (Paper/Computer Work)</p> <p>Unit 3: Printing from Surfaces(Direct Printing)</p> <p>Unit 4: Plant Dyes</p> <p>Unit 5: Fabric Preparation/Dyeing Processes</p>
<p>Year Two</p>	

<p>SECTION ONE: FIBRES: PROTEIN AND MANMADE (Pg. 28-31)</p> <p>Unit 1: Protein fibres (wool and silk)</p> <p>Unit 2: Man- made fibres (regenerated, synthetic)</p> <p>Unit 3: Contemporary yarn spinning</p>	<p>SECTION ONE: FIBRES: PROTEIN AND MANMADE (Pg. 23-25)</p> <p>Unit 1: Protein fibres (wool and silk)</p> <p>Unit 2 : Man-made fibres (regenerated, synthetic)</p>
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<p>SECTION TWO: SUSTAINABLE DEVELOPMENT AND ENTREPRENEURIAL PRACTICE (Pg. 32-39)</p> <p>Unit 1: Managing Resources</p> <p>Unit 2: Healthy Studio Practices</p> <p>Unit 3: Building a portfolio and Exhibition</p> <p>Unit 4: Developing a Business Plan, Brochure and Card</p> <p>Unit 5: Costing and pricing</p> <p>Unit 6: Packaging in Textiles</p>	<p>SECTION TWO: YARNS (PROTEIN AND MANMADE) (Pg. 26)</p> <p>Unit 1: Contemporary yarn spinning</p>
<p>SECTION THREE: FABRIC CONSTRUCTION- TWILL WEAVES AND OTHER WEAVERS (Pg. 40 – 47)</p> <p>Unit 1: Designing and Weaving Twill structures</p> <p>Unit 2: Satin/Sateen Weaves</p> <p>Unit 3: Crocheting and Knitting</p> <p>Unit 4: Tapestry</p> <p>Unit 5: Types of power looms (shuttle/shuttleless)</p> <p>Unit 6: Finishing and care of woven fabrics</p> <p>Unit 7: Effects of weave structures on the body</p>	<p>SECTION THREE: FABRIC CONSTRUCTION –Twill WEAVES AND OTHER WEAVES (Pg. 27 – 34)</p> <p>Unit 1: Designing and Weaving Twill structures</p> <p>Unit 2: Satin/ Sateen Weaves</p> <p>Unit 3: Crocheting and Knitting</p> <p>Unit 4: Tapestry</p> <p>Unit 5: Types of power loom (shuttle/shuttleless)</p> <p>Unit 6: Finishing and care of woven fabrics</p>

<p>SECTION FOUR: FABRIC DECORATION PROCESSES (Pg. 48 – 54)</p> <p>Unit 1: Tools and Materials for Fabric Decoration</p> <p>Unit 2: Dyeing Techniques</p> <p>Unit 3: Screen Printing Techniques</p> <p>Unit 4: Traditional (Adinkra) Printing</p> <p>Unit 5: Finishing and Care of Decorated Fabrics</p> <p>Unit 6: Effects of chemicals on the body Internal/external)</p>	<p>SECTION FOUR: FABRIC DECORATION PROCESSES (Pg. 35 – 41)</p> <p>Unit 1: Tools and Materials for Fabric Decoration</p> <p>Unit 2: Dyeing Techniques Unit 3: Screen Printing Techniques</p> <p>Unit 4: Traditional (Adinkra) Printing</p> <p>Unit 5: Finishing and Care of Decorated Fabrics</p>
<p>SECTION FIVE: APPLIQUE AND EMBROIDERY TECHNIQUES (Pg. 55 – 56)</p> <p>Unit 1: Stitches</p> <p>Unit 2: Appliqué and Embroidery Techniques</p>	<p>SECTION FIVE: APPLIQUE AND EMBROIDERY TECHNIQUES (Pg. 42 – 43)</p> <p>Unit 1: Stitches</p> <p>Unit 2: Appliqué and Embroidery Technique</p>
<p>Year Three</p>	

<p>SECTION ONE:</p> <p>FABRIC CONSTRUCTION (Pg. 57-61)</p> <p>Unit 1: Traditional weaving (kente weaving)</p> <p>Unit 2: Crocheting/knitting</p> <p>Unit 3: Tapestry</p> <p>Unit 4: Non-woven fabrics</p>	<p>SECTION ONE:</p> <p>FABRIC CONSTRUCTION (Pg. 44-47)</p> <p>Unit 1: Traditional weaving (kente weaving)</p> <p>Unit 2: Crocheting/knitting</p> <p>Unit 3: Tapestry</p>
<p>SECTION TWO: FABRIC DECORATION TECHNIQUES (PG. 62-65)</p> <p>Unit 1: Dyeing / batik making</p> <p>Unit 2: Printing</p> <p>Unit 3: Appliqué / embroidery</p> <p>Unit 4: Finishing and care of fabrics</p>	<p>SECTION TWO: FABRIC DECORATION TECHNIQUES (Pg. 48-51)</p> <p>Unit 1: Dyeing /batik making</p> <p>Unit 2: Printing</p> <p>3: Appliqué/embroidery</p> <p>4: Finishing and care of fabrics</p>
<p>SECTION THREE: INDIGENOUS TEXTILE EXPLORATION (Pg. 66 – 68)</p> <p>Unit 1: Exploration of indigenous tools and Materials</p> <p>Unit 2: Exploration of indigenous fabric construction and decoration processes.</p>	<p>SECTION THREE: SUSTAINABLE DEVELOPMENT IN TEXTILES (Pg. 52- 55) Unit</p> <p>1: Managing Resources</p> <p>Unit 2: Textiles and cultural values</p>

Additional topics to the content

A thorough examination of the syllabus in outlined in Table 4.2 shows the following significant topics that have been included in the 2010 syllabus which were not in the 2008 syllabus:

1. Competences, attitudes and behaviour of the student for employment and customers
2. Effects of weave structures on the body, Exploration of indigenous tools and materials
3. Exploration of indigenous fabric construction and decoration processes
4. Appreciating and criticizing specific Textile products
5. Effects of chemicals on the body
6. Entrepreneurial Practice under which students gain knowledge in:
Healthy Studio Practices

Building a portfolio and Exhibition

Developing a business plan, Brochure and Card and Packaging in Textiles.

It is obvious that the scope of content of the syllabus is broad enough to provide adequate basic knowledge and skills for students who select Textiles to enable them pursue further education in the Visual Arts, and also for those terminating their education at the Senior High School to also practice Textiles as a vocation. Some of the skills to be gained by students from the topics are listed in Table 4.3.

Table 4.3 Skills to be gained by Students from the Syllabus

TOPIC	SKILLS
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 Dyeing- Batik and Tie & dye	Idea development, drawing, mixing of colours, painting, stitching, tying, folding of fabric, waxing, de-waxing and ironing.
Scope of Knitting and Crocheting	Measuring, stitching, colour combination.
Scope of Embroidery and Appliqué	Drawing, cutting, Stiches, colour combination.
Scope of Weaving: Broad loom 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,
	Building a portfolio and Exhibition, packaging in Textiles, Appreciating and criticizing Textiles product.

Objective 2: *To explore the methods and strategies of teaching and learning used by the teachers and students of Textiles in the selected Senior High Schools*

4.3. Data gathered through Observation

This section analyses the observation of teaching and learning processes in the schools selected for the study. The aim was to examine how teaching and learning takes place in the classroom, to identify the teaching and learning methods and strategies used by both teachers and students, the tools and materials available for teaching Textiles and the students' attitude to the teaching and learning processes. Highlights of the lessons observed are described in the following sections.

1. Lesson in School A

Topic: Components of Textiles

Class: SHS 2

Teaching / Learning materials: Textiles pamphlet

Presentation: The lesson started without the teacher writing the topic on the board. The researcher asked about the topic before the teacher told her she was discussing 8components of Textiles9. The discussion and lecture methods were used for the lesson. It was an afternoon class. The teacher and students gathered around the teachers9 table with a textile pamphlet in front of them. The students read from the pamphlet while the teacher explained what was read. The lesson was very boring since no activity was used by the teacher. There were only seven students in the class but some of them were found sleeping while the teacher was explaining the various components of Textiles. The researcher deduced that the teacher did not plan her lesson to consider the techniques and strategies that will encourage students to be fully involved in the lesson.

2. Lesson in School B

Topic: Tools and Equipment for Screen Printing

Class: SHS 2

Equipment, tools and materials: Wooden frame, mesh (silk cloth), prepared Screens.

Presentation: Teacher introduced the lesson with questions on printing including 8what are the types of printing9? The students answered the questions with confidence as they cited answers like 8direct printing and stencil printing9. The teacher then introduced the topic for the lesson and explained what screen printing is to the students. She used the prints in the students9 dresses, including crests and prints in their pullovers, as examples to explain the topic. The teacher then asked how screen printing is done. The students explained with different answers based on their understanding. The class was very interactive. The teacher used rewards like 8very good, clap for him or her9 and promised to give toffees to those

who performed excellently in class. After an extensive discussion, the teacher then explained how screen printing is done using the relevant tools and materials.

The next question was <what are the tools and materials used in screen printing?= Answers she obtained from the students include mesh/organzie, stapler pins, frame, nails, squeegee, photo emulsion for coating the screen, shooting box (development table), sand bag or weight for firm contact of screen with the glass, the design on tracing paper, blanket for covering the screen, cushion foam and water for washing and padded table/flour with blanket for printing. The teacher used questions to evaluate the lesson; the students gave excellent answers, the teacher rewarded them with praises. The teacher used the discussion method and motivation to fully engage the students with a lot questions. This made the students participate fully in the class discussion.

3. Lesson in School C

Topic: Processing of Cotton Fibres

Teaching / Learning materials: Textiles textbook

Presentation: The teacher wrote the topic on the chalkboard. He asked some leading questions to introduce the lesson for the day. The students tried to answer the questions. After the question and answer session, the teacher explained what textile fibres are and the various types of fibres there are to the students. The teacher finally gave 8notes9 to the students to copy while she marked the students9 previous assignments. Because this school had previously phased out Textiles from the Visual Arts programme and was reintroducing it in the 2014/2015 academic year, there were only 11 students in this Textiles class. The tools and equipment available for the teaching and learning of Textiles were a damaged loom that had been packed in one corner of the small classroom that also served as the

studio, a metal pot and six big plastic bowls used for dyeing activities (see Appendix H). The Textiles teacher had already taken this first year class of students through some practical works including frame loom weaving, crocheting and tie-dye. Plates 1 – 4 show examples of the students' practical works.



Plate 1: Tie & Dye Fabrics

Plate 2: Crocheting



Plate 3: Frame loom weaves

Plate 4: Frame loom

Plates 1 – 4: Samples of Students' works

Source: Field work, 2015.

4. Lesson in School D

Topic: Dyeing (Tie & Dye)

Tools and Materials: Teachers' lesson notes

Class: SHS 2

Presentation: The teacher introduced the lesson by asking the students to mention some of the tools and materials used in dyeing. The students' answers included dyes, fabric, and bowls. The teacher then explained the dyeing process to the students. He started with the recipe for dyeing one yard of fabric: one spoonful of dye, three spoonful of sodium hydrosulphite, three spoonful of caustic soda and three spoonful of common salt. He described the process for dyeing as follows: 1. add the recipe in the order listed to a small amount of warm water and stir. 2. Pour the solution into a big bowl with water sufficient to submerge the fabric. 3. Wet the fabric and immerse the fabric for 25 to 30 minutes. 4. Remove the fabric; dry it under a shade for oxidation, wash, dry and iron. The teacher added that they can sew it as a present for their parents.

The teacher evaluated the lesson with questions after the students did not ask him any questions. He then advised the students to get their materials for the practical. The lecture method was used in teaching this lesson which was not interactive. When asked why he taught a practical lesson with the lecture method, the teacher complained of lack of materials for the students to do practical work.

5. Lesson in School E

Topic: Loom parts and loom accessories (Broad loom).

Class: SHS 2

Teaching / Learning materials: Teachers lesson notes, Frame Loom,

Presentation: The teacher wrote the topic on the chalkboard. Some questions were asked by the teacher to introduce the lesson. She asked the students to mention some machines or tools used in producing fabrics. After some discussions she introduced the topic for the day.

Using the lecture method, the teacher explained the parts of the loom and what loom accessories are to the students. The teacher explained the various tools and accessories theoretically since there was no loom and loom accessories available. When some students asked to see samples of the items which the teacher mentioned, she gave it to them as homework to find things up for themselves and bring their findings for marking. After this the teacher demonstrated frame loom weaving and then set the students to work. When they started their work, the teacher went round to monitor and help them get the weaving done. Students' participation was excellent.

6. Lesson in School F

Topic: Practical work on Tie & dye as fabric decoration method

Class: SHS 2 & 3

Equipment, tools and materials: Dyes, mercerized cotton, mordant, small and big plastic bowls, metal bowls for heating, padded table for dyeing, synthetic yarns for tying.

Presentation: The lesson was delivered on a Saturday with 15 students. The lesson took place in the classroom which also served as the studio for the practical work. After introducing the lesson the teacher, allowed a past student of the school who had been invited by the teacher as a resource person for the lesson to demonstrate the dyeing process to the class. The dyes the class used were also mixed by the resource person which the teacher assisted him. The students started work with tying of mercerized cotton, T-shirt and handkerchiefs according to the material each student had for the practical work. After the dyeing, they did not achieve the expected colour effect.

At that point, the researcher interacted with the students to find out how they mixed the dyes and found that the recipe used was: one spoonful of dye, one spoonful of sodium hydroxide

and one spoonful of sodium hydrosulphite which was not correct. The researcher then offered to assist them to get the desired effect, which was accepted and subsequently enabled the class to complete the practical work successfully.

7. Lesson in School G

Class: SHS 2

Topic: Natural Fibres e. g. Cotton

Teaching / Learning materials: Textiles textbook

Presentation: The teacher started the lesson by writing two questions on the chalkboard for the students to answer and gave them time to finish the answers. With a textbook (Not approved by GES) in front of him, the teacher explained the exercises to the students and created fun to arouse their attention. It was observed that the students were not serious in class as they were seen throwing things here and there, interacting with their friends, which made the teacher keep shouting <keep quiet=. The students paid little attention in class as they kept laughing at the teacher's mannerism of frequently saying <do you understand?=. The observation revealed that the students do not do corrections after the teacher has finished marking their class exercises. This attitude can negatively affect the students' performance.

4.4 Interviews

Interviews with the participating teachers, students, lecturers, CRDD coordinators, Textiles Examiners, Heads of the schools and WAEC officials revealed that the content of the Textiles syllabus is too broad for the three-year programme and there are no standard GES recommended textbooks to guide the teaching and learning of Textiles. The teachers complained that the school authorities do not provide them with adequate tools, equipment

and materials to facilitate the teaching and learning of Textiles. As a result, some of the teachers do practical work only when they receive the final year project question from WAEC. It was evident from the interviews that the materials they needed for the practical work are bought by the students so those who are unable to afford them are not able to take part in the practical exercises. The teachers also complained about the neglect of the Visual Arts department as evident in the damaged or broken looms, and lack of padded tables, development tables, and studios to keep their artefacts. The teachers are not given refresher training to enhance their skills and to be abreast with current trends in teaching and learning of Textiles. This finding reflects Anang9s (2011) assertion that the Visual Arts programme continues to encounter problems although it is the only programme that is given the least attention and support through much is expected from it.

Interviews with the students also revealed that they lacked textbooks for further reference and this is not helping them to read ahead, there is a neglect of the Textiles programme by the school authorities for not providing them with the necessary tools and equipment to do their practical work as it is done for programmes like science. They also complained that the time allocated for the practical work is too short that they are not able to finish their practical works and also there no studios to work in. There are no field trips to Textiles factories to get first-hand information although field trips and excursions are recommended educational exercises that help to explain the concepts presented in the classroom setting as the syllabus specifies (CRDD, 2010).

Interviews with WAEC Officials revealed the following:

1. Extensive or very broad Textiles syllabus.
2. Financial constraints - students getting money for their practical work.

3. That students are not taken through the various practical works by teachers for them to get knowledge and vocabulary to write. For example weaving is not taught by some teachers, they do not do practical works and suggested that where the teacher is not able to do the practical work he or she should invite technicians to help.
4. The school administration should provide materials and equipment to the Visual Arts department for at least demonstration for the students.
5. Making Textiles a 2-D subject and not a 3-D subject makes students opt for Graphic Design or Picture Making instead of Textiles.

Reasons for the decline in the offer of Textiles in the SHS were given as follows:

1. The scope of content of the Textiles syllabus is very cumbersome.
2. The results of past students are not encouraging for parents to allow their wards to offer the programme.
3. The Textile industry is not doing well; many factories have collapsed, and SHS graduates fear that they will not be getting jobs after school.

The CRDD Co-ordinators revealed the challenges facing teaching and learning of textiles in the SHS as following:

1. Human Resource: Textiles design teachers are inadequate in the SHS and in some of the cases, those present were not qualified Textiles design teachers. There is also no opportunities for professional development.
2. Tools / Material resources: There are no looms in some of the schools for weaving, inadequate equipment for dyeing, printing, tracing, development table, etc. and also inadequate materials such as dye stuffs and chemicals, printing paste, etc.

3. Academic progression: The admission requirements are also not favourable as only students with evidence of SHS Textiles Elective Subject from the Visual Arts background are admitted. There is lack of interest in most Visual Arts SHS Graduates to pursue the Textiles Programme at the tertiary level.
4. Vocational Progression: The collapse of some of the Textile factories in Ghana, such as Freedom Textiles, GTMC and the slow growth of the local Tie-Dye business due to preference for foreign Textile products.
5. Curriculum Provision and Requirement: The 2007 Curriculum and subject groupings that moved Textiles from 3-dimensional arts to 2-dimensional arts. The requirement that every Visual Arts student should select one elective subject from 2-dimensional arts and one from 3-dimensional arts. Students mostly choose Graphics or Picture Making instead of Textiles creating an unfavourable competition between Graphic Design, Textiles and Picture-Making for only one slot.

According to the CRDD officials the poor performance of students in the WASSCE can be attributed to some of the following factors:

1. Absence of hands-on activities to equip the learner with employable skills due to lack of appropriate and suitable materials, tools and equipment.
2. Lack of interest in the programme due to unfavourable academic and vocational progression.
3. Placement of JHS graduates with low grades which discourages some interested students.
4. Disrespect, labelling and branding of students who offer the programme by the public, teachers and fellow students as daft, unintelligent and good for nothing.

5. Absence of a good working environment; for example a studio to work and keep their works.
6. Use of obsolete teaching methods and approaches that have no future.

An interview with Polytechnic and University Lecturers concerning the intake of Textiles students into the tertiary institutions revealed that very few students who have done Textiles apply and get admitted to the institutions. In KNUST, few students who have done Textiles at the SHS level come into the Textiles Section of the Art Faculty to pursue the Industrial Arts programme. At the Accra Polytechnic, out of 150 first year students offering Fashion Design and Textiles Technology, only 25 students actually did Textiles or Clothing and Textiles at the SHS. The rest did Business, General Arts, General Science, and other Visual Arts programmes such as Picture Making, Sculpture, Leatherwork, Jewellery, Ceramics and Graphic Design. According to them, students who have background knowledge in Textiles understand the techniques and skills better than those without the background knowledge who find it difficult to cope. The change of Textiles as a 2-D subject has been the major reason why Textiles is dying at the SHS level and affecting enrolment at the tertiary level.

Objective 3: To identify the challenges that affect the teaching and learning of Textiles in the selected schools

According to the CRDD (2010), practical skills has been given 60% of the teaching and learning time to emphasise the point that the orientation in Visual Arts is more towards the acquisition of practical vocational skills at the SHS level. However, from Fig. 4.5, this is not the case as theory lessons were predominantly observed in the sampled schools because the studios were either not adequately furnished with the required tools or equipment or there were no studios at all. According to Opoku-Asare, Agbenatog and deGraft-Johnson (2014),

theoretical teaching through lectures that ignore the relevant practical activities is likely to shut off the spirit of active learning through exploration and experimentation among Visual Arts students and thereby hinder them from engaging in critical thinking and development of high creative abilities. Some of the teaching methodologies usually employed by the teachers in teaching Textiles were identified as discussion, demonstration, lecture and group work.

Permanent Studios for Practical Work

Four out of the seven schools sampled for the study have Art studios for students' practical exercises. Out of these four studios observed, two schools used their studios as classrooms (see Appendix H). However, it was observed that these studios were not adequately furnished with the set of Textiles equipment needed to organise practical work. The remaining three schools conduct their practical works under trees or sheds. According to CRDD (2010), every school offering Textiles must be provided with a studio furnished with at least a set of Textiles equipment for all the units of the syllabus (weaving equipment, printing/dyeing equipment, embroidery/appliqué equipment as listed in Table 4.4.

Table 4.4: List of Equipment / Tools from the SHS Textiles Syllabus

Equipment / Tool	Material
Weaving (Fabric construction methods) Power looms and Man power looms, e.g. Traditional kente looms, Table looms, Broad looms, Weaving Accessories (reed,	Weaving Yarns (hanks, cones and cheeses)

<p>heddle hook, reed hook, warping mill/warping board, skeiner, bobbin winder, shuttle, shed sticks)</p> <p>Crocheting/knitting</p> <p>Knitting pins/needles, Crocheting pins, Hand-sewing needles (assorted sizes)</p>	<p>Crocheting/Knitting</p> <p>Stranded cotton</p> <p>Metallic threads and sequins/beads</p>
<p>Printing /Dyeing (Fabric decoration methods).</p> <p>Printing table (Padded), Wooden frames/Screens, kodatrace or tracing paper, stapler, stapler pins, brushes, Squeegees, Spoons, Bowls/buckets, Large coal pots, Stoves (kerosene / gas / electric),</p> <p>Hand gloves and face masks, Fine mesh or silk organdie, Waxes, raffia threads, needles, threads.</p>	<p>Printing</p> <p>Chemicals (photo-emulsion, potassium dichromate, hydrosulphite, caustic soda, common salt),</p> <p>plain fabrics (poplin/calico/lien),</p> <p>Dyes (Vat, procion, etc.) Postal colours</p>
<p>Applique/embroidery/</p> <p>Pins, Scissors, Tape measure</p> <p>Hand-sewing needles (assorted sizes)</p>	<p>Applique /embroidery</p> <p>Stranded cotton, Metallic threads and sequins/beads</p>
<p>Finishing and Care of Fabrics</p> <p>Pressing iron</p>	

Source: Field Work 2015

Table 4.5: Equipment / Tools found in the Selected Schools

School	Tools / Equipment found
School A	Traditional looms without accessories, developing tables/shooting tables without glass by GES, improvised wooden frames provided by the students.

	Squeegees, printing table not padded.
School B	Printing table, developing table, darkroom, squeegee, screens, Damaged broad loom without accessories.
School C	Damaged broad loom, warping mill, skeiner, shuttle, large coal pot, large plastic bowls, improvised wooden frames provided by the students and padded table.
School D	Traditional loom without accessories, no padded table, squeegees, prepared screens, no developing tables/shooting tables
School E	Damaged broad loom and traditional loom without accessories packed under trees
School F	Padded table, four broad loom with accessories, and big plastic bowls.
School G	Damaged old traditional and broad looms without accessories

Source: Field work

Comparing Table 4.4 and Table 4.5, it can be deduced that most of the schools lack tools / equipment and materials. In some instances the looms were broken down. Lack of these tools militates against practical activities and contributes to the students' inability to practise Textiles as a profession. This confirms the finding of The President's Education Reform Review Committee (2002) that Ghana cannot fully benefit from the creativity of its citizens as long as Visual Arts and the Technical/Vocational sub-sector of the nation's public educational system is poorly resourced and is unable to positively impact on access or human capital development for economic growth. This is why students in all the schools visited are required to buy almost all the materials needed for their practical work.

The study confirms the findings of Evans-Solomon and Opoku-Asare (2011) that schools offering Visual Arts are mandated to offer at least, two elective subjects but fulfilling this requirement depends largely on the availability of specialist teachers, requisite studio facilities, tools, equipment and relevant raw materials. However, not all the schools are able to offer a wide selection of electives to enable every student to satisfy their educational needs. Schools G and F which are private schools offer Textiles and Graphic Design only.

Strategies and methods of teaching

Strategies and methods of teaching have great influence on students because they come to school with unique sets of characteristics that may assist or impede academic performance (Gray, Griffin & Nasta, 2005). In Schools B and C, the teachers demonstrated high level of control over the subject and topics treated and the students were highly motivated by the teachers' classroom strategy during their presentations. The students' participation was interactive. The teaching strategies the teachers employed made the teaching process lively and there was excellent use of teaching and learning materials. De Bortoli and Thomson (2010) assert that the outcome of any strategy is influenced by the teacher's motivation, the effort that has been put into the planning and preparation of the lesson, the motivation of the students and the ability of the teacher to create chances for students to take part in the learning process.

In Schools A, D and E, there was clear evidence of lack of teacher preparation for the lessons that were observed. No teaching and learning materials were used in the lessons for the students to understand the topics discussed. The teachers used lecture to describe everything

which made the teaching-learning process boring, non-interactive, abstract and teachercentred. In this regard, Shuell (2014) opines that student-centred teaching is built on the notion that "what the student does is actually more important in determining what is learned than what the teacher does". This could be due to the fact that there is lack tools and equipment for the teaching and learning of Textiles or the teachers may not be professional teachers in Schools A, D and E.

In school G, it was observed that the teacher was not efficient and lacked knowledge and control over the teaching process. Vin-Mbah (2012) postulates that informing and explaining are key functions of teaching and that a good teacher is expected to be knowledgeable in his or her area of specialisation and also to communicate his or her knowledge to his or her students. The tools and materials required for the lessons were available but were not used and the demonstration was done by an assistant; the method used did not achieve any good result. The researcher further got to know that the teacher did not specialise in Textiles to handle the subject well. He was, therefore not qualified to teach Textiles.

Lack of Tools, Equipment and materials

The observation also revealed that almost all the schools with the exception of Schools A and F lacked tools, equipment and materials required for effective teaching and learning Textiles. Equipment found in the schools were either damaged or were inadequate for effective practical work or class demonstrations. Some of the students in the sampled schools did not attend the practical lessons because they were unable to buy materials for their practical work. Teaching in this situation made the teachers to describe tools and equipment without the students getting the opportunity to practise with them. But the CRDD

(2010) requires that every school offering Textiles should be provided with a studio furnished with at least a set of Textile equipment from all the groups listed in Table 4.4.

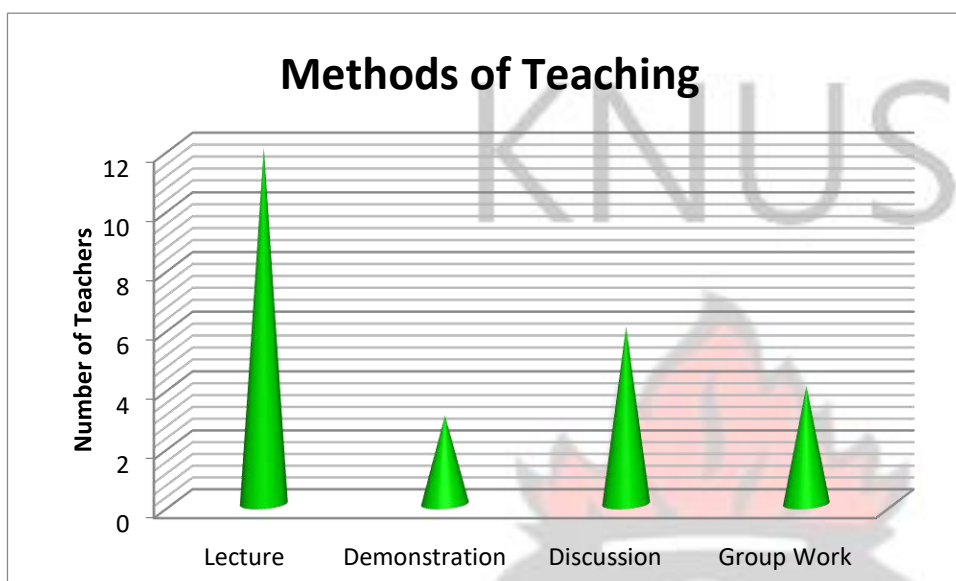


Figure 4.4: Teaching Methods used by the Sampled Teachers

On teaching methods used by the teachers in the selected school, fig 4.4, all the 12 teachers said they use lecture method and six of them use discussion in addition to the lecture method while two use both group work and demonstration. The low number of demonstration and group work could be attributed to the lack of tools and equipment for the teaching and learning of Textiles in the Senior High School.

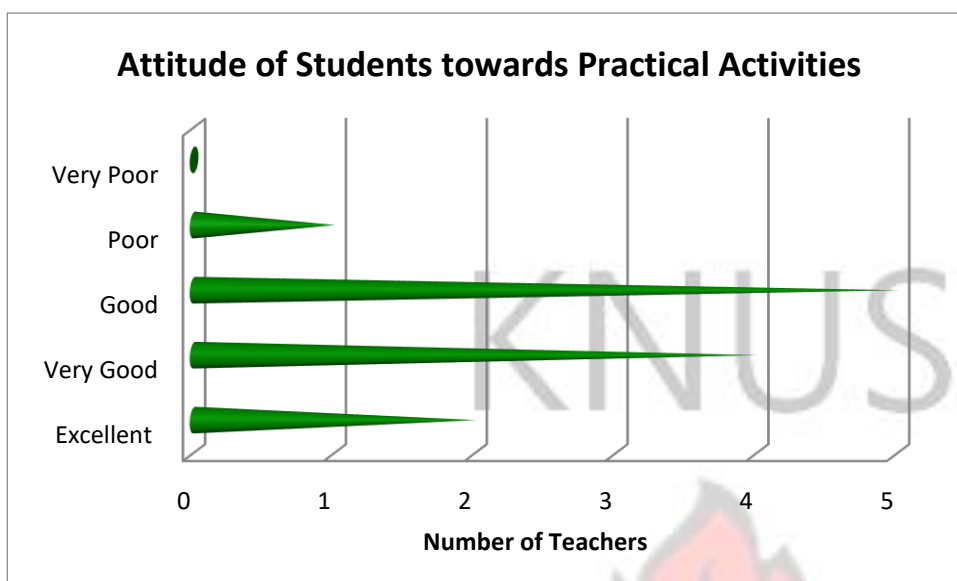


Fig. 4.5: Students' Approach towards Practical Activities in Textiles

In general, the sampled students' attitude or approach towards practical exercises was described as 'good' by 45.5% of the teachers or 'very good' and no teacher said that the students' attitude was 'very poor' as shown in Fig. 4.5. This positive attitude suggests that if the tools, equipment and materials required for practical lessons are provided and adequate instructional time is allocated to Textiles, the teaching and learning activities could engage the students to participate fully and effectively in class.

Table: 4.6: Frequency of Textiles Practical per Term

Frequency of Textiles practical/demonstration per term	Number of Teachers	Percentage
0	1	8.3
1	7	58.3
2	3	25.0
3	1	8.3

Total	12	100.0
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Source: Field Work, 2015

On the frequency of conducting Textiles practical work per term, seven teachers out of the 12 (representing 58.3%) conduct practical / demonstration work once every term, and one teacher representing 8.3% indicated he does not conduct practical or demonstration work in the course of the term (see Table 4.6).

The study also revealed that 32 students (representing 17%) of the student population responded that the time allocated for practical work is enough for them to practise what they are taught while the large majority of 155 students (representing 83%) responded that the time for practical works is too short and not enough to have hands-on practise of what they are taught. This emphasises the fact that most of the schools lack the tools and equipment for the practical work. Also it may be due to the fact that no period has specifically been allocated for practical work on the school timetables. The researcher agrees with Boateng (2012) that Textiles needs to be allotted sufficient time for both teachers and students to satisfy their practical goals.

Objective 3b: How the challenges could be solved

Discussions were held with the CRDD coordinators and other stakeholders on the GES approved textbooks required for the teaching and learning of textiles. In an attempt to solve the problem of tools and equipment, six looms with their accessories have been purchased by three schools by the help of the researcher.

Suggestions for Improving the Teaching and Learning of Textiles in SHS

The following were some of the suggestions given to improve the teaching and learning of Textiles in the SHS. Suggestions made by Textile students were:

1. Provision of tools, materials and other equipment such as looms, padded tables, development tables, chemicals for dyeing and printing, yarns and fabrics for the practical work.
2. More time is required for the teaching and learning of Textiles especially practical work to improve our skills.
3. The scope of content of syllabus must be reduced to ensure completion by teachers.
4. Excursion to textile factories to gain first-hand information on Textiles.
5. Provision of Textiles textbooks CRDD of GES.
6. Provision of permanent studios.

Suggestions made by the Teachers were:

1. School authorities should procure or bill students to procure the necessary materials and tools such as dyes, yarns, fabric for students to work with.
2. Exposition of marketing experience to students.
3. Regular field trips to Textile manufacturing companies to have first-hand information on the process they have learnt in school.
4. Resource personnel must be employed to handle practical issues.
5. Students should be more serious with the learning of the subject with the help of parents by supervising and helping to sell the works of the students.
6. Studios must be built for practical work.
7. The scope and content of the Textiles syllabus should be reduced as most of things taught are repeated at the Tertiary institutions.
8. Regular updates on new development in the Textile world to Textile teachers by the

CRDD of GES.

Suggestions made by WAEC Officials were:

1. Textiles teachers should do well to encourage fresh students since it is a new subject to them, by explaining the importance and benefits for choosing the subject.
2. The Universities should also do well to prepare the Teachers adequately by treating all the topics in the SHS Textiles syllabus so that effective teaching can take place. This is because some of the Teachers find it difficult to teach some of the topics. E.g. weaving and crocheting practical.
3. The CRDD should look at the content of the Textiles syllabus again since it is too cumbersome or too broad.

Suggestions made by Textiles Examiners were:

1. There should be a link between Textiles students and practising indigenous and contemporary Textiles artists because it is very weak in the syllabus as students do not have the right picture about the world of work and practitioners are also unsure about the capabilities of students for employment.
2. More emphasis should be placed on lesser practised fabric construction methods like crocheting to bring innovation in teaching and learning.
3. The scope of content of the syllabus should be reviewed or reduced to match the number of periods allocated for the subject.
4. There should be an introduction of some diversity in what students produce (end product) that is accessories and souvenirs in the syllabus to attract all stakeholders in the subject.

5. Teachers should be able to locate sources of information and further training to develop themselves and to enhance their teaching.
6. Students should be taught how to plan their daily itinerary for the 5 days practical examination because a lot of them lose valuable time due to lack of proper planning.

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Suggestions made by CRDD Coordinators were:

1. Review of the entry requirements into the tertiary institutions to study Textiles. SHS graduates with GKA should be considered for admission.
2. Revamping the Textile Industry: user agencies should be looked at by the government.
3. The Textiles Programme in the tertiary institutions should be rebranded to include issues such as 8functional and fashionable9 products that attract easy markets.
4. Government should reduce tax on the importation of Textile raw materials such as dyes, dye chemicals, etc. so that they could serve as incentive for those intending to start their own Textile businesses and also to stop the near collapse of the Textile factories.
5. Textile teachers should avail themselves for regular in-service training and research into modern approaches and techniques in textile production.
6. The 8Friday Wear9 concept must be revisited and new ideas such as African Day, Fashion Trends, and Fashion Show etc. introduced in Ghanaian schools.
7. The biennial cultural festival for the basic and second cycle schools should introduce Ghanaian Indigenous Dress Code as part of the activities.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary, conclusions and recommendations of the study.

5.1 Summary

The research was to examine the scope of content of the Senior High School Textiles syllabus, to explore the teaching/learning methods and strategies used by teachers and learners of Textiles in the selected Senior High Schools in the Greater Accra Region and to identify the challenges encountered during the teaching and learning of Textiles in the selected schools and how they could be resolved.

Even though the 2010 syllabus that currently guides the teaching and learning of Textiles is well structured, the content is too broad and cumbersome for the three-year SHS programme. The specific skills that the students are expected to acquire have been enhanced by new topics. For example, Entrepreneurial Practice, which includes topics such as Healthy Studio Practices, Building a Portfolio and Exhibition, Developing a Business Plan, Brochure and Card, Costing and pricing, Packaging in Textiles, has been added to the 2010 syllabus. However, the total periods per week have been reduced from 21 to 18 whereas more topics have been added. As a result of these challenges most teachers are not able to finish the

syllabus considering that first year students report late for school, third year students write the WASSCE much earlier in the year, and instructional periods are now less than what they were when the 2008 syllabus was in use.

Teaching and learning tools and materials such as GES approved textbooks and standard textbooks on Textiles to guide teaching and learning in the SHS, studios, chemicals, yarns, fabrics, dark rooms, development tables, and printing tables are also not available. Most of the broadlooms and indigenous looms observed were not used for their intended purposes. Those found were dusty, much disorganized, and very old with broken down parts; the teaching and learning of weaving was therefore cumbersome using bad looms. The students therefore become handicapped due to lack of such materials and tools to practise what they are taught. Some students only get the opportunity to do practical work in their final year when the WAEC practical project questions are sent to the schools.

It was also found that the poor performance of Textiles students could be attributed to inadequate qualified teachers to teach Textiles in the SHS. Five (5) of the twelve (12) teachers interviewed did not do Textiles during their tertiary education. It was also found that art exhibitions and excursions that are requirements of Textiles component of Visual Arts education are not taken seriously by students and teachers in the sampled schools.

Suggestions given by the respondents for resolving problems that were identified with inadequate effective teaching and learning of Textiles point out to the need for school authorities to provide the schools with standard textbooks, permanent studios, requisite tools, materials and equipment, and chemicals for dyeing and all relevant resources that teachers and students need for practical works. In-service training must be organised for

teachers periodically to help them enhance the teaching methods as well as introduce the teachers to the newly included topics in the Textiles syllabus and also demands of the Ghanaian Textiles industry.

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5.2 Conclusions

It can be concluded that the rationale and objectives set for the SHS Textiles programme in the 2010 syllabus are very impressive. If the schools were able to achieve these objectives, it would be the best for the development of Textiles Education in Ghana. It can likewise be concluded that the time allocated for the teaching and learning of Textiles in the SHS woefully inadequate to complete the syllabus as 83% of the teachers are not able to complete the syllabus in the three year duration of the SHS programme.

The study unveiled that tools, equipment and materials such as textbooks, looms, chemicals and dyes that are required for effective teaching and learning of Textiles are not adequate and in some cases, are simply not available for effective teaching and learning of Textile in the SHS. Where the materials are available it is the students who provide them after persistent persuasion by the teachers. These factors have negative effects on Textiles education in the SHS, hence the performance of the Textiles students in the WASSCE and ultimately, entrepreneurship development in textiles and employment.

5.3 Recommendations

Owing to the findings and conclusions made the following recommendations have been made for resolving problems that were identified in the research:

1. The Ghana Education Service in conjunction with the CRDD should provide approved Textiles textbooks covering the scope of contents of Textiles syllabus to standardize the knowledge and skills that must be taught to Visual Arts students who choose to study Textiles as their elective subject.
2. The GES and CRDD should consider reducing the scope of content of the Textiles syllabus or increase the instructional periods for Textiles education so that the teachers would have enough time to go beyond the theory lessons to engage the students in practical works and to also complete delivery of the syllabus. This is because the number of instructional periods assigned to Textiles on the school time table in the SHS does not match the increased content which makes it difficult for the teachers and their students to do enough practical so that the students acquire more skills in Textiles.
3. The Government together with the PTAs and Old Students' Associations of the SHS could support the schools by providing adequate facilities and equipment such as Art Studios, Workshops, Galleries and Exhibition Rooms at the Visual Arts departments in the schools so that they can have a place to work, exhibit their works and if possible, sell some products to raise funds.
4. Studios must be provided by the GES and adequately furnished with the full set of Textiles tools and equipment for practical works as the syllabus suggests. Providing every school that offers Textiles with a studio furnished with at least one set of Textiles equipment from all the groups - Weaving equipment, printing / dyeing equipment and embroidery/appliqué – will enable the students learn more Textiles skills.
5. The Heads of the schools and institutions should seek the approval of the Metro Directors of Education to bill Textiles students with the cost of materials such as

- chemicals, yarns and fabrics so they would have enough materials for practical exercises throughout the stay in school.
6. The Textiles programme should be introduced at the basic school level for students to have fair knowledge about the elective Textiles at the JHS before they get to the SHS since all they know is Graphic Design.
 7. The schools can organise excursions to Textile factories in the country to enable the students gain first-hand information in the production of Textiles. This will create interest in the subject.
 8. The CRDD and Ghana Art Teachers Association (GATA) should liaise to organise periodic in-service training to upgrade or enhance teaching strategies and also learn new methods to improve the teaching and learning of Textiles. The Teachers could also be introduced to the new topics in the Textiles syllabus and the changing demands in the Textile industry.
 9. The WAEC assessment of Textiles projects and examinations should include exhibition of students' portfolios as a guide to their involvement in the projects being assessed. This will give the examiner a fair knowledge about what students could do and at the same time ensure that the teachers are teaching the practical lessons in the schools.
 10. The GES and CRDD should re-consider changing Textiles to 3-D to enhance interest as most students would want to pair Graphics Design with Textiles. The current situation compares Textiles with other 2-D subjects like Graphic design and picture making which makes students opt for Graphics or Picture making instead of Textiles.
 11. Educational officers who are adequately trained should be assigned to pay visits to various educational institutions to supervise and evaluate management and academic activities of these schools to be sure they are operating well and in line with educational policies of the Government and the Ministry of Education (MOE).

12. Further research could be conducted to appraise the form of practical assessment by WAEC in the various Visual Arts subjects.

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APPENDICES

APPENDIX A

Questionnaire for SHS Textiles Teachers

This questionnaire is aimed at soliciting information that will help improve the teaching and learning of the contents of the Textiles syllabus in the Senior High Schools. Whatever information is given, it would be treated as confidential.

Please tick as appropriate

1. Level of Education () Teacher's Certificate () Diploma () Masters () Post-graduate () Others ;

Please specify

2. For how long have you been teaching Textiles? () 0 – 3 years () 4 – 6 years () 7 – 9 years () more than 10 years

3. Do you lack any tools/materials for teaching/learning of Textiles? () yes () no

4. If yes which teaching learning tools/materials do you lack for Textiles?

A. Text books B. Looms C. Chemicals D. studios () Traditional Loom () Broad loom () Padded printing table () Developing table () <dark room= () Dyeing equipment () Others; Please specify

.....
.....

5. Do the topics in the textbooks / pamphlets reflect on those in the syllabus? () yes () no

6. Do you have enough materials for practical exercises? () yes () no

7. If yes, who provides them? () Students () School Administration () Teacher

8. How often are practical activities organized for a class in a term? () 0 – 2 () 3 –

5 () 6 – 10

9. How do you estimate students' attitude towards Textiles practical activities?

() Excellent () Very good () Good () Poor () Very poor

10. What is the class size in your school? SHS1 SHS2..... SHS3

11. Does the class size affect practical teaching? () Yes () No

12. If yes, state how and give reasons.

13. How are practical activities organized? () Individuals () In small groups () As a whole class

14. Are you able to complete the syllabus within the academic year? () Yes () No

15. If no, give reasons.

.....
.....
.....

16. How do you go about teaching your topics?

() Follow the syllabus religiously

() Random selection of topics (contents)

() Follow chapters in a textbook

() Select topics according to difficulty and relationship

17. Which of the following syllabi do you use for your teaching?

() CRDD Syllabus

() WAEC Syllabus

18. In your opinion, does the content follow a systematic sequence? () Yes () No

19. What specific methodologies do you usually employ in your teaching?

i.
.....

ii.

20. Suggestions for improving the teaching/learning of contents of the Textiles?

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21. Do the skills in the syllabus provide the competencies to make student perform effectively after their studies at SHS level? () Yes () No

22. If yes, which of the skills or competencies? List/state them.

.....

.....

23. If no, suggest the skills or competencies that will improve the student performance in textiles after their studies at SHS level.

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.....

24. Make some general suggestions that will help improve the teaching/learning of Textiles in the SHS.

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APPENDIX B

Questionnaire for SHS Textiles Students

This questionnaire is aimed at soliciting information that will help improve the teaching and learning of the contents of the Textiles syllabus in the Senior High Schools. Whatever information is given, it would be treated as confidential.

Please tick the appropriate space.

1. Class level ☐ SHS1 ☐ SHS2 ☐ SHS3
2. Do you have Textiles textbooks for your private studies? ☐ Yes ☐ No
3. If yes, mention the titles of any two of such books.
.....
.....
.....
4. How often do you have practical exercise in a term? ☐ 0-2 ☐ 3-5 ☐ 6-10
5. Do you actively participate in practical exercises? ☐ Yes ☐ No
6. If no, state the reason (s).....
.....
.....
7. If yes, state the possible reasons
.....
.....
.....
.....
8. Do you have enough materials for practical works? ☐ Yes ☐ No
9. If yes, who provides them? ☐ Students ☐ School Administration ☐ Teacher
10. Does the school have a permanent studio for practical exercises? ☐ Yes ☐ No
11. If No, where does practical work take place? ☐ Classroom ☐ Teachers residence
☐ under shed)

12. When does the class usually have practical exercises? () Morning () Afternoon ()

Evening others; please specify.....

.....

13. Do you have enough time for your practical work? () Yes () No

14. Do the skills in the syllabus provide you the competencies to make you perform effectively after the SHS level? () Yes () No

15. If yes, which of the skills or competencies? List/state them.

.....

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.....

16. If no, suggest the skills or competencies that will help improve the performance of Textiles students after their studies at SHS level.

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17. Which of the following equipment/s is/are available in your school?

() Broad loom () Padded print () Traditional loom () Developing table <dark room= () Dyeing equipment () others; please specify

18. What are the main challenges / difficulties you face as a Textiles student? List / state them.

.....

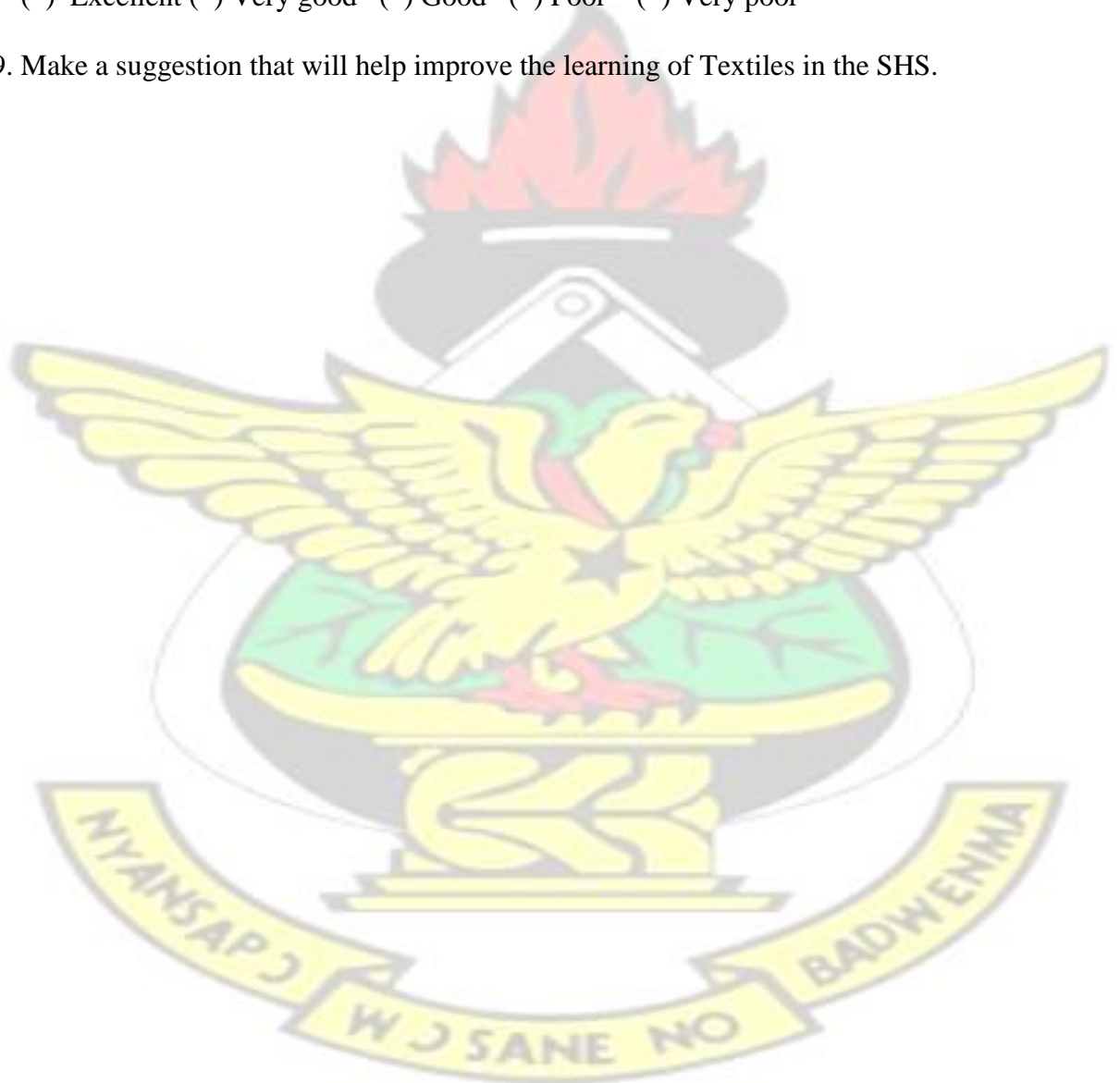
.....

.....

How do you rate the performance of your Textiles Teacher?

() Excellent () Very good () Good () Poor () Very poor

19. Make a suggestion that will help improve the learning of Textiles in the SHS.



APPENDIX C

Observation Checklist

1. Time for practical work

2. Students attitude towards practical work

4. Availability of tools, equipment facilities and materials for practical work

APPENDIX D

Interview Guide for Teachers

Kwame Nkrumah University of Science and Technology

MPhil Art Education

College of Art and Social Sciences.

The researcher is carrying on a study in connection with the research on the subject: The state of Textiles Education in SHS in Ghana. The project is solely an academic usage and your responses would be granted the necessary confidentiality.

1. Name of interviewee.....
2. What do you consider to be the setbacks to the effective teaching and learning of the Textiles programme?
3. Are you supplied with enough materials for practical works?
4. Do you have studio for practical lessons
5. Do you take your students for excursion?
6. What are some of the problems you faced when teaching Textiles?
7. What are your recommendations or suggestions to enhance teaching and learning of Textiles in the schools?

Thank you

The logo of Kwame Nkrumah University of Science and Technology (KNUST) is a large, faint watermark in the background. It features a yellow eagle with spread wings perched on a green shield. Above the eagle is a red torch with a flame. Below the eagle is a yellow banner with the text 'ANANSA P' on the left and 'BADWENMA' on the right. The entire logo is set against a light gray background.

APPENDIX E

Interview Guide for CRDD Coordinators

Kwame Nkrumah University of Science and Technology

MPhil Art Education

College of Art and Social Sciences.

The researcher is carrying on a study in connection with the research on the state of Textiles Education in SHS in Ghana. The project is solely an academic usage and your responses would be granted the necessary confidentiality.

1. Name of interviewee.....
2. Are you aware of the challenges Textiles teachers face in the teaching and learning of Textiles?
3. Teachers of Textiles complain about the comprehensive nature of the syllabus?
4. What do you consider to be the setbacks to the effective teaching and learning of Textiles?
5. Do you have any suggestion to improve the teaching and learning of Textiles?

APPENDIX F

Interview Guide for Lecturers and Technicians in the Textiles Department

Kwame Nkrumah University of Science and Technology

MPhil Art Education

College of Art and Social Sciences.

The researcher is carrying on a study in connection with the research on the state of Textiles Education in SHS in Ghana. The project is solely an academic usage and your responses would be granted the necessary confidentiality.

1. Do you have all the students offering Textiles at the department having background knowledge in Textiles at the SHS?
2. If no, why do you think we do not have most of our Textiles students from the SHS do not continuing at the tertiary institutions?
3. Do you have any suggestion to improve the teaching and learning of Textiles?

APPENDIX G



PLATES



Plate 5: Metal Broadloom under a tree

Plate 6: Traditional loom under tree



Plate 7: Broken down old broadloom



Plate 8: Broken down loom with dyeing tools

APPENDIX G (Cont.)

PLATES



Plate: 9. Kente Loom without Accessory

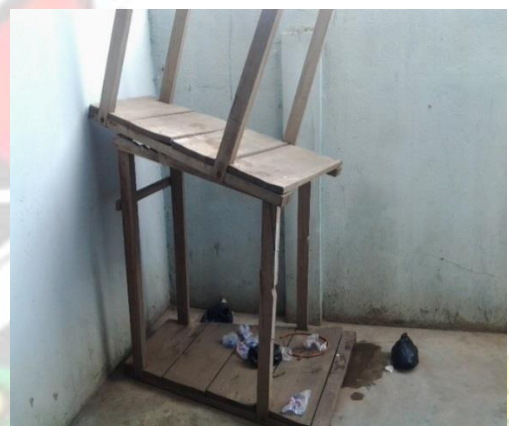


Plate: 10 Damaged Traditional Loom



Plate: 11. Studio serving as classroom



Plate: 11 Example of frame weaving



Plate: 13 Frame Loom Woven Fabric



Plate: 14 Frame Looms

