UNIVERSITY OF CAPE COAST

QUALITY OF CONSTRUCTION PROCESSES AND THE FIT OF GOVERNMENT SUPPLIED UNIFORMS IN WEST AKYEM MUNICIPALITY

MAVIS KORANTENG

2015

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BY

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Thesis submitted to the Department of Vocational and Technical Education of the College of Education Studies, University of Cape Coast, in partial fulfilment of the requirements for award of Master of Philosophy Degree in Home Economics.

JULY 2015

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

Candidate's Signature:..... Date:.....

Name: MavisKoranteng

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature……..... Date:….....

Name:Dr.ModestaEfuaGavor

Co-supervisor's Signature……..... Date:…….....

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ABSTRACT

The purpose of this study was to assess the constructional quality offree school uniforms supplied by Government of Ghana to basic school pupils. The study was a descriptive survey carried out at the West Akyem Municipal Assembly. The population studied comprisedFree School Uniform (FSU)beneficiaries for the 2013/2014 academic year. Purposive and disproportionate stratified sampling techniques were utilized to select 419 respondents which comprised of manufacturers, headteachers/teachers, parents and pupils. Two Quality control personnel were contacted to assess the constructional details of the free school uniforms sewed. Data was collected using questionnaireand observation guide.

The instrumentfor the parents, teachers and pupils yielded aCronbach alpha coefficient of 92.95 and 73 respectively. Data collected was tabulated, interpreted and discussed using descriptive statistics. This involved the use of frequencies, percentages, means and standard deviations. Though the manufacturersrated themselves as excellent, the assessors rated the construction quality of the FSU as unsatisfactory because their constructional processes did not meet international quality standards. The study recommends that government of Ghana incollaboration with well established apparel producers come out with effective sizing system for manufacturers to use to produce quality constructed and well fitting school uniforms.

ACKNOWLEDGEMENTS

I gratefully acknowledge all those who assisted in bringing this thesis to its successful completion. I especially wish to render sincere thanks to my principal supervisor Dr.ModestaEfuaGavor, who has been an inspiring source of encouragement throughout the research work. I also owe a debt of gratitude to my co-supervisor, Dr. Stephen Baafi-Frimpongof Department of Educational Foundations, University of Cape Coast, for his encouragement. Through their collective guidance and directions, I was able to complete this thesis.

I would be ungrateful if I fail to mention the contributions made by the following people towards the completion of this work; They are Ms Irene TawiahAmpong, lecturer at the Vocational and Technical Education Department of the University of Cape Coast, thepersonnel from KAD Manufacturing and Cadling Fashions, pupils, parents and teachers in the West Akyem Municipality who served as participants for the study. I am also indebted to Mr. T. D. Kyereme,Mr. Alexander Tetteh and Ms Deborah Asare for their help in the statistical analysis, editing and directives. I deeply appreciate the total support of my family members throughout this study. Authors and writers whose works were cited cannot be left out in this. I say God richly bless you all.

DEDICATION

To Emmanuel ManteyLarbi, my dear husband and my daughters, Asi,

Ampomaa and OdiMantey-Larbi.

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CHAPTER ONE

INTRODUCTION

Background to the Study

Clothing means, anything that is used for covering oneself, with a purpose to provide protection, beauty, fashion and decency (Pritchard, 2013). History has it that primitive people who dwelt in caves and tress during the stone age period through to Aurignacean period, made their clothing from skin of animals, feathers, bark or leaves of trees and also sometimes with the beads of stones and metals. With the advancement in science and technology, countries like India, China and Egypt started the manufacture of what we call 'textiles' today to fulfil the desire or purpose of clothing (Microsoft Encarta, 2009). Clothing in its most functional and authoritative form is generally accepted as one of the fundamental needs of individuals and families all over the world. Clothing therefore refers to collection of items worn by societies. People frequently judge others' social worth and status according to what they are wearing.

Garment production has been a profession that has gone through various stages of development. Tracing its history, Ampong (2004) and Zakaria (2011) have established that production of garments were originally hand-made until the time of the industrial revolution in the late 17th and early 18th centuries. According to Arnold (as cited in Ampong, 2004),there was a switch from hand-made production to mass-produced ready-to wear garments during the

period of industrial revolution. Major developments which have been attributed to the improvement and change in the industry include the mechanization of textile mills which made possible the production of quality fabrics in less time; the invention of the sewing machine which made factory production of garments possible; and the development and refinement of techniques in mass distribution, advertising and retail selling.

The industrial revolution caused changes in almost every sector of industry including clothing and textiles. One of the changes is the concept of ready-to-wear (RTW) clothing. As technology sped up the pace of life, the process of acquiring and wearing clothing became easier because, textiles were more readily available, garments were less expensive and easier to produce. The nineteenth century began the mass acceptance of of-the-rack clothing (Dunne, 2004).

In the early twentieth century, according to Dunne (2004), the most significant change was seen in the technology for garment manufacture. The author noted that the nineteenth century introduced the concept of RTW clothing, and had established such garments as acceptable, at least, for men. This paved the way for the development of a market for mass manufactured clothing. By the end of the nineteenth century, women's casual clothing was also available as RTW. Technological advancement in machines for garment manufacture further reduced the time and cost of making clothing. Soon cutting, the old cornerstone of the tailor's art was also delegated to machines.

Ampong (2004) adds that the late twentieth and early twenty-first centuries saw another wave of technological advancement. The popularization of computer technology in the late twentieth century soon spilled over into

most manufacturing sectors. Computers offer the apparel industry an efficient means of producing designs and manufacturing clothing. This helps to shorten the development cycle of new styles. New software systems based on Computer Aided Design (CAD) programmes made patterning, grading of patterns into different sizes, and marker-making (the process of laying pattern pieces to use fabric efficiently) easier to create, revise, and communicate (Taylor, 1990). Computer Aided Manufacturing (CAM) can automate some construction processes as well as offer new technological solutions to speed the manufacturing processes.

The manufacture of clothing, along with the closely associated activities of fibre and textile production, continues to be one of the driving forces of industrialisation throughout the developing world. At the same time, the clothing industries of many developed consumer countries are fighting to maintain their share of the total value which is created throughout the entire chain of apparel design, manufacturing and distribution. Technology has always been important to this competitive struggle and is still largely controlled by the 'older' established industries of Japan, Europe and the USA. In Ghana, garment and textile manufacturing is dominated by small scale industries based on the kind of machineries and workforce strength. The Ghana Statistical Service (GSS) considers firms with less than ten employees as small scale enterprise whilst those with more than ten are categorized as medium enterprises. According to Ministry of Trade and Industry (2004) definitions, a micro industry employs between one to five people and a small scale industry employs between five to thirty people. A medium scale industry accordingly employs between 30 to 500 people and a large scale one employs

over 500 people. The predominance of small scale set ups in the clothing and textiles industry in Ghana is characterised by low productivity as a result of low educational background, source of skill acquisition, and financial problems couple with lack of machinery which can enhance quality garment production.

With respect to source of skill acquisition of garment manufactures in Ghana, a study conducted by Sarpong, Howard and Osei-Ntiri (2011) on how 72 fashion designers got their skills indicated that five, representing seven percent, hold degree qualification in Fashion Design and Textiles Studies, 16representing 22 percent have Advanced Fashion Certificates, eight representing 11 percent possess Intermediate Certificate in Fashion, and 43 representing 60 percent had their skills through apprenticeship training in Dressmaking. This proves that most of the small scale seamstresses and tailors may not have in depth knowledge in the application of new technologies for garment production. This confirmed the assertion made by Zwane, Richarda and Edmond (2002) that the use of unskilled labour compromises the quality standards in production of garments as most apprentices lack the requisite knowledge and key skills. These authors further indicated that hardly does unskilled labour come out with good garment construction details and specifications like even seam widths, neat edge finishes and neatening techniques, effective use of elements and principles of design.

It was also revealed in the studies of Sarpong, Howard and Osei-Ntiri (2011) that Small scale designers do not have enough machines which can make them produce more for export. In their studies two of the respondents representing 3 percent use industrial sewing machines for production whiles

forty-six representing 64 percent making use of hand sewing machines only for production. However, Fashion education has also been improved; it is now being studied at the tertiary level of Ghana's educational institutions, where graduates are expected to acquire quality demand-driven employable and marketable skills that will make them take their roles in the industrial sector, work and be economically productive.

For garment manufacturers to be economically productive, the performance of clothing articles produced must be of high standards (Pritchard, 2013). Performance in clothing and textiles describes the manner in which a textile, textile components or textile products responds when something is done to it or when it is exposed to some elements in the environment that might adversely affect the textile (Kadolph, 2007). Consumers always expect a certain level of usefulness in the clothing bought and this explains why they are concerned about the performance of the fabrics. Serviceability and durability are also factors that determine the performance of clothing or fabrics. Kadolph and Mayer (2002) point out that serviceability initially was how clothing was able to last over time, but today this is viewed as durability. It has other important factors which are comfort, ease of care and appealing appearance with emphasis on colour.

Once clothing is purchased and worn, its serviceability is exposed to all sorts of condition. These include sunlight, humidity, atmospheric gases, wet, dry and hot conditions, perspiration and body oils, and mechanical forces such as flexing, straining and abrasion. In view of this, its performance, in terms of colour fastness and tensile strength, cannot be told at a glance (Kadolph & Mayer, 2002). Durability is related to anything that is strong and

can withstand use. Sometimes answers to questions related to a clothing article's durability and serviceability serve as a guide to the consumer when it comes to the use of a product. Garments do not only go through wear in the course of use, but also care, which includes laundry and storage, among others. As indicated by Ukponmwan and Mukhopadhyay (2000), in the lifetime of a garment, both cloth and seam undergo repeated laundering, which may result in a change in the quality and performance of the sewn product. Seam performance after laundering is important in judging the suitability of a sewn product since seam quality is an important parameter deciding the performance of garments. For a garment's seam to be able to withstand the pressures from laundry processes, it will all depend on the stitch density and type of thread employed in the making of the seam.

For a perfect fitting and look of a garment, seam appearance and its strength have to be proper (Doshi, 2006). This enhances the quality of the garment to meet its required end use. Therefore, fit, according to Doshi (2006), is one of the most important criteria consumers look for when buying readymade dresses. The author further explained that to get the best fit and size dimensions, manufacturers spend large amounts of money on sizing systems so as to satisfy their consumers. Further, she adds that every garment manufacturer has a target segment with certain demographic characteristics defining consumers' profile. The best range of sizing can be a key to the success of clothing manufacturers and as a result, they make use of advanced technologies and strategies to devise sizing systems and sizing categories to improve quality construction of apparel.

The International Standards Organization (ISO) defines quality as the totality of characteristics of entity that bear on its ability to satisfy stated or implied needs (Brown & Rice, 2001). Quality may also be defined as the level of acceptance of goods or services. For the textile and apparel industry, product quality is calculated in terms of quality and standard of fibres, yarns, fabric construction, colour fastness, designs and the final finished garments. Garment quality is not determined by the quality of manufacture only, but by a number of other influential factors such as the quality construction incorporated in the garments.

The quality of a garment may also refer to the fitness for use with the level of acceptance, derived from the values of the consumer from time to time. Quality features of a garment are found in two aspects. These are the physical features and performance features. The physical features include the garment's design, construction and finish, while the performance features include aesthetic and functional performance. Consumers, however, evaluate a garment by its perceived quality which is dependent on the individual's desires or expectations. Issues pertaining to qualityare important in all garments with school uniforms not being an exception. In Ghana, school uniforms are used at all levels of education with the exception of universities and polytechnic.

Statement of the Problem

In Ghana, pupils or students in all government public schools with the exception of universities and polytechnics are required to put on school uniforms. It is therefore mandatory for parents and guardians to provide school uniforms for the period their ward(s) are in school. According to Weitzel

(2004), school uniform policy states what must be worn and a school dress code policy is a standard of aesthetic appearance which states what the pupils are not permitted to wear while at school. The wearing of school uniform in an academic institution ensures uniformity and provides a sense of belonging to pupils or students

Pupils are to look presentable at all times in school and out of school. To ensure this, pupils need school uniforms that are functional, aesthetically pleasing and affordable. In the submission of Stamper, Sharp and Donnel (2005), clothing is not only developed to cover the body, but must fit well. A garment may be well constructed and have all the excellent functional and aesthetic features but if it does not fit well, positive features cannot be well communicated. School uniforms that do not fit well will affect the comfortability of its wearer. With special reference to children clothes including school uniforms, they should be made to fit them well while taking into consideration, their ability to grow fast. Thus, they should be made to take care of growth however; they should not be over or under sized as a case in point of the Freely Supplied Uniforms (FSUs) by the government of Ghana reported to be so in the Okaikoi South Education sub-metro ("Causing financial waste to state: Undersize free school uniforms unable to fit pupils," 2014).

Poorly-made school uniform makes the wearer look sloppy and un-kept. On the other hand, when it is well constructed, it fits well and can go a long way in giving the wearer a polished, impressive, and confident appearance. When selecting a school uniform, the ability to judge the quality

of the workmanship is very important, as well-made school uniforms do not only look better when worn, but also lasts longer.

School uniforms are washed at least once a week. Children play a lot and for that matter constructional techniques used for the uniforms must be of quality so as to withstand the frequent use, washing and harsh weather conditions prevailing in our country. The supply of free school uniform is hoped to boost the morale of pupils who have to wear "non-uniforms" or be in torn clothes to schools. In order for a school uniform to fulfil usefulness, its constructional details are expected to be of the best quality. Features such as collar, sleeve, pocket, seams and stitches, opening and fastening must compare to international standard to give the school uniform a high utility value. This study is an indicator as to whether the constructional processes of the uniforms supplied by government of Ghana have quality comparable to international quality standards.

Purpose of the Study

The purpose of the study was to assess the quality of the construction processes and the fit of FSUs produced in Ghana. Specifically, the study found out the;

1. background of the manufacturers.
2. extents to which specific constructional processes present in the FSUs meet international quality standards.
3. quality related problems in garment manufacturing in the FSUs
4. extent to which the kind of machines used by the garment manufacturers influenced the quality of the construction of the FSUs

5. views of pupils, parents and teachers on the constructional quality and fit of the FSUs.

Research Questions

The following research questions guided the study:

1. What is the background of the manufacturers of the FSUs?
2. To what extent do specific constructional processes present in the FSUs meet international quality standards?
3. What are the quality related problems in garment manufacturing in the FSUs?
4. How have the kind of machines used by the garment manufacturers affected the quality of the construction of the FSUs?
5. What are the views of pupils, parents and teachers on the constructional quality and fit of the FSUs?

Hypothesis

H_O1. There is no statistically significant difference between the quality assessment of the assessors and the manufacturers.

Significance of the Study

The findings of this study are expected to be useful in the garment manufacturing industry and to the nation in various ways. Not much has been done by way of research into issues that bother on supply of school uniforms in Ghana. Publication of this work on the internet and making it available to stake holders will provide insights into the constructional quality of FSUs supplied by the government of Ghana. This study will enable the government to get a fair assessment of what is going on so as to continue or make modifications to the uniforms production processes where necessary. The

study will go a long way to shape policy direction and guidelines of the free school uniform production and distribution in Ghana. It will enable policy makers as well as educationists and other stakeholders to identify the quality of materials and people (manufacturers) to be contracted to produce and sew the uniforms for the schools, to enhance positive attitudes and cost effectiveness of the policy.

The anticipation is that, the results of the study will also be beneficial to manufacturers (seamstresses and tailors) who sew the school uniforms since this will provide them with knowledge that would yield better results. Finally, the study will enrich the literature on the free school uniform policy in Ghana and also provide data which will serve as a springboard for further research on the production and supply of free school uniforms in general.

Delimitation of the Study

There are many basic schools in the Eastern Region that benefits from the free school uniform initiative, (both Primary and Junior High). For the purpose of this study, West Akyem Municipal was the focus with garment manufacturers' who were awarded the contract to produce the uniforms for the pupils. This municipality was chosen for the study because it was convenient for the researcher. Uniforms for both sexes (boys and girls) were selected for the project. Assessment of the uniforms was limited to constructional processes. This was because it is one parameter, which, to a large extent, determines the quality of garments (King, 1993). As the main focus of the study was on the quality of construction and fit of the school uniform, the researcher did not consider other issues like, distribution, and cost of

production, the effect of school uniforms on attendance or academic achievement.

Limitations of the Study

The study was limited in terms of scope and the quality of construction used for the study. Sampling from a municipality and using only the manufacturers in that municipality alone makes generalisation about the quality of construction and fit of the FSUs to the entire uniforms produced in the country impossible.

Definition of Terms

Assessment: judging the quality of constructional processes of a garment based on given standards.

Construction: the process of putting various cut pieces of fabric together to make a garment complete for use.

Garment: any of the dresses used by people irrespective of their categorisation as male, female, clothing for the young or old and irrespective of its use.

Fabric: an artefact made by weaving or felting or knitting or crocheting natural or synthetic fibres.

Quality of Construction: The standard of workmanship which is acceptable to the majority of consumers as well constructed, well-fitting and durable.

Durability: how a textile product is able to withstand use or the length of time a product is considered suitable for use.

Performance: it describes a manner in which a textile product responds when it is exposed to some elements in the environment such as sunlight, dew, humidity and soils that might adversely affect its life span.

Seam: a line of stitches which joins two pieces of fabrics together.

Fit – subjective evaluation of the quality of uniforms as they are worn by students in terms of garment proportions to the figure, comfort and beauty.

Organisation of the Rest of the Study

The entire study examined the quality of construction and fit of FSUs in the West Akyem Municipality. The study was developed under five chapters. The first chapter considered the introduction. The second chapter is on review of literature. It provides theoretical and empirical evidence on school uniforms and the constructional qualities of free school uniforms. The issues reviewed are broken down into sub sections to cover salient aspects.

The third chapter is concerned with the methodology. It explains how the study was conducted and comprises the research design, the population, sample and sampling procedure. It also describes how the instrument was developed and administered as well as the procedure adopted to analyse the data. The fourth chapter deals with the results and discussion of the data collected from the field. Finally, the fifth chapter provides the summary, conclusions, recommendations and suggestions for further studies.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter provides theoretical and empirical evidence on school uniforms and the performance of clothing. The issues reviewed are broken down into sub sections to cover salient aspects. This literature review explores:

1. Theories on the Social-Psychology of Clothing and Appearance
2. Sewing machinery
3. Techniques and processes in garment construction
4. Features of school uniforms
5. Factors influencing garment quality
6. Conceptual framework

Theories on the Social-Psychology of Clothing and Appearance

There are various theories on the social-psychology of clothing and appearance. This study makes use of two of the theories namely: (a) the Clothing, Appearance and Role Theory, and (b) School Uniforms and Social Control Theory.

Clothing, Appearance and Role Theory

One theory of clothing and appearance that serves as a basis for the study of school uniforms is role theory. Role theory is related to the use of appearance in the pattern of attitudes and actions taken by an individual is social situations. The specific role that a person plays at any given moment

depends upon the situation and upon the person's self-concept. According to Kaiser (1998), clothing may influence the self-concept and make the role easier to play, possibly determining whether or not a particular role is to be played at all.

Clothing plays a dual role in social interactions. It affects the actions of the wearer, in part, determining the role he or she plays in a social situation. It also plays an important part for the perceiver who forms impressions of the wearer and potentially shapes response to the wearer. Kaiser (1998) explains that clothing is a simple way to identify the role of individuals within a social context. Dressing is socially meaningful, serving as a tool for social survival and providing a means of significant social interaction. There exists for everyone a group force that influences clothing choices. Most individuals are willing to jeopardize their own individuality to some degree for the security that comes with identifying with a group. Security is derived from identifying with other group members and gaining their acceptance and approval, behaviour, particularly evident among adolescents (Kaiser, 1998; Damhorst, 1999).

An appreciation of adolescents' development and their clothing behaviour are central to the study of uniforms. One of the developmental tasks of this age group is to experiment with clothing and appearance as part of identity formation (Kommer, 1999). Clothing is an adornment practice which adolescents use to assume various roles within their peer groups. This practice includes conformity to group expectation (Kaiser, 1998). Adolescents' work at self-presentation, presenting a total programme or package of clothing, accessories, gestures and posture to their peers to solicit for their view in

social situations. If the peer group approves, it reinforces the individual's programme and validates his or her self- image. To Kaiser if the reviews are negative, they challenge the individual's programme and changes are made until he or she obtains positive reviews and validation.

A limited degree of preoccupation with clothing, appearance, and related experimentation is generally accepted as normal adolescent behaviour (Kommer, 1999). The adolescent is a member of a smaller peer society within which most of his or her social interactions occur. This smaller social growth maintains limited connections with outside adult society. Therefore, peer approval is more necessary for social survival than is adult approval. Consequently, dressing in ways that ensures social comfort in the presence of peers may contribute significantly to social survival (Kaiser, 1998). Styles of adolescent dress also serve to separate youth from adult world, signifying their social separation from and economic interdependence on adult society. Dress related problems among youth involve the socialization agents in the home, workplace, community, and also in the schools (Holloman, Lapont, Alleyne, Palmer, & Sanders-Phillips, 1998).

One of the major clothing behaviour problems of adolescence is the peer pressure on youth to dress fashionably in specific clothing styles, displaying certain labels or expensive brands (Murray, 2002). Recent clothing trends and marketing that target this age group have created several problems. The rise in popularity of high priced, name-brand, status-label clothing, the use of celebrity endorsements to sell clothing and accessory products to the youth market, and the adoption of certain clothing styles by street gangs, have turned the adolescent social environment, particularly the schoolhouse, into a

socially dangerous and highly competitive place (Kommer, 1999). The rampant consumerism and materialism that is exemplified by contemporary adolescent clothing behaviours are also reflected in several age-related social problems such as anger that may lead to violence, sexual activity that may lead to promiscuity, pregnancy and sexually transmitted diseases, poor academic achievement, suicide and homicide (Holloman et al, 1998).

The emphasis of fashion and the high costs of outfitting school children in brand label and status clothing impact on the family budget. Students whose families cannot afford expensive status brand clothing and accessories often create problems in the home as they try to manipulate parents to purchase clothing items for them. Some students will work long hours to obtain money to purchase clothing. Students may fail to attend school because they do not have and cannot afford the uniform they think they need to be accepted by their peers (Holloman, 1995). This is clearly so in the Ghanaian perspective as some pupils, especially in the rural areas, also find it difficult to purchase school uniforms for school("Prez launches free uniforms,"2009).

School Uniforms and Social Control Theory

Proponents of school uniforms make several convincing arguments about the positive effects it has on an academic organisation. As schools explore ways to unite students to work toward common goals to enhance a conducive environment in which they learn and socialize, they argue that wearing of uniform helps to foster unity and commitment to a common goal (Draa, 2006). School uniforms may be used to solve the problems of organizational control by differentiating between members and non-members,

articulation of individual status sets, immediate recognition and validation of the uniformed status, and creation of uniformed positions as key statuses.

The uniform designates a group: One's uniform indicates membership in the group. Because of its identification within the group, the uniform assumes the properties of a totemic emblem and embodies the attributes of a group. In a sense, the uniform becomes the group as it provides the symbol of a group toward which the public may demonstrate its attitudes (Draa, 2006). Uniforms legitimate the roles in a given situation by certifying membership and role. The Uniform is a symbolic statement that an individual will adhere to group norms and standardized roles. Furthermore, specific uniforms worn by members in an organization help to distinguish superiors from subordinates and as such, it guarantees and ensures organizational efficiency and control. Even if not fully internalised, the wearer of a uniform is subject to external constraint by peers, and outsiders who are aware of the norms to which the wearer is expected to adhere (Draa, 2006). Within the school, conflicts over appropriate appearance are frequent.

The school exists as a self-contained society for students. Since students represent many kinds of backgrounds, the stage is set for problematic behaviours (Holloman et al, 1998). Administrators usually attempt to ease some of the tensions, social problems and appearance related issues within the school by encouraging conformity in dress. The mission of most public schools continues to expressly include efforts to provide a healthy and safe environment that nurtures the academic, social and overall development of youth. Problems related to student dress and appearances are a threat to these efforts (Cohn, 1996). The establishment of dress code and uniform policies

serve as an attempt by schools to function as a socializing agent for appropriate school attire and may act as a control on problematic adolescent clothing behaviours (Kommer, 1999). The debate over and questions related to requiring school uniforms as means of promoting the mission of public school continues.

Preoccupation with clothing and appearance detracts from the business of schooling and learning (Kommer, 1999). School have become a daily fashion show, and children who do not dress in the requisite styles are often ridiculed or ostracised. Mandatory school uniform policies counter status pressure by peers to imitate a certain style of dress (Caruso, 1996). If there are no logos and no labels, then there is no pressure (Marshall, Jackson, Stanley, Kefgen & Tourchiespecht, 2004). Uniforms may improve classroom behaviour because they encourage students to live up to the group standard. As indicated by Caruso (1996) in his report on school uniform policy, there was a decrease in classroom indiscipline after the policy's implementation and it have ensured that, teachers do not spend time looking for dress code violations and reporting them. As a result, they are able to devote more time to instructions.

School is a social environment, and for the adolescent one of the primary places where social relationships are formed. Some of those relationships may be based on sexual attractiveness and interest. According to Draa (2006), clothing serves as means to promote sexual attractiveness by stimulating sexual interest and at the high school level, sexual interest is at its peak. Adolescent sexual behaviours, among other appearance related behaviours, may detract from the learning process as a result, uniformity of

dress may be one means of controlling sexual urges and is often a motivation for schools to attempt to control and regulate student appearance (Draa, 2006).

For the reason that school has become an arena for the display of the latest fashions and status label clothing, students whose families cannot afford to buy the status label clothing may rob and steal to get what they want (Caruso, 1996). Many school dress policies were developed specifically to control the proliferation of the gang clothing style that had found its way into the school social culture (Senem, 2011). Although the assertion by Senem was not the basis for the introduction of school uniform in Ghana, when a student does something good or bad with their uniforms on, they can be easily traced to address the issue.

History of School Uniforms

According to Brunsma (2006) the use of school uniforms date as far back as the year 1222 when they were used in France, Germany and England. However, it wasn't until the 16thcentury that school uniforms made an appearance in recorded history. During this time, a charity school in England called Christ's Hospital boarding school mandated uniforms, which were provided by citizens. The uniforms consisted of a blue cloak and yellow stockings, thus earning charity schools like Christ's Hospital the nickname 'blue cloak' schools. Later during the 17th and 18th centuries, school uniforms became associated with the upper class as private and preparatory schools began to use them more and uniforms at these schools were incredibly formal. This discouraged state schools from adopting the school uniform policy due to its high cost. This was the case until the 19thCentury where school uniforms

became widely acknowledged at state schools after some adaptations have been made to make it affordable.

In Ghana, one can assume the school uniform policy was adopted from the British who were the colonial rulers. However, one cannot state the exact date or when the wearing of school uniforms started in Ghana. History reveals that the missionaries who brought schools into the countries introduced uniforms as well. It can therefore be concluded that, the pioneering work of missionaries started the history of school uniforms in Ghana. Uniforms were used as a way to differentiate students at the missionary schools from kids running the streets. For easy identification as to which mission school a child attended, the missions introduced different colours of fabrics for their schools. On the other hand, all basic schools (from Primary to JSS)under local and municipal authorities wore the same coloured school uniform. Kraft (2003) is of the view that school uniform policy leads to higher attendance rate, and better academic. To enable more children to attend school so as to achieve one of the aims of Millennium Development Goals which is the Free Compulsory Universal Basic Education (FCUBE) in Ghana, the government of Ghana initiated the supply of free school uniform for pupils in deprived areas in 2009 ("Prez launches free uniforms," 2009). With this initiative, the government of Ghana absorbs the total cost of production and supplies the uniforms freely to the pupils.

Functions of School Uniforms

For centuries most of the private and public schools around the world have made use of dress codes which entail a uniform appearance of the learners. Socialization and education are social needs that are associated with

the culture they serve and school uniforms form part of the school's culture (Kaiser, 1998). Experience has shown that students, who are required to maintain a neat appearance, and to coordinate their wardrobe within established bounds, are more likely to carry over these habits to the performance of their schoolwork (Caruso, 1996). Teachers and principals often report that discipline problems are reduced in schools that implement a standardized dress programme. This sets the tone for a proper work attitude in the classroom, reducing indiscipline and improving performance. According to Caruso (1996), children seem more attentive and respectful with fewer distractions caused by the attention to clothing. The author further indicates that school uniforms eliminate the need for constant monitoring of the dress code by the teachers and administrators. School uniforms meet widely accepted standards of modesty thus eliminating the conflicting interpretations of dress codes and the embarrassment that often is associated with "violations" of dress code (Caruso, 1996).

Kaiser (1998) and Swain (2002) maintain that schools that have a school uniform policy use it to specify school identity, and to maintain order and discipline. When considering security, it is easy to identify who belongs to the school premises and who does not. School uniforms apparently also encourage pupils to learn (Kraft, 2003). Besides making the pupils appear "neat and decent", school uniforms enhance a sense of belonging and school pride. It also limits parents' expenditure on expensive branded clothing. School uniforms are increasingly becoming more popular among school districts, especially in elementary schools now called basic and junior high schools, for reasons usually associated with school safety and school pride.

Just as athletic teams, uniforms promote unity and spirit, so do school uniforms. School uniform programme make it easier for students to develop a sense of belonging at school because greater attention is given to who they are instead of what they wear.

Kraft (2003) further points out that school uniform promotes peace in the classroom as it diminishes arguments or comparison of clothing brands. Learners dressed in a school uniform seem to have their attention focused on their school work and academic achievement, but when casual clothing are worn, their attention seems to shift to what is in fashion and what is not. The aim of any school around the world is to have an environment that is educational in nature, with high standards that can be measured according to the learners' performance. Thus, the wearing of school uniform creates conducive atmosphere and causes learners to have more respect for their school (Starr, 2000).

Firmin, Smith and Perry (2006) confirm that educators are of the opinion that the implementation of school uniform policy may help to remove other preoccupations from the academic focus of learners' daily lives, create the best learning environment and eliminate distractions. These authors are of the view that, school uniforms give educators a chance to recognise the potential of every learner, as they are all dressed alike and cannot be judged by the clothes they are wearing, but are evaluated by their academic achievements. Instead of limiting the individuality of learners, uniforms can help learners to stand out from other individuals in the society. If learners do not wear uniforms, less affluent learners can be identified immediately by their peers, while when school uniform is worn, it is more difficult telling which

learner comes from which type of environment, making it difficult to link academic achievement to the learner's background.

Parents also cite the simplification of selection and the economic benefit as important advantages to school uniforms. Besides saving parents hundreds of cedis on the purchase of school clothes, school uniforms also do away with the morning tug-of-war with children over what to wear to school. Ashton (2002) agrees that governing bodies should think about the needs of families when deciding on school uniform policies, particularly with regard to the affordability and practicality when introducing or changing school uniforms. That is, if learners' parents cannot afford the prescribed school uniform, learners might feel stigmatised. In order to prevent that in United States of America, school uniform policies and dress code policies were implemented in the schools.

Also, the wearing of school uniform levels the playfield for learners. People in favour of uniforms feel that uniforms help minimise the costly, destructive competition amongst learners as to who can afford to wear the nicest clothes, competition that inevitably leaves low-income learners disadvantaged. According to parents as well as educators, the peer pressure over what should be worn is diminished to a great extent by wearing school uniforms, although learners are not always as convinced as the other two parties that competition is eliminated by this practice (Firmin, Smith, & Perry, 2006).

Production and Distribution of School Uniforms

In fashion, one dresses for success. This is what job experts say about going to an interview or a workplace. What about going to school? Students

have to look best when going to school and in class. Proponents argue that uniforms cause students to take studying more seriously. The "uni" means "one" therefore uniform means one for all. School uniforms are a requirement in both public and private schools in Ghana. Different schools have different ways by which school uniforms can be acquired. Schools or parents acquire uniforms from the open market or go into contract with a company to sew for their schools. In Ghana, the free school uniform policy was to standardise uniforms of Government Owned or Public Schools, stimulate the State's economy and empower the citizens. The aims of the production of these uniforms were to create a unique identity for all students in public schools throughout the country ("Prez launches free uniforms," 2009).

The government of Ghana has one of its objectives for the implementation of the free school uniform policy as, using it as a medium to empower citizens economically through the production of local materials for the production of school uniforms. This is to encourage small and medium scale enterprises to grow. To achieve this objective, the government decided to procure 100 percent of the school uniforms locally. The government committed twenty-one million Ghana cedis into providing free uniforms for basic school children. In the various metropolises, municipals and districts, tailors and seamstresses are contracted to sew them for schools in their metropolises, municipals and districts. The first consignment of uniforms for children in 77 deprived districts for 2009/2010 academic year cost the government one million six-hundred thousand Ghana cedis ("Prez launches free uniforms," 2009).

On the other hand, there are already-sewn basic school uniforms from China which are imported into the Ghanaian market. The Chinese school uniforms as cited in the Daily Graphic on 29th January, 2009 have the Ghana flag embossed on them. They have the inscription "Hechoen China" and are selling at GH¢7 each on the market. The Chinese uniforms, according to the label, are made up of 65 percent polyester and 35 percent cotton. The material used for the uniforms is light, thereby raising questions about its durability, constructional quality and sizing.

Quality

Quality as a notion can be defined in different contexts because people's concept of it is formed from various experiences and also through individual's own concept of what it constitutes (Stamper, Sharp & Donnell, 2005). Quality is also defined as 'fitness for use' and described with five dimensions which are the quality of design, quality of conformance, availability, safety and field use (Kuei & Lu, 1997). Christiansen (2011) like Kuei and Lu identifies quality as conformance to requirements and he gives the dimensions of quality as performance features, reliability, conformance, durability, serviceability, and aesthetics.

In the apparel industry, quality is defined as the judgments of the consumers about the performance of the garment based on 7 factors (Rayman, Burns& Nelson, 2011). These authors stated the 7 factors for judging apparel's quality as performance, components, garment care, appearance, construction or workmanship, style or fashion, and fit. On the other hand, Forsythe (1991) is of the view that, consumers evaluated the apparel products and formed impression of quality and value through the use of extrinsic cues such as brand

name, price, package and store image and through intrinsic cues including the design, style, fabric type, fibre content and construction details. Nonetheless, Forsythe, Bethpresley and Wilsoncaton (1996) describes three dimension of perceived quality as sturdiness/durability involving garment seams, stitching, fabric construction, style and aesthetic like garment design, styling and overall performance and finally lasting/care like garment life and care required.

Saricam, Kalaoglu, Ozduygu and Orun (2012) states that, in identifying the apparel attributes, workmanship in sewing, physiological comfort, usefulness, physical and chemical properties, suitability to individual preference and fashionability or brand are considered. Ampong (2004) on the other hand identifies apparel attributes as evident in the external appearance of a garment as well as the details not seen from the outside. It includes interfacings, linings, and construction techniques. King (1993) also makes use of intrinsic and extrinsic cues in explaining quality.

Intrinsic Signs of Quality

Intrinsiccuesas stated by King (1993) are those characteristics that cannot be changed or externally manipulated without changing the physical characteristics of the product and include type of fabric and details of construction. Intrinsic properties are those that affect a product when they are altered and refer to properties such as design or style, materials, construction and finishes. In terms of school uniforms, it is important that the style chosen accommodates different body types(Fan, Yu, & Hunter, 2004). The clothing style, fit and size should provide both physical and psychological comfort (Li, 2001). The body image, which is how one perceives his/her body, contributes

to successful interpersonal relationships, but a negative body image may result in low confidence (Fan, et al. 2004).

Extrinsic Signs of Quality

Extrinsic cues refer to attributes of the garment that can be changed without necessarily altering the product itself (Brown & Rice, 2001), for example price, image and reputation of the manufacturer or retailer, brand name, and country of origin. Extrinsic cues may strongly influence consumers' evaluation of the quality of school uniforms.

Research indicates that more women are satisfied with their dressed bodies than when undressed (Fan, et al, 2004). Individuals thus use clothing to camouflage or hide undesirable figure attributes because dress can enhance the perception of body appearance. The same can be assumed for, and expected of school uniforms. The nature of a style dictates the amount of ease the garment has. Design ease, for example, provides more comfort and allows room for body movement (Fan, et al, 2004). Body image is related to personality. Certain individuals prefer certain styles and colours because they match their personality.

It is important to note that quality has a multidimensional, multivariate and continuously changing concept. Thus, it is not an easy task to make universalistic propositions for describing the relationship between various variables and quality (Christiansen, 2011). As noted earlier, quality is an important factor when it comes to any product or service. With the high market competition, quality has become the market differentiator for almost all products and services. Therefore, all manufacturers and service providers out there constantly look up to enhancing their product or the service quality.

In order to maintain or enhance the quality of the offerings, manufacturers use two techniques, quality control and quality assurance. These two practices make sure that the end product or the service meets the quality requirements and standards defined for the product or the service.

Quality Control and Quality Assurance

The terms "quality assurance" and "quality control" are often used interchangeably to refer to ways of ensuring the quality of a service or product. The terms, however, have different meanings. Quality Assurance (QA) is planned and systematic activities implemented in a quality system so that quality requirements for a product or service will be fulfilled. Quality Control (QC), on the other hand, is the observation technique and activity used to fulfil requirements for quality. QA is process oriented and focuses on defect prevention; while QC is product oriented and focuses on defect identification. QA is a set of activities for ensuring quality in the processes by which products are developed. QC, on the other hand, is a set of activities for ensuring quality in products. The activities focus on identifying defects in the actual products produced. QC aims to identify (and correct) defects in the finished product it is therefore, a reactive process.

The goal of QC which is embedded on some principles is to identify defects after a product is developed before it is released. Ampong (2004) outlined the following as the essential requirements for producing a reliable product:

1. A satisfactory design of product, thoroughly proved by adequate development testing in order to establish its reliability under the

conditions to which it will be subjected in use. This is the requisite quality of the product.

2. A full specification of the requirements of this quality, which must be clearly understood by everyone concerned with the production of the constituent parts and of the complete end product.
3. Confirmations that the manufacturing processes are capable of meeting these requirements.
4. Full acceptance, by all those concerned with production, of the responsibility for meeting the standards set by the specification.
5. Checks on the product at every stage of manufacture to detect any departures from the specifications.
6. Record essential information derived from these checks to provide accurate evidence for action.
7. Establishment of lines of communication, that is, feedback to production, to ensure that this action is taken to effect the appropriate adjustments to materials, process and operatives to maintain future production within the specifications.
8. Instruction in the use, applications and limitations of the product.
9. A study of user experience, feedback to the departments concerned, and rapid remedial action.

It is worthwhile to note that in the establishment of these principles, tolerances and quality standards for goods going for dispatch may often vary rapidly, depending on the urgency of call-off. Some manufacturers have extensive quality control and testing procedures and articles carry a label to this effect. For example, Courtaulds, Monsanto, Marks and Spencer adhere to

high quality standards. Other manufacturers rely on a money back guarantee based on the reputation of their company. The net result of either approach is that customers can be assured of quality.

Ensuring quality control means there should be some quality schemes that need to be followed. This process includes:

1. Sampling of products in production to check their conformance to agreed quality specification,
2. Inspection of specific quality parameters,
3. Testing,
4. Statistical analysis of results to ascertain the occurrence of features that are critical to the product,
5. Interpretation of results to see the real picture,
6. Pass/Fail criteria to accept or reject,
7. Action at machines to improve production.

These processes are required to greater or lesser extent. The exact procedure and mode of analysis depends on the amount and depth of information required as well as the overall system of operation. Crosby (1979) has argued that the totality of features and characteristics of a product or service has bearing on its ability to meet a stated or implied need. The main factor in all these definitions is satisfying customer needs and expectations. Kadolph (2007) asserted the importance of Total Quality Management (TQM), which is the totally integrated effort for gaining competitive advantage by continuously improving every facet of organizational culture. The basic principles of TQM can be classified under ten major headings as outlined by Kadolph (2007). These are:

1. Leadership - that recognizes that quality is essential for success,
2. Commitment - of all people who are connected with production,
3. Total customer satisfaction - that ensures continued patronage of the product,
4. Continuous improvement - that makes the customer have confidence in the product,
5. Total involvement - of producers and consumers in ensuring quality delivery,
6. Training and education - for workers to improve practices,
7. Ownership - that makes every worker a shareholder who has a responsibility towards the company,
8. Reward and recognition of achievement to motivate workers,
9. Error prevention - to reduce cost and increase patronage, and
10. Co-operation and teamwork - to establish rapport for development.

Quality Management (QM) is managing the entire organization of production so that it exceeds all dimensions of products and services that are important to the consumer. Ishikawa (as cited in Ampong, 2004) points out that this actually started in Japan in the 1950s and North America in 1980s. In simple terms it involves:

1. finding out what the customer wants - market research,
2. designing a product or service that will meet customers' wants - customer satisfaction,
3. designing production processes that strives to make mistake proof'- total quality management, and
4. Keeping track of results for improvement.

Philosophically, this process should be the backbone of any production of goods and services. It stresses the use of quality as the driving force.

Standard

A standard provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose. ISO International Standards ensure that products and services are safe, reliable and of good quality. For business, they are strategic tools that reduce costs by minimizing waste and errors, and increasing productivity. They help companies to access new markets, level the playing field for developing countries and facilitate free and fair global trade. Standard is a specification, which sets out the criteria for acceptable quality and covers all the characteristics that can be accurately measured. It is a criterion against which actual results can be measured. Standards are physical and represent qualities of products or materials (Cooklin, 1991 & Ampong, 2004). This includes a plus and minus tolerance to the central measurement and defines the range within which the quality is acceptable. For instance, a specification and tolerance for a seaming operation could read: seam width: 10mm ± 0.5mm (Cooklin, 1991).

Brown and Rice (1998) explained tolerance as the difference between the allowable minimum and maximum of a specification or standard. Allowable tolerances establish the limits within which a product can vary and yet be acceptable. ISO has broad quality standards outlined in ISO 9000, and this is adopted and interpreted by various nations and organization to suit their peculiar situations. Altogether, there are certain minimum standards below which a product will be rejected, and there are levels below which a garment

would never be rated as highly desirable. It is important to set up a guide for garment tolerances in order to avoid goods that surpass tolerances or do not meet specifications being passed through. Irrespective of this, standards that are too rigid may result in acceptable goods being unnecessarily rejected.

Defects in Apparel Construction

Garment making is the most sensitive stage because it is the last stage of manufacturing before sewn garment is taken out for the consumer to use. Consumers want a product that is free of any type of defects and for this reason, manufacturers should be aware about the defects of a product. At any stage of the manufacturing process, various types of mistakes can occur. Defects of apparel can be defined as the absence of desired features in the product or unwanted features in products or features existing in distorted or wrong ways (Textile School.com, 2010). When these problems occur, the product becomes undesirable to consumers because, no one would want to purchase a defective product. Another term associated with defect is called reject. A product becomes a reject when it loses its saleability in the market and it is harmful for manufacturers whose goods are subjected to rejection.

Generally, three main classifications of defect exist under defect guide. These are critical, major and minor defects (Ampong, 2004). As indicated earlier, defect affects product usability. Critical defect indicates hazardous or unsafe conditions; major defect indicates reduction in usability; minor defect minimally affects products usability. Also apparel's defect can either be non-sewing or sewing. Non-sewing defects are due to faulty materials, (fabric, buttons, zipper), wrong cutting, staining and oil marks, wrong ironing and wrong folding as well as wrong packing.

On the other hand, sewing defect may include:

Skipped Stitch: Missing in loop formation and speed variation in feed dog is the main cause of this defect.

Staggered Stitch: This type of defect occurs for thin needle. If needle size and thread count are not matched and needle displaced then this defect also appears.

Unbalanced Stitch: This type of defect appears due to un-uniform thread tension.

Variable Stitch: If feed dog is not in right track then this type of defect occurs.

Open Stitch: This type of defect occur due to blunt needle and poor strength of sewing thread.

Needle mark: Needle is the main element of sewing. When wrong stitching arises then this defect arises.

Techniques and Processes used in Garment Construction

Garment manufacturing processing depends on some steps and techniques. The production of a garment involves processes like fabric buying, marking and grading of patterns, marker making, cutting and then construction before finishing, and finally, quality control and dispatch to the consumer (Stamper, Sharp & Donnell, 2005). Each of the production processes is important and contributes to the quality of the final product.

However, the joining of components through sewing and other techniques is considered a central process in the manufacture of garments (Cooklin, 1991). Construction, as the process is termed, can be done using the

unit construction method or flat construction method, depending on the skills of the operator and the type of garment being constructed.

In unit construction, separate pieces are prepared and then assembled to form a whole. Flat construction on the other hand involves direct assembling of the parts. Most manufacturers use the flat technique in constructing uniforms for both boys and girls. The boys' uniform is of two parts – shirt and shorts. The uniform for girls, on the other hand, is made up of a shirt and a pinafore. The process that one performs in getting the parts together is called construction processes and it involves stitching, fusing, and pressing.

Stitches

Ampong (2004) defines a stitch as one unit of conformation that result from one or more strands or loops of thread intra-looping, inter-looping or passing into or through material. It may also be defined as a formation of thread for the purpose of making a seam (Pritchard, 2013).The appearance and durability of seam depends on the stitching. Stitches used to secure the garment parts are classified by method of application. Today, most retailers and global manufacturers are communicating stitch and seam specifications using the Stitch Identification numbers and Stitch Per Inch (SPI) specifications. There are eight classes of stitches recognized in the ISO. However, the specific type of stitch formation produced by a machine depends on the number of needles, loppers and threads, which combine to construct the stitch. Classification of stitches based on British and USA standards are:

Class 100: chain type stitches

Class 200: hand formed stitches

Class 300: lock stitches

Class 400: locked chain stitches

Class 500: over-edging stitches

Class 600: flat seam

Class 700: single thread lock stitches

Class 800: simulated hand stitch

There are about 70 stitch types, which are classified under the above classifications that are used in joining fabrics together, neatening raw edges and providing decoration, or a combination of these functions. Description of types under these categories has been presented as outlined by Cooklin (1991) and Carr and Latham (2000).

The 100 class includes one thread chain stitches. Each loop of thread is interlaced with the next loop and is easily ravelled out. Examples of how this stitch class is used in apparel include chain stitch button sewing; chain stitch button holes and single thread blind stitch applications. The top and bottom sides have different appearances with the straight stitch above and the loops below. A spreader is used to manipulate the needle thread.

The 200 class originally only included hand stitching, but some can now be formed by machines. The single thread passes from one side of the fabric to the other. This is typically accomplished with a shuttle type needle with the eye in the middle. The pick stitch or sad stitch used to outline the lapels of jackets can be placed in this stitch classification.

The 300 class includes the lockstitch where two threads, typically a needle and bobbin thread, interlock. Both sides have the same appearance with the interlacing point in the middle of the fabric. The lockstitch will not

ravel and cannot be picked out without destroying one or both of the threads. The 301 lockstitch with one needle thread and one bobbin thread is commonly referred to as a plain stitch. Examples include joining or topstitching wovens, setting pockets and hemming.

The 400 class includes multi thread chain stitches. All stitches in this class are interconnected on the underside by thread from a single looper thread. The two sides have different appearances. The face side appears similar to the plain stitch, but loops are visible on the underside. The 400 stitches are elastic and will travel from the trailing end. These stitches historically cannot be sewn in reverse. Through the years various methods have been employed to lock the stitches in: tack separately, condense ending stitches, and malformed overlapping hem stitches. Newer technology allows the ending stitches to be formed in the opposite direction by an auxiliary looper.

The 500 class includes variations of a chain stitch where at least one group of threads pass over the edge. A clean seam is produced with a built in edge cutting device. Common applications include over locking a single ply to prevent it from fraying and joining woven or knit fabrics.

The 600 class includes top and bottom cover stitches. The stitches are formed by at least three thread systems – needles, upper and lower cover threads.

In addition to the 100 to 600 classes are the 700 and 800 classes of stitches developed from the 300 and 500 classes respectively. The 700 class is for a specialized lock stitch using a single thread. The formation of a lockstitch requires that the needle thread loop be wrapped around a second

thread loop, which is a bobbin in the 300's class. In this class there is a single thread system a continuous needle thread. An under spool is automatically filled from the needle thread supply before starting each stitching sequence. The needle thread interlaces with the bottom thread that has been wrapped around a reel. This is a less common stitch classification applicable only to short length seams or stitching. The first stitch has no loose ends and has been used in tacking and shank button sewing.

The 800 class includes safety stitches. They were originally part of the 500 classification in Federal Standard 751A (Stamper et al, 2005). These stitches are similar to an over edge stitch but with additional chain stitch a few millimetres from the edge. The additional chain stitch in a true safety stitch is produced at the same time but is independent of the over edge thread systems. The additional chain stitch in a mock safety stitch is interdependent. A single machine simultaneously sews two or more rows of stitches of different classes.

Many factors are involved in determining the seam and stitch quality. Basically these factors can be divided into two major groups. The first group is dependent on sewing parameters itself which include the threads used, needle size, stitch types and densities and also sewing machine settings such as speed and tension. The second group is the fabric mechanical properties. The first part of this section is concentrated on to find the effect of these sewing parameters on the constructional qualities of the free school uniforms. Brown and Rice (2001) asserted that the quality of the stitch and seam are affected by both the needle and the thread.

Sewing Thread

Thread is a major factor in the overall production of a garment. Thread is comprised of yarn, which determines the effectiveness of that thread. Textile fibres are the main component of yarns, which create sewing thread. Sewing threads for garments are usually made from 100 percent cotton, 100percent spun polyester, 100 percent polyester core-spun, continuous-filament polyester, and also combinations of both (Brown & Rice, 2001). Sewing thread is selected according to the sewing needle size and fabric structure in addition to stitch and seam types (Ukponmwan & Mukhopadhyay, 2000). The sewing thread must conform with the garment, making it pleasing to the eye, but the product must also be of quality. The sewing thread is a huge indicator of style as well as the durability of the product. The strength of sewing thread is critical to the performance of stitches and seams. The sewing thread should be comparable to the wear and care of the garment. It is important to compare the strength of the fabric with the strength of the sewing thread.

Seams

The seam is the basic structural element of a garment or household textile item. It is formed when two pieces of fabric are joined together with a stitch. A seam is also a joint between two pieces of fabric and is defined as the application of a series of stitches or stitch types to one or several thicknesses of material (Ukponmwan & Mukhopadhyay, 2000). To Doshi (2006), a seam is the joint between two parts of a garment. Seams are the basic element of structure of any apparel, home furnishing product and industrial textiles. A

seam finish is applied to or used on the unfinished seam edge to prevent ravelling, curling, or rolling.

The wearing property of a sewn garment is greatly influenced by the quality of its seams, which form the basic structural element. Seams in garments are to work efficiently by holding pieces of fabric firmly in place for the garment to be able to function properly to meet its required uses. Quality is one attribute that most consumers look out for in an apparel product; though it varies from individual to individual. Quality seams in sewn garments contribute to the overall performance of the garment in use. From these definitions, there are two major components of seam which include stitches and materials in the form of fabrics. Seam quality is thus influenced by two main factors which are the fabrics' mechanical properties and sewing parameters. There are different types of seam used in garment construction to achieve the right effect. TextileSchool.com (2010) outlines seams into six types. These are: Superimposed, Lapped, Bound**,** Flat, Edge Finished and Decorative or Ornamental Seams**.**

Basically, the aforementioned types of seam are classified into two; these are conspicuous and inconspicuous seams. Conspicuous seams are those that have stitches showing on the right side of the garment and inconspicuous seams are those that when finished, will not have stitches showing on the right side of the garment. TextileSchool.com (2010) provides some best practices a good seam should have. These are:

1. Smooth and even in appearance on the inside and outside. Properly adjust machine tension, stitch length, and presser foot pressure to suit the fabric and thread. Fabric should not pucker.

2. Even in width throughout
3. Pressed open or closed according to the type of seam
4. When stitched, the thread should be appropriate to the fabric type and fibre content. Thread colour should match or be slightly darker than the fabric.
5. Neat and smooth in appearance, without added bulk.
6. Free from ravelling, stretching, rolling and curling.
7. Should not be visible from right side of garment unless use for decoration.

Interfacing

Interfacing is an inner construction material that lies between the layers of fashion fabric. This adds shape, strength, and body. Almost every garment requires some type of interfacing for inner stability. Interfacing supports the fashion fabric and adds crispness, not bulk. This is used to reinforce areas that are subject to stress and helps a garment maintain its shape, wearing after wearing. Interfacing is also required for many home decorating items to add support and shape. Years ago, dressmakers used whalebones, hoops, bustles, corsets, and metal bands to maintain shape in garments (TextileSchool.com, 2010). Today, special interfacing fabrics, woven, knit, or nonwoven can be used to give the desired shape. Interfacing comes in a variety of weights, from sheer to heavyweight.

Common Features of a Constructed School Uniform

In Ghana, school uniform for both boys and girls comes in two parts – shirt and shorts or pinafore. The girls' pinafore has two sections, the upper section and the lower section and they are joined together with the use of a

waist band. The school uniform is made up of features such as bodice, skirt sleeves, pocket(s), closures, plackets, hem and a collar.

Pocket

A pocket is a bag or envelope-like receptacle either fastened to or inserted in an article of clothing to hold small items. Pockets may also be attached to luggage, backpacks, and similar items. In older usage, a pocket was a separate small bag or pouch. In basic clothing construction, pockets are usual parts of the garment design and may be both functional and decorative. Many types of pockets can be made. The most common types that are used on school uniforms are in-seam pockets, slashed or welt pockets and patch pockets. In-seam pockets may be made of lightweight and tightly woven fabrics or of a stabilized knit. In-seam pockets are often used on female dresses. In-seam pockets are made at areas where there are seams or slash. Additional fabric is used to construct the pocket and construction is difficult comparatively. Patch pockets are made in a variety of shapes and may be unlined or lined. They are stitched to the outside of the garment in the desired location by topstitching or by invisible hand or machine stitching. One must bear in mind that while in-seam pockets do not show from the outside of the garment and may be added without affecting the design of the garment, patch pockets are stitched to the outside of the garment and may affect the outline or pattern of the garment altogether.

Sleeves

Sleeves, as a strong fashion element, have been with us for centuries. Sleeves may be short or long, fitted or full, cuffed or hemmed. Most sleeve designs fall into one of the following categories:

a. set-in sleeves

b. raglan sleeves and

c. kimono sleeves.

The set-in type is most common and mostly used in shirt construction, according this sleeve the name "shirt sleeve". No ease is incorporated, and it is attached using the flat construction method mostly, which makes it easier to construct. The set-in sleeve is mostly used for school uniforms in Ghana due to the nature of the country's climatic conditions. The sleeves in a garment should add style and beauty as well as provide comfort to the wearer. The finish given to the lower edge of a sleeve needs to be of good quality, even stitching, matching of fabric patterns, appropriate treatment of enclosed seams, and adequate pressing help achieve the level of quality expected in sleeve attachment. Good sleeve design, however, must be followed by quality sleeve construction and good fit, or the end product will be disappointing at best.

Plackets

A placket is a finished opening in a garment. It is a piece of cloth sewn under an opening. It is little needed with the present style of dress. Placket may be divided into two classes: those that are cut straight and made light-weight materials, and those that join a straight and a bias piece of material or two bias pieces and used on heavy material. Plackets are lapped from right to left. The right side is called the overlap and the left side the underlap. On women's clothing the lapping is right over left, on men's clothing left over right. Some common placket opening treatments are continuous bound, open-dart, open seam, pleated and tailored. Continuous bound plackets and tailored plackets are the most common ones used on shirts. Continuous bound is most frequently used as it is strong, neat and durable. A long strip is used to bind a

slit at the back wrist and reinforced at the pointed end with appropriate stitching. The tailored placket has two sections; a bound underlap and a shaped overlap. The underlap is applied at one side of the slash and the shaped overlap applied at the other side and partially topstitched through all the thickness to hold the overlap in position. If long enough, the placket can be closed with buttons and buttonholes.

Collar

Collar is a single or double ply fabric extension to the neckline. It may stand, drape over or both stand and drape over the natural neckline depending on the desired style. In clothing, a collar is the part of a shirt, dress, coat or blouse that fastens around or frames the neck. Also, a collar is the part of the shirt that frames the neck, and thus its shape, cut and size have a direct effect on portraying the structure of one's face. The wrong collar style can accentuate facial abnormalities, making the wearer look awkward and tardy, while the right collar style can enhance positive features. Among clothing construction professionals, a collar is differentiated from other necklines such as revers and lapels, by being made from a separate piece of fabric, rather than a folded or cut part of the same piece of fabric used for the main body of the garment. A collar may be permanently attached to the main body of the garment by stitching or be detachable. Collars can be categorized as:

1. Standing or stand-up, fitting up around the neck and not lying on the shoulders.
2. Turnover, standing around the neck and then folded or rolled over.
3. Flat or falling, lying flat on the shoulders.

When the collar is in one piece, only the sides are closed, but when it is in two or more pieces, the sides and style lines are joined before attaching to the neckline. Where the collar has a separate stand or band, the upper part is prepared before sandwiching it in the band, and finally attaching it to the neckline. In shirt, the collar is self-finished rather than the use of facing. Precision and accuracy are needed to achieve a perfect neck attachment. Collars may also be stiffened, traditionally with starch; modern wash-and-wear shirt collars may be stiffened with interfacing or may include metal or plastic collar stays. Shirt collars which are not starched are described as soft collars.

Closures

Closures are items that are used on garments to ensure fit and also to facilitate wearing and removal, besides the decoration they give to garments (Ampong, 2004). There are various types such as snapped and hooked closures; (snaps and hooks, claps and buckles), zippered closures; and button and buttonhole closures. Button and buttonhole closures are commonly used on plackets of sleeves, and the opening at the front of shirts.

Buttons are made from materials like wood, leather, pearl, horn and synthetics. They may be with shanks or without shank (eyed button). The shank serves as a spacer to keep the button raised from the garment surface. For shirts, the eyed buttons are mostly used. Placement of buttons depends on the diameter of the button. Buttonholes are made to complement the use of buttons in shirts. The size of buttonhole to be made should be based on the diameter and thickness of the button. When button closure is closed, the button should not extend to, or go beyond opening fold and button should be firmly

held in position. Where there is enough stress buttonholes usually demand reinforcement in the form of bartacks at the stressed areas. Buttonholes can be machine or hand stitched. Reinforcement is always needed where buttons and buttonholes are made. Interfacing provides stability in the button and buttonhole placement areas.

Hem

A hem in sewing is a garment finishing method, where the edge of a piece of cloth is folded narrowly and sewn to prevent unravelling of the fabric. There are many different styles of hems of varying complexities. The most common hem folds up a cut edge, folds it up again, and then sews it down. The style of hemming thus completely encloses the cut edge in cloth, so that it cannot unravel. Other hem styles use fewer folds. One of the simplest hems encloses the edge of cloth with a stitch without any folds at all (Shaeffer, 2011). There are even hems that do not call for sewing, instead using iron-on materials, netting, plastic clips, or other fasteners (Calderin, 2009). Hems are an important part of any garment and can be handled in many ways. The manner in which a hem is handled depends on the style of the garment, the location of the hem (sleeve, skirt, etc.), the fabric being used, and the occasion or mood for which the garment is designed. Hems of different depths, which include the seam allowance, may have a particular style to achieve, which requires more or less fabric depending upon the style. The hem's depth affects the way the fabric of the finished fabric will drape. Heavier fabric requires a relatively shorter hem (Colgrove, 2011). An interface fabric sewn to the fabric in the hem has a useful function in some hem styles. A bias strip is sometimes

used as a hem interface. This adds fullness to the finished garment and reduces wrinkling (Shaeffer, 2011).

Structural Trim

Structural trim refers to decorative touches created during construction of the garment and includes pleats, ruffles and tucks. Pleats are folds of fabric providing controlled fullness. Pleats generally look best when executed in firm, resilient fabrics such as synthetics, blends and heavy silks. There are four basic kinds of pleats: knife, box, inverted, and accordion. The knife pleat is constructed by making folds of fabric all facing in one direction. This type of pleat is mostly used in constructing school uniforms.

Waistline

Waistline is the line of demarcation between the upper and lower portions of a garment, which notionally corresponds to the natural waist but may vary with fashion from just below the bust to below the hips. The waistline of a garment is often used to accentuate different features. The waistline is also important as a boundary at which shaping darts (such as those over the bust and in the back) can be ended. Waistlines can be secured with a variety of methods: button, clasp, drawstring, elastic, knot and zipper. On the other hand, waistband is applied piece of fabric that is sewn to the garment at the fashion waistline (Stamper et al, 2005). Waistbands are by nature very functional but can be made decorative as well. We can have contour waistbands, and straight waistbands. The uniform (shorts) supplied to the children has a waistline treated with a waistband.

Finish

The finish of a garment is that property that gives the final product the attribute, which makes it attract the attention of observers. This includes how well the garment has been under pressed and top pressed to outline shapes, how the garment has been meticulously stitched, how notions have been carefully chosen and used to exhibit quality workmanship, and how carefully all parts are aligned and quality controlled to remove any unwanted elements like hanging threads, and finally, how the garment has been folded and packaged for delivery.

Sewing Machinery

Sewing is a creative and interesting skill. The knowledge of sewing gives a confident feeling when it is applied to the construction of garments. The central process in the manufacture of clothing is the joining together of components and this involves sewing in one form or another (Cooklin, 1991). The earlier method of sewing by hand is not applicable for all stages of garment making and as a result, the importance of sewing machinery cannot be underrated. Sewing machines join fabric with thread. The lockstitch is the most common type of home sewing machine. The lockstitch sewing machine consists of interloping sewing threads. Lockstitch sewing machines are comprised of a needle thread and a bobbin thread. The needle thread is delivered through a cone and the bobbin thread is spun onto a spool and enters the fabric from below. A shuttle hook revolves around the bobbin and captures the needle thread when it is brought down through the fabric. Seams are formed when the sewing machine needle is threaded and penetrates the fabric. The interloping of threads is produced to form a stitch (Brown & Rice, 2001).

There are several machines in the market today, each with its own desirable features and advantages. Sewing machines range from most basic having only simple lock stitch to the electronic machines that use advanced computer technology having various functions for example piping, binding, ruffling, pleating, darning, hemming and even making buttonholes and attaching fasteners. A good sewing machine is required to obtain quality products. One has to be familiar with the characteristics of different types of machines for selecting appropriate machine, depending upon the ability and requirements of the person. Ampong (2004) indicated that the sewing machine types used in clothing manufacture can be classified into the following levels with the quality in commercial use decreasing rapidly from the first level to the last.

Basic Sewing Machine: Basic sewing machines consist of a stand, table, electric motor, and a head. It offers one stitch type and has various shapes with means which helps the operator to control the speed of sewing, stitch density and presser foot position (Ampong, 2004). These basic machines have various work aids and attachments which make sewing smooth and faster. The attachments applied to these machines, enable things like presser foot lift, backtack, thread trim, fullness and others to be preset and controlled automatically. Examples of this group of machines are; single needle lockstitch, safety-stitching, blind stitching, single and two thread chain stitch and *over* locking machines (Carr & Letham, 2000; Ampong, 2004).

Simple automatics: These types of machines are controlled manually but the movements of the components to be sewn are normally controlled by special cams during the entire sewing operation. Simple automatic machine produces

only one configuration of sewing. Examples of simple automatic machines are buttonholers, button sewers, bar tack machines and label sewers (Senem, 2011). According to Ampong (2004), the specialized natures of these groups of machines makes them performed very accurate sewing operations and are very fast.

Automated workstations: These make use of electric, electronic and pneumatic control and incorporate sophisticated conveyor and clamp technology and perform complex functions in addition to sewing. These machines are, profile sewing system, CNC sewing machines and robots. Examples are patch pocket setting on jeans and shirts, run stitching collars or flaps, long seam joining, making jetted pockets, serging trousers and sequential buttonholing. Apart from loading and removing the garment after sewing, the machine controls the rest of the handling and sewing (Senem, 2011). Sophisticated automated workstations have numerical control, automated loading, unloading, edge sensors and other intelligent features.

High speed sewing machines: Apart from simple basic machines, simple automatics, there are industrial machines known as high speed machines, which have several ancillary mechanisms. The main function is to reduce the time needed by the operator for non-sewing activities (Senem, 2011). The ancillary equipment for industrial high speed sewing machines are; thread cutter, thread wiper, automated presser foot, needle positioning, stitch compression, bar tacking, automatic start using an optical sensor, automatic stop using an optical sensor and edge trimmer (Senem, 2011).

Concept of Fit

Apparel fit has long been of interest in clothing research because it is considered a crucial element of clothing quality and customer satisfaction (Song & Ashdown, 2010). Due to the various characteristics of apparel, many researchers have defined apparel fit in multiple dimensions (Brown & Rice, 2001; Laing & Sleivert, 2002; Outling, 2007). Fit is defined as the way a garment conforms to the body or the relationship between the garment and the body, and is commonly seen as one of the most important indications of the quality of clothes (Brown & Rice, 2001).

Fit according to Marshall, et al (2004) is the person's values, needs and preferences. A well-fitting garment must be functional. It should allow freedom of movement, be comfortable to wear and have sufficient room for movement. It does not leave wrinkles; it is not baggy and is fashionable and pleasing to look at (Shamper, et al, 2005). A properly fitting garment is one, which hangs well, has no wrinkles, lies smoothly over the body curves and feels comfortable. In effect, a thorough subjective evaluation of garment fit can only be assessed while it is worn. In this case, a student can only tell if his or her school uniform fits well after wearing it. This is because the effect of all components of the uniform, including comfort and peer opinion can only be evaluated upon wearing the garment.

These fit qualities of a garment tend to appeal to one's fashion sense and create confidence in the wearer. It also contributes to one feeling of self-worth end self- esteem (Marshall, et al, 2004). Fit may also be defined as the way clothing item conforms to the body (Workman & Lentz, 2000) or the relationship between the clothing item and the body (Song &Ashdown, 2010).

As such, clothing items with a good fit ought to conceal the wearer's figure faults, compliment the body and provide well-balanced proportions (Tate, 2004). Therefore, a garment of the correct size, in combination with the correct body measurements, ought to result in a notable fit.

"Good fit" has also been defined diversely, depending on fashion trends, standardized sizes in the apparel industry and individuals' perceptions; because, clothing fit are a complex property affected by fashion, style, and many other factors (Fan, Yu & Hunter, 2004). However, good fitting clothing should fall smoothly over body contours without clinging, pulling, binding or twisting, as well as drawing attention to the most attractive areas of the body (Rasband & Liechty, 2006). Poor fitting clothing on the other hand tends to focus on negative features of the body, gapes easily creases, wrinkles and draws attention to the wearer. This may result in a feeling of insecurity and total discomfort for the individual (Rasband & Liechty, 2006).

Size and Fit Problems with Ready-made Clothes

According to DesMarteau (2000), fit problems are the reason for 50 percent of catalogue returns. Consumers are pressed for time and for that matter when they order a range of clothing sizes, try them on and see that the clothes do not fit they return them to the retailers. For this reason, manufacturers have come up with ways of creating a range of apparel sizes to fit their target market. Methods of creating sizes and analysing garment fit are:

1. Based on measurements of one "ideal" customer represented by a single fit.
2. Adjusted for additional sizes by using grade rules to define proportional increases and decreases from the base pattern.

3. Evaluated on the fit model visually and in two dimensions by comparing linear garment measurements to linear body measurements (Keiser & Garner, 2003).

Although these methods are useful in evaluating simple garment fit issues, they are not adequate to investigate the complexities of the multifaceted relationship between body and clothing for a large number of customers with a variety of body types within each size. Most sizing systems are derived from the ISO. However, individual firms have always interpreted the standards differently, in order to distinguish their garments from those of their competitors. Size and the resulting fit are used as a marketing tactic. Size 10 at one firm is not the same as size 10 at another company, even when the style and some of the body measurements such as bust/chest, waist, hip and others are the same. This is brought about by the body height and proportions of the fit model, plus the preferred "fit" established by a company.

The school uniform is an integral element of every child's school-going years. Children in different age groups have widely varying physical, social and psychological requirements for their clothing (Zakaria, 2011). As a result, children are expected to wear comfortable clothing for various activities in order to be physically, socially and mentally active and fit (Robotham, 2009). On the other hand, during this time children grow quickly in different ways and at different rates, therefore clothing size is significant in giving them the right fit which allows room for growth (Robotham, 2009). Furthermore, there is a possibility that physical changes in children could cause complications in choosing clothing, especially when it comes to fit.

Basing the size system on age alone also results in poor representation of actual body dimensions and shapes. Several studies have revealed that children of similar age may have varying height, shape and body proportion (King, Choi & Do, 2001). Research done by Otieno (2008) in Malaysia demonstrated that 50 percent of children did not fit into clothes designed according to the age system due to poor sizing system used. Also, a Ghanaian newspaper Daily Heritage, on 9th April, 2014 p.1, 2, reported that free school uniforms did not fit pupils in schools in the Okaikoi South Education sub-metro because of it being undersized. To Brown and Rice (2001), one of the causes of sizing and fit problem is lack of standardised sizing systems.

According to the authors, the problem of sizing and fit is due to current sizing systems which differ from country to country, and from manufacturer to another which have resulted in wide size variations in the market. Not only that, the poor sizing system used by manufacturers creates more fit problems as consumers have to try on a garment before buying it or altering it to ensure a good fit. Chen (2008) also attests to the notion that clothes do not often fit children well because the sizing system used to manufacture them is not based on a scientific understanding of body shapes and sizes of this group. With the above information, one could boldly confirm that fit plays a major role when it comes to garment construction.

Sizing System

Sizing system is defined as a set of sizes while size category is a range of sizes, presented in a retail situation. A sizing system used for ready-made clothes makes use of a base size which is often fitted on a model from which size variations are generated by proportionally grading it. Technological

advancement in sewing equipment, mass cutting technologies, distribution technology and mass production methods contributed to development of ready-made clothing using this sizing system. A sizing system can be as simple as one-fits –all, or as complex as a system that provides a custom fitted garment for each individual.

Today's clothing industry is based on a system where clothes are made in ready-to- wear sizes and meant to fit most people. Studies have pointed out that consumers are discontent with the use of these systems: size designations are not accurate enough to find clothing that fits, and different sizes are poorly available. In particular, large women, very large men, and thin, short men are those who experience less priority in clothing stores and have more difficulties in finding clothes that fit (Laitala, Klepp & Hauge, 2009). Dressing requires finding clothes that fit our bodies and the way we look, as well as the society and occasions we are part of (Entwistle, 2000).

Summary of Literature Review

The use of school uniforms date as far back as the year 1222 when they were used in France, Germany and England. However, the use of school uniforms in Ghana was brought about by the missionaries who introduced formal education in the country. Proponents of school uniforms make several convincing arguments about the positive effects of school uniforms on the school as an organisation. The government of Ghana as part of its social responsibility in ensuring that children, especially, those in deprived areas are not denied the right to basic education initiated the Free School Uniform (FSU) programme. Some theories surrounding clothing and school uniforms include Clothing, Appearance and Role Theory, and School Uniforms and

Social Control Theory. Various factors influence the desirability of obligatory school uniforms. But all boils down to the quality of the final product. Quality is seen as conformance to requirements which may take the dimensions of quality as performance features, reliability, conformance, durability, serviceability, aesthetics and perceived quality.

In constructing the school uniform, the cut pieces of fabrics are joined together with the help of sewing machines and construction processes and techniques. These techniques when done well, enhance the beauty of the dress. On the other hand, when poorly applied, the fit of the garment will be affected. The literature review also revealed that fit problems exist with ready-made clothes. This is because sizing systems depend on accurate measurements of a target population. The fit preferences differ with individuals, and fit is subjective, yet most garment manufacturers do not agree on standard sizing. The construction processes and the fit of garment in one way or the other contribute to the quality of the garment. The uniforms given to the pupils need to last long hence the need to look at the quality of the construction. Extrinsic and intrinsic quality indicators that may be used by consumers (parents and pupils) of the uniforms are also important factors to be considered in providing the uniforms. Quality control and quality assurance are requisites, needed to generate consumer satisfaction in using products produced by manufacturers.

Conceptual Framework for the Study

For every industry or business to get increased sales and better name among consumers and fellow companies, it is important to maintain a level of quality. In the apparel industry, quality control is practised right from the initial stage of sourcing raw materials, to the final stage a garment is produced

to assure consumers of product quality (Danquah, 2010). Issues boarding on quality are subjective as its attributes vary from individual to individual. As indicated by Ampong (2004) quality means different things to diffident people. Also, Stamper et al (2005) assert that there is no mechanical device that can measure in very precise terms the quality of garments. Responses as to what quality entails is dependent on peoples' perception of the value of a product or service under consideration, and their expectation of performance, durability, and reliability of that product or service.

Chowdhary and Poynor (2006) indicate that perceived apparel quality is a function of intrinsic and extrinsic cues. Intrinsic cues are an inherent part of the apparel product, and represents fit and style, sizing, the type of fashion and support fabrics, and the sewing process used to produce a quality garment for the intended purpose. In contrast, extrinsic cues to quality and performance include prices, brand names, retailers' reputation, visual display of the apparel product, and promotional strategies used to introduce and merchandise the product. Irrespective of the diverse views of what quality entails, standardization programme by the ISO 9000 series, have laid down some broad quality parameters that are used by companies to assess their products.

It has been noted that the achievement of quality construction in garments, and for that matter apparel products, depends on several factors which borders on:

Constructional processes

Manufacturing equipment,

Expertise of manufacturers

Consumers' or customers' views on quality

This concept has been illustrated diagrammatically in Figure 1.

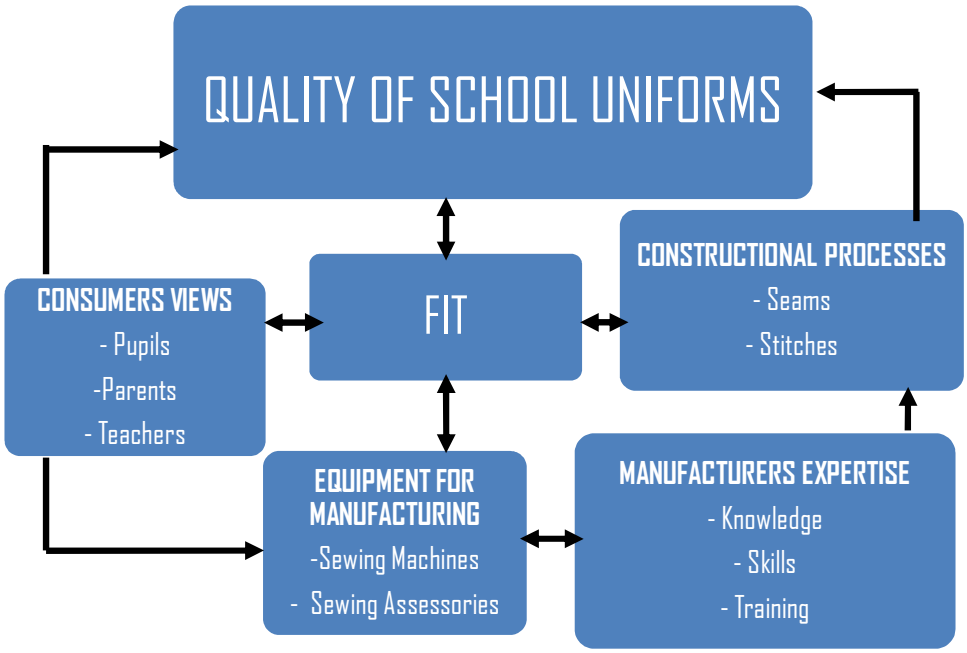


Figure 1: Conceptual Framework (Researcher's construct)

To produce quality sewn uniforms, the constructional processes are important. To Doshi (2006), quality related problems in garment manufacturing like sewing defects such as open seams, wrong stitching techniques used, miss out of stitches in between, creasing of the garment and erroneous thread tension should not be overlooked. The expertise or experience of the manufacturers is another factor. An inexperienced manufacturer is likely to produce garments which may show defects. In the same way, where the machines are not efficient, the seams, stitches and other constructional features will show defects.

The views of consumers or customers' which for this study are the pupils, parents and teachers, also count. These views are accessed when the consumer looks at the fit and the durability of the various constructions in course of usage.

CHAPTER THREE

METHODOLOGY

The objective of this study was to assess the quality of constructional processes and the fit of government-supplied school uniforms in the West Akyem Municipality of Ghana. This chapter outlines a description of the procedures and methods used to execute the study. It is divided into sub-sections comprising the research design, population, sample and sampling procedure, instruments for data collection, data collection procedure and finally data analysis procedure.

Research Design

This study is a descriptive survey. Descriptive research refers to research that has as its main objective, the accurate portrayal of the characteristics of persons, situations or groups (Polit & Hungler, 2004). These authors indicated that descriptive survey aims predominantly at describing, observing and documenting aspects of a situation as it naturally occurs rather than explaining them.

This study is categorised as a descriptive study because the broad research objective is to assess the quality of construction of government free school uniforms made by Ghanaian manufacturers. Ary, Jacobs, Razavieh and Sorensen (2006) have explained that descriptive research helps in studying the present problems of students, teachers, administration, curriculum, teaching and learning process, and to suggest some solutions to these problems. The nature of the instrument used allowed me to employ only the quantitative

research design which proved to be very practical and economical in assessing the opinions of manufactures, pupils, parents, and teachers on the quality of constructional processes and fit of government-supplied uniforms in Ghana.

Population

Polit and Hungler (1999) have defined population as the entire aggregation of cases that meet a designated set of criteria. In view of this, the target population for this study consisted of manufacturers (tailors and seamstresses) in the Eastern Region of Ghana who sewed the FSUs, parents and pupils who benefited from the FSUs and teachers in schools where pupils benefited from the FSUs. The region was expected to benefit from 100,000 free school uniforms, out of which 4,862 pieces was the quota for the West Akyem Municipality (West Akyem Municipal Assembly, 2012). Statics showed that the municipality had a total number of 47 Nursery Schools, 141 Primary Schools, 87 Junior High Schools (JHS), three Senior High Schools (SHS) and three Vocational Schools. However, the uniforms were supplied and distributed to 37 deprived schools in the Municipality. Beneficiaries of the Free School Uniforms (FSUs) consisted of 21 Primary and 16 Junior High Schools. Out of the 4,862 pieces of school uniforms to be supplied, boys were to receive 3,360 and 1,502 pieces were apportioned to girls (West Akyem Municipal Assembly, 2012).

Sample and Sampling Procedure

According to Leedy and Ormrod (2010), the process of selecting a portion of the population to represent the entire population is what is referred to as sampling. For this study's purpose to be achieved, the purposive and the stratified random sampling (disproportionate) techniques were employed. The

purposive sampling which is described by Amedahe (2002) as a technique whereby the researcher chooses subjects who in their opinion are thought to be relevant to the research topic. This method was used to choose two quality control personnel.

The stratified random sampling technique is described by Amedahe (2002) as a technique whereby a researcher divides the population into a number of homogeneous groups or strata where each group contains subjects with similar characteristics. According to the author, the division of the population is based on one or more criteria such as economic status, age, sex and professional status. In the case of this study, the criterion was status of FSU beneficiary. Sample drawn from each stratum which could be either proportionate or disproportionate then makes up the final sample for the study. This sampling technique was therefore used to select 419 participants which constituted six manufacturers, 36 teachers which included headmasters, 65 parents and 312 pupils. During the sampling process three steps were followed.

The first step involved the division of the target population into significant groups. At this stage four strata were obtained; manufacturers, teachers/headmasters, parents and pupils. With respect to the manufacturers, the Municipal Assembly in collaboration with the Ghana Education Service contracted them to sew the uniforms. The teachers/headmasters were responsible for selecting pupils who meet the criteria for benefitting from the FSU programme. Parents who formed part of the population were those whose ward(s) benefitted from the initiative and the pupils were the recipients' of the FSU.

The second step involved the preparation and development of sampling frames for each group. The third step employed the lottery method in sampling final participants for the study based on sample size determination table by Krejcie and Morgan (1970) as indicated in Appendix H.

Table 1 shows the population of FSU beneficiaries and their respective sample sizes.

Table 1: Sample size of FSU beneficiaries

FSU Beneficiaries	Population	Sample
Pupils	1609	312
Parents	83	65
Manufacturers	6	6
Teachers/headmasters	41	36
Total	**1739**	**419**

Source: Researcher's field data, 2014

Research Instruments

In order to obtain comprehensive data for the study, the main instruments used to collect the data were Observation Guide and Questionnaire. The observation guide which was developed for the Assessors, was replicated from Ampong (2004) based on a scale developed by Stamper, Sharp and Donnel (1988). Patton (as cited in Cohen, Manion & Morrison, 2004, p. 305) point out that, "observational data are attractive as they afford the researcher the opportunity to gather 'live' data from 'live' situations. The researcher is given the opportunity to look at what takes place in situ rather than at second hand". They add that, as with other data collection techniques, issues of validity and reliability beset observation. Regarding the

constructional qualities assessment, two (2) Quality control personnel assisted in assessing the constructional details of the school uniforms.

The observation guide which was replicated from Ampong (2004) was structured in eleven parts according to features that were to be assessed by the two quality control personnel. As indicated in Appendix F, elements/features that the assessors observed in order to grade included (a) stitches, (b) seams, (c) underlining fabrics, (d) hem treatment/finishes, (e) patch pockets, (f) in-seam pockets, (g) neckline/collar treatment, (h) sleeve treatment, (i) buttons, (j) buttonholes, and (k) structural trim. In order to provide the assessors with school uniforms to observe and grade, all the six manufacturers were required to construct two sets of uniforms (a boy's uniform and a girl's uniform) each for the small, medium and large sizes which had an average age of 6,9 and 12 years respectively. In all, 36 constructed school uniforms were observed by the assessors.

Questionnaire was used for the manufacturers, head teachers, teachers, parents and pupils. Although questionnaire may have potentially low response and or return rate, it is a relatively economical method in both cost and time, and it gives the opportunity to carefully check the content of the items that are likely to yield more inaccurate information. This is an important consideration in the study which seeks reliable information from the respondents. According to Patton (2002), researchers can get the right responses from respondents when they use questionnaire. The questionnaire was structured in four sets; questionnaire for pupils (Appendix A), parents (Appendix B), teachers/headmasters (Appendix C) and manufacturers (Appendix D). The use

of the questionnaire was preferred because its anonymity is very high, and there are no geographical limitations to its usage.

Validity and Reliability

The validity and reliability of the questionnaire were taken into consideration. The aim was to avoid any weakness before producing the final version for implementation. According to Cohen and Manion (2004) examination or the validity of questionnaire aims at making sure that the adopted instrument measures what it is supposed to measure. Thus, the instruments were given to my supervisors and colleagues to check their validity (by face). After their scrutiny, some items were eliminated and new ones were added to produce the final one which was used for the data collection (see Appendices A to F).

Pre-testing

The questionnaires were pre-tested under the same conditions as for the main research. The most important reason for the pre-test of the instrument was to identify potential problems and to make sure that all the items were well stated for effective results to be received. To establish the content validity of the instrument, the items was tested on teachers, parents and pupils of Jacob Wilson Sey Basic School in Cape Coast who were beneficiaries of the FSUs in the Central region of Ghana.

Cronbach's alpha was used to find out the reliability of the items of the questionnaire after the pilot test. Pallant (2001) recommends a minimum level of 0.7 for internal consistency of the items that make up a scale to measure an attribute. This scale was the standard used to determine the reliability of the questionnaires. The questionnaire for the parents gave a Cronbach's Alpha of

0.679 and so the corrected item total correlation, which suggests items that can be deleted to generate a much better Alpha, was used to delete some of the items which then gave a Cronbach's Alpha of 0.920. The heads and teachers questionnaire was also worked on to arrive at an Alpha of 0.975 with the pupils' one being 0.734. After pre-testing and discussion of the findings with my supervisors, the needed amendments were made to make sure that the instruments were valid and reliable for the study. It was also realised that some of the manufacturers, parents and pupils could not fill in the questionnaire items and so in collecting data for the main study, they were read out in the form of a structured interview.

Data Collection Procedure

Data, as described by Polit and Hungler (2004) refers to information obtained in a course of a study. To assess the quality of construction processes and the fit of FSUs in the West Akyem Municipality, two quality control personnel, and419 beneficiaries which constituted six manufacturers, 36 teachers/headmasters, 65 parents and 312 pupils were sampled through the purposive and disproportionate stratified sampling technique for the study. In order to avoid any inconveniency with the respective beneficiaries, visits were paid to their various offices and schools to seek for their consent and fixing of dates for data collection.

With respect to the manufacturers, the contact number of their leader was provided to me by the secretary of Ghana Tailors and Dressmakers Association (GNTDA) for the region. A meeting was then fixed with the manufacturers through their leader on the phone. During the meeting, the purpose of the study as well as their relevance to the study was explained to

them with the help of an official introductory letter (Appendix G) from the Vocational and Technical Education (VOTEC) department, University of Cape Coast. The manufacturers indicated that they had already submitted the required consignment for the academic year (2013/14) to their various outlets. I therefore made provision for the leader to fund the construction of 36 school uniforms for assessment. Each manufacturer was to construct a uniform for a boy and a girl under the sizes; small, medium and large.

The manufacturers were encouraged to construct the uniforms as they did with their original sets. Convenient dates were then fixed by each of them for the collection of sewn uniforms. This was done within the time frame, 17th to 31st July, 2014. Questionnaire for manufacturers (see Appendix D) were personally administered during the collection of constructed uniforms from their various workshops.

A visit was then paid to the Presidential Special Initiative Quality control department office where I consulted with the Public Relations Officer (PRO) to make my mission known. Two quality control personnel from KAD Manufacturing and Cadling Fashions were purposively chosen to assist with the assessment of the uniforms. A brief meeting was held with them to explain the purpose of the study as well as their role. A date was then fixed for the submission of the school uniforms by the two personnel. The sewn uniforms, together with the observation guide (see Appendix F) were sent to the premises of KAD Manufacturing for the assessment to commence on 12th August, 2014. The two quality control personnel were briefed on how to use the observation guide to assess the school uniforms. Since the format was not very different from the one they used for their quality control records, much

difficulty were not encountered. I was told to come for the feedback on 2nd September 2014 indicating that the assessors took three weeks to complete the task.

Questionnaire administration for teachers/headmasters, parents and pupils were collected within a period of one month (12th September to 10th October 2014) with the help of clothing and textiles graduate from University of Education Winneba. I briefed the assistant on the study by taking her through each item before we went to the field. This group of participants were put into four zones based on proximity. The zones were Asamankese 1, Asamankese II, Asamankese III and Asamankese Anum. In each zone, a school was picked for the conveyance of participants for questionnaire administration with the help of teachers/headmasters who had been selected as zone representatives. The representatives were briefed on the purpose of the study and they helped in fixing dates for the collection of data. A period of two days (first day was for parents and the second day was for pupils and teachers/headmasters) was spent in each zone.

The purpose of the study was explained to participants afterwards, two mannequins (Appendix E) that were dressed in a boy's and girl's school uniforms were used to explain unfamiliar terminologies to participant. Together with my assistant, we assisted and supervised the exercise. For parents and pupils who could not read and write, questionnaire was administered in the form of an interview and their response were recorded by either me or the assistant.

On the whole, a period of four months (17th July to 10th October, 2014) was used for the collection of field data from manufacturers, assessors, teachers/headmasters, parents and pupils.

Data Analysis Procedure

After the collection of assessment results and questionnaire, the data received were coded for the purpose of statistical analysis. Descriptive statistics was applied in the analyses of data. This involved the use of frequencies, percentages, means and standard deviations. All data collected through open-ended items were grouped into emerging themes while those collected by the close-ended items were coded and quantified into mean and standard deviation values and thus, analysed quantitatively. Others were interpreted using percentages and frequency counts.

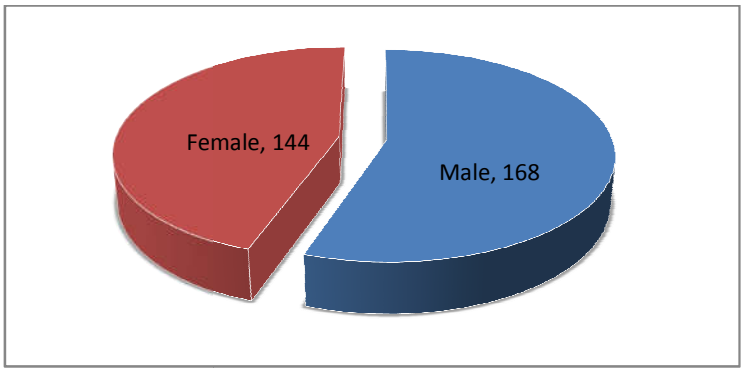
CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter focuses on analysis the collected data, interpretation as well as a discussion of the findings obtained from evaluating the primary objectives of the study. The objective of the study was to assess the quality of constructional processes and the fit of government supplied uniforms in the West Akyem Municipal in the Eastern Region. The results are presented and discussed under demographic data and the research questions. Wrongly ticked responses were eliminated from the analyses to give a true reflection of the actual responses received; hence, having different totals in tables. The demographic data were pictorially represented with pie charts, bar graphs and frequency tables. The research questions were presented using simple frequencies and percentages.

Demographic Data

The researcher, before delving into the focus of the study, tried to consider the background of the respondents. This is presented in Figures 2 to 6 and covers the pupils' sex and age distribution, years uniforms were supplied, age of parents and teachers and their educational levels.

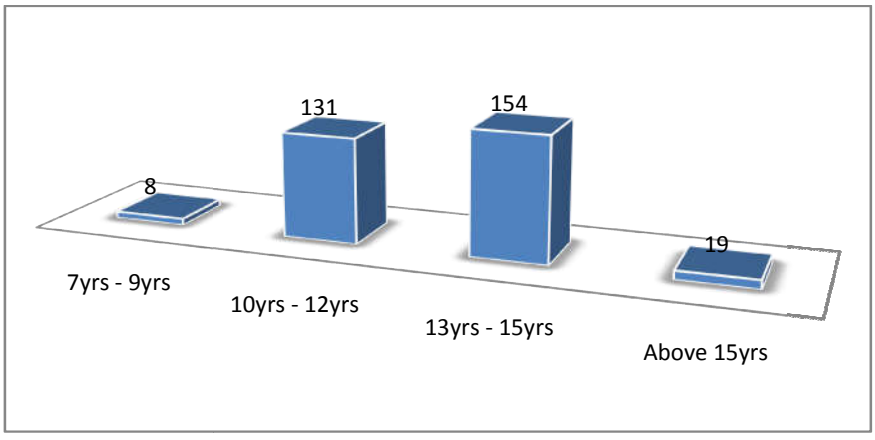


Source: Field data, 2014

Figure 2: Sex Distribution of Pupils

Figure 2 presents the sex distribution of the pupils who took part in the study. There were 312 pupils who were interviewed. Out of that, 168 (53.8%) represented boys and 144 (46.2%) girls. This is an indication that there were more boys who benefited from the uniforms in the West Akyem Municipal than the girls in 2010 to2012.

The uniforms were distributed according to the sizes of pupils which are based on age. Due to this, ages of respondents were used to determine the group that benefit from the uniforms. Figure 3 is a bar graph to that effect.

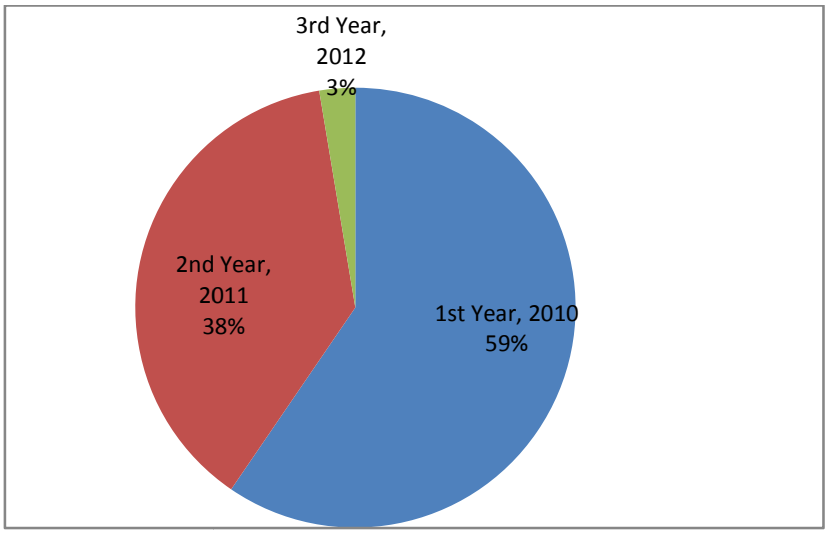


Source: Field data, 2014

Figure 3: Age Distribution of Pupils

The ages of these respondents ranged from 7years to 15years and above. They were categorised into four groups. The highest representations in this study were children between the ages of 13 and 15 years, where 154 pupils were involved. The least were between the ages of 7 and 9 years with 8 pupils. On the average, it is expected that the ages of the pupils in the primary school should range between six and 12 years, but most of the pupils who benefit from the uniforms were between 10 and 15 years. Kommer (1999) is of the view that pupils of all ages want new school clothes that are in-style and fashionable because new clothes give pupils a feeling of self-assurance. When children feel confident about their appearance they are more likely to succeed. This thought is buttressed by Ray (2006) who points out that new school clothes give children of all ages the extra boost of self-confidence they need especially with the adolescents.

The uniforms were supplied in three consecutive years in the West Akyem Municipality. The number of years and the quantity of uniforms supplied are pictorially presented in Figure 4.The idea of supplying FSUs to Ghanaian pupils started in 2009 by the government of Ghana. In the West Akyem municipal the distribution of the FSUs to pupils commenced in the year 2010, where 181 representing 59% were supplied.

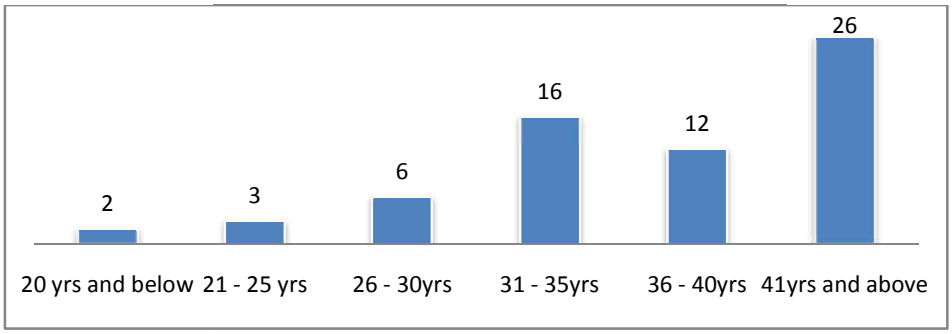


Source: Field data, 2014

Figure 4: Years in which the School Uniforms were Given to Pupils

The number of pupils who benefit reduced in 2011 and by 2012, it had reduced to as low as eight pupils representing 3%.

The parents of the pupils who benefit from the FSU programme were included in the research. Figure 5 is a bar chart representing their age distribution.



Source: Field data, 2014

Figure 5: Age Range of Parents

Out of the 65 parents who participate in the study, 17 were males and 48 females. Their ages ranged mainly between 21years to 41 years and above.

This shows that parents of these children were matured to give meaningful suggestions about clothing that are good for their wards.

Educational Levels of Parents

The educational levels of parents were investigated to find out if it could have some influence on their lives as it may affect their ability to provide school uniforms for their wards, as well as influencing their interest in educating their wards by spending much money in providing the all the needs of the children which includes school uniforms. The results can be found in Table 2.

Table 2: Parents' Highest Educational Level

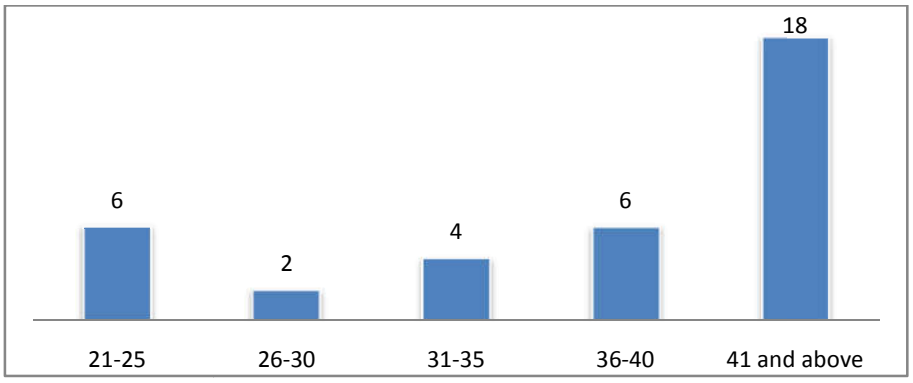
Institutional Level Attained	Frequency	%
No formal education	18	27.7
Basic school/Middle school	38	58.5
Vocational/Technical/Secretarial school	5	7.7
Senior high/technical school	3	4.6
University	1	1.5
Total	**65**	**100**

Source: Field data, 2014

Looking at the statistics from Table 2, the majority of the parents (56, 86.2%) of the children who benefit from FSUs had no or a maximum of Basic/Middle school education. This might mean that majority of the pupils who benefited from the FSUs came from homes of low levels of education which may affect their parents ability to provide them the uniforms. This adds to support the submission from the Daily Graphic ("Prez launches free

uniforms,"2009) that some pupils find it difficult to purchase school uniforms for school as such the initiative is welcomed.

The teachers/headmasters of the pupils in the schools selected were included in the research. Figure 6 is a bar chart representing their age distribution.



Source: Field data, 2014

Figure 6: Age Range of Teachers

The 36 teachers/headmasters who participated in this study ranged in age from 21 to 41 plus years. The age group that made up the largest set was the 41 years and above, representing 50 percent. Only eight teachers were at most 30 years, thus most of them were matured and could be trusted to provide meaningful views to the study.

Qualifications of Teachers

Teachers were asked to identify the highest academic qualification they have achieved. Table 3 illustrates the highest educational qualifications attained by the teachers.

Table 3: Teachers' Highest Level of Education

Institutional Level Attained	Frequency	%
Training College	22	61.1
Polytechnic	2	5.6
University (Degree)	12	33.3
Total	**36**	**100**

Source: Field data, 2014

The results (Table 3) indicate that the respondents had certificates, diplomas, and Bachelor degrees in different categories of the education system. The results indicated that 22(61%) of the respondents had a diploma qualification, while 2 (5.6%) had higher national diploma from polytechnic and 12(33.3%) had Bachelor degrees. All the respondents were professionals in the teaching profession. One can assume that being in the schools at the time the uniforms were distributed as well as the period within which the pupils used the uniforms; these teachers could give detailed reports.

Results and Discussion on the Main Data

The results and discussions of the main data are organised in respect of the research questions and hypothesis.

Research Question One

What is the Background of the Manufacturers of the Free School Uniforms?

The researcher wanted information about the background of the manufacturers and so made them to respond to some questions about themselves, specifically their profession in order to gather their socio-demographic data.

Socio-Demographic Data for the Free School Uniform Manufacturers

This study identified the following four demographic characteristics: sex, level of education, number of years in occupation, and type of initial occupational training received as manufacturers of garment production.

Sex

The study sought to find out the numbers of females and males who were given the contract to produce the FSUs. The number of males and females is presented in Table 4.

Table 4: Gender of Free School Uniform Manufacturers

Gender	Frequency	%
Male	3	50.0
Female	3	50.0
Total	**6**	**100**

Source: Field data, 2014

All the six manufacturers who sew the uniforms in the Municipality were picked for the study. The number of female manufacturers whose products were used for the study was 3(50%) and that of the males was 3(50%). Five out of six were members of dressmakers and tailors association in the Municipality. The ages of the manufacturers were also considered to find out their maturity level to see if it could have some impact on their work. Table 5 represents their age distribution.

Table 5: Age of Free School Uniform Manufacturers

Age	Frequency	%
21-25yrs	1	16.7
36-40yrs	2	33.3
41 and above	3	50.0
Total	**6**	**100**

Source: Field data, 2014

Table 5 presents the age distribution of the manufacturers who took part in the study. Out of the 6, one manufacturer (16.7%) was below 26 years. Two manufacturers' (33.3%) ages fell between 36 and 40 years. The manufacturers aged 40 years and above dominate in terms of maturity. Their representation in the study is 3 (50%). This indicates that the contract was given to experienced and matured manufacturers who could be expected to produce quality products.

Educational Level

Respondents were asked to identify the highest academic qualification they had achieved. In Ghana, people believe and have concluded that children who are academically weak and perform poorly in school have to end up by learning a trade. Not only that, parents who cannot afford to sponsor their wards to senior high schools as well as children who do not have guardians or helpers all end up in the informal sector. Table 6 illustrates the qualifications that respondents had acquired. This is indicated in an International Labour Organization (ILO) report (1993) on the informal sector of the economy in Ghana.

Table 6: Highest Educational Level of the Free School Uniform Manufacturers

Educational level	Frequency	%
Basic School/Middle School	5	83.3
Vocational/Technical/Secretarial School	1	16.7
Total	**6**	**100.0**

Source: Field data, 2014

Looking at Table 6, five (83.3%) of respondents had basic level of education and 1 (16.7) a higher level. This means that the respondents have some basic education but not necessarily school dropouts.

The form of training respondents went through before becoming dressmakers or tailors was investigated and Table 7 indicates the distribution of responses.

Table 7: Type of Occupational Training by Manufacturers of Free School Uniforms

		Training Duration		
		3yrs	4 yrs and above	Total
How knowledge in dressmaking/tailoring was acquired	Through formal school instruction	1	0	1
	Through apprenticeship	4	1	5
Total		**5**	**1**	**6**

Source: Field data, 2014

Table 7 indicates that 83.3% of the respondents went through apprenticeship training and 16.7% went through formal school training. The training duration was three years for the one formally trained and four

informally trained manufactures. The remaining one was trained through apprenticeship for more than four years.

This confirms what was reported in the literature according to Ampong (2004) ILO report of 1993 that 65.6% of the labour force nationwide acquires vocational skills through the apprenticeship system. Also, research done by Sarpong, Howard and Osei-Ntiri (2011) on how 72 fashion designers got their skills indicated that 43 (60%) had them was through apprenticeship. From the above, one can say that, apprenticeship is therefore is a popular form of training for vocational skills acquisition, which includes the sewing or dressmaking industry, especially in the rural communities in Ghana.

Use of In-service training

The researcher was interested in finding out whether the manufacturers after their training do undertake other in-service training. The result can be seen in Table 8.

Table 8: In-service Training

Training	Freq	%
Attending workshops	5	83.3
None at all	1	16.7
Total	**6**	**100.0**

Source: Field data, 2014

Apart from the form of skills acquisition by the manufacturers, the majority of them usually upgrade themselves to be abreast with the profession. As indicated in Table 8, five of the respondents, representing 83.3 percent have been going through in-service training programmes organised by governmental or non-governmental organisations. These training

programmes are usually centred on teaching of skills that are known to pose difficulty to practitioners in a specific trade or vocation. One manufacturer (16.7%) indicated that she had never attended any in-service training. Interestingly, she was the one who did not belong to the dressmakers association.

The Manufacturers' Years of Experience

The researcher was interested in finding out the use of experience in performance and so the manufacturers were asked the number of years they had spent working as tailors or dressmakers. Table 9 shows the number of years that respondents had worked in the industry.

Table 9: Number of Years a Manufacturer Practised as Tailors or Seamstresses

Years of Practice	Frequency	%
1-5yrs	1	16.7
16-20yrs	2	33.3
More than 20yrs	3	50.0
Total	**6**	**100**

Source: Field data, 2014

The majority of respondents, which represents 50 percent, have been working in the sewing industry for more than 20 years, which indicates that they are fairly well established in their careers. Respondents who have spent from 16 to 20 years in the industry represented 33.3%, which also indicates that a significant percentage of them have long experience in the fashion industry. Therefore, totalling the number of respondents with 16 to 20 and above years of experience in garment production would result in approximately 83.3 percent of the total respondents. This is an indication that

the manufacturers of the uniforms in the West Akyem Municipality were experienced tailors and seamstresses.

Research Question Two

To what Extent do Specific Construction Processes Present in the FSUs Meet International Quality Standards?

To answer this question, the researcher asked assessors to assess two selected uniforms from each of the manufacturers. The manufacturers were also made to do a self rating of their own products. Data to this effect is presented in Tables 10 and 11 which show their rating of the garments on specific constructional processes. The scores are interpreted using the score bands as indicated below:

Below 1.6 represented 'Poor',

1.6 – 2.49 represented 'Fair',

2.5 – 3.49 represented 'Average' and

Above 3.5 represented 'Good'.

From Table 10, the boys' uniform obtained an average mean of 2.17 and that of the girls' an average of 2.02. They both fell within the score band of 1.6 – 2.4 which is interpreted as fair. The assessors rated the uniforms based on specific constructional processes as fair which is below average.

Table 10: Assessment of Uniforms by Assessors

Constructional Process	Boys			Girls		
	Type of Uniform	Mean	SD	Type of Uniform	Mean	SD
Stitch and Seams	Shorts	2.71	.47	Pinafore	2.36	.48
	Shirt	2.44	.54	Shirt	2.35	.54
Interfacing	Shorts	2.32	.47	Pinafore	1.31	.61
	Shirt	1.28	.45	Shirt	1.64	.48
Hem	Shorts	2.26	.44	Pinafore	2.33	.47
	Shirt	1.12	.50	Shirt	1.32	.56
Pockets	Shorts	2.43	.69	Pinafore	2.25	.53
	Shirt	2.41	.66	Shirt	2.08	.34
Buttons	Pinafore	2.36	.62	Pinafore	2.00	.00
	Shirt	2.33	.54	Shirt	1.92	.85
Collar	Shirt	2.19	.52	Shirt	1.61	.95
Sleeve	Shirt	2.26	.44	Shirt	2.58	.50
Structural Trims	Pinafore	2.16	.54	Pinafore	2.47	.64
Averages		**2.17**	**.53**		**2.02**	**.53**

SD=Standard Deviation
Source: Field data, 2014

An in-depth study revealed that some of the constructional processes were assessed as poor and below the average mean. These areas were interfacing for boys' shirt (M=1.28, SD=.45) and girls' pinafore (M=1.31, SD=.60). In terms of Hem both the boys' and girls' shirt was considered poor (M=1.12, SD=.50) and (M=1.32, SD=.56). This finding corroborates that of

Zakaria (2011) which showed that constructional processes for the Bolgatanga Senior High School students' uniforms were very poor. However, Sarpong et al, (2011) on their part, found the constructional processes in their study on the uniforms for the St. Peters Seminary students to be good. This may be as a result of the manufacturers who were contracted to sew the uniforms.

The manufacturers' ratings are found in Table 11.

Table 11: Manufacturers' Rating of the Quality of the Garments on Specific Construction Processes

Construction Process	Mean	SD
Stitch/Seam Making	3.47	.64
Fixing of Sleeve	3.34	.48
Fixing of Collar	3.26	.44
Making an Opening/Closure	3.16	.54
Making Pocket	3.09	.30
Fusing Interfacing	3.64	.48
Making Structural Trim	3.33	.47
Finishing a Hem	3.32	.56
Waist Band	3.25	.53
Overall Finish	3.08	.34
Averages	**3.29**	**0.48**

SD=Standard Deviation
Source: Field data, 2014

From Table 11, the average mean of the manufactures was 3.29 which fell within the score band of 2.5 – 3.4 which is interpreted as good. The manufacturers had a good rating of the quality of the garments on specific construction processes. This finding is consistent with the study of Chowdhary

and Poynor (2006) where 50 manufacturers in Maryland were contracted by some high schools to manufacture uniforms. When they were asked whether their products were of the highest quality, 91percent of them answered in the affirmative. The dissenting 9 percent admitted that their products were of high quality. Brunsma (2006) studies also confirm the current finding. She found in Tanzania that 86 percent out of 27 manufacturers contracted to produce prison inmate uniforms were of the opinion that their products were first class 13 percent said that theirs were second class.

It must be noted that literature accessed by the researcher did not find any study that differed from the finding of the current study. I presume that it is only natural that people will not discredit their own handy work. Kadolph (2007) posits that no psychologically healthy individual will turn his or her back to products he or she has committed resources to.

Research Question Three

What are the Quality Related Problems in Garment Manufacturing in the FSUs?

The researcher was also interested in finding out the quality related problems identified by the assessors and so, research question three was posed. Table 12 was their assessment on the sewing defects in the boys' shorts and shirts and girls' shirts and pinafore. The scoring was based on the four point scale of scoring of Very Good (VG), Good (G), Poor (P) and Very Poor (VP). The options of the items were weighted as VG = 4, G = 3, P = 2 and VP = 1.

To interpret the score a factor obtains, score bands were used as shown below. The greater the score the more positive effect it has on the FSUs. Thus:

1.0 – 1.5 represented 'Poor',

1.6 – 2.4 represented 'Fair',

2.5 – 3.4 represented 'Average' and

3.5 – 4.0 represented 'Good'.

Table 12: Sewing Defects

Defects	Boys			Girls		
	Type of Uniform	Mean	SD	Type of Uniform	Mean	SD
Sewing	Shorts	2.25	.27	Pinafore	2.22	.43
	Shirt	1.97	.28	Shirt	2.11	.55
Colour	Shorts	2.72	.40	Pinafore	2.85	.36
	Shirt	3.16	.75	Shirt	3.23	.91
Sizing	Shorts	2.99	.06	Pinafore	2.92	.39
	Shirt	2.04	.54	Shirt	2.13	.44
Garment	Shorts	2.06	.41	Pinafore	2.08	.31
	Shirt	2.33	.42	Shirt	2.18	.35
Averages		**2.53**	**.10**		**2.47**	**.15**

SD=Standard Deviation

Source: Field data, 2014

In answering research question 3, Table 12 reveals that boys' type of uniform had a quality average of 2.53 and girls' type of uniform had 2.47. Their results were interpreted as poor because they both fell within the score band of 1.6 to 2.5. The results however revealed that the boys' uniform was 0.06 better than that of the girls. It is therefore inferred that no differences existed between the boys' and the girls' uniform in terms of quality.

Colour was assessed in terms of its evenness throughout the garment. A result of (M=3.1, SD= .75) for boys' and girls' (M=3.2, SD= .91) were recorded. With the shorts or pinafore the colour performed better, producing a result of (M=2.7, SD= .40) and (M=2.9, SD=.36) respectively. It was evident that in sizing the quality was good on both boys' shorts (M=2.9, SD=.06) and girls' pinafore (M=2.9, SD=.39). Another revelation was that the worse quality was seen in both boys' and girls' shirts in terms of sewing defects with a result of (M=1.97, SD=.27) and (M=1.11, SD=.54) being recorded respectively. The sewing defects identified included (a) open seams, (b) wrong stitching techniques, (d) different coloured threads on garment, (e) miss out of stitches, (f) creasing of the garment, (g) erroneous thread tension and (h) raw edges.

This finding is congruent with the finding of Doshi (2006). A study conducted by Doshi in the Benin State of Nigeria revealed that the quality of seminary uniforms was poor. She, however, espoused her finding with the view that because producers are usually given a limited time to produce for large groups, the quality is usually compromised. Producers are hired to produce thousands of uniforms in a very limited time. In most cases as producers have to deliver before they are paid for their work, they rush through it and hence compromise quality.

Another of such study is the one conducted by Kaiser (1998) which also showed a very poor quality on the production of uniforms for fire fighters produced by the "Next" company in Morocco. She revealed in her study that, the same company produced for both males and females and this in her view is the probable cause of the poor quality work. Since most producers have their

specialty in terms of male and female dresses, allowing one producer to make clothes for both boys and girls could pose problems. In Ghana it is well known that females usually produce for females and as a result, some producers of the FSUs could have similar problems in producing for both sexes.

However, Firmin, Smith and Perry (2006) reported contrasting findings. Their study brought to bear that a very good quality of production of high school uniforms was achieved in South Africa. According to the authors, evidence of good machines and high quality human resource of the three companies were assuming factors of the very good quality of the uniforms. It is common sense that a good machine with a highly skilled labour behind it will produce a good dress. Thus the defects in the quality of the uniforms as observed might be due to the quantity of the uniforms to be sewn, and the type of machines used. It is in the light of this that the current researcher came out with the fourth research question which was based on the machines the manufacturers used and their effects on quality of construction.

Research Question Four

How has the Kind of Machines used by the Garment Manufacturers Affected the Quality of the Construction of the FSUs?

A look at the machinery distribution of the manufacturers used in this research indicates that obsolete machines are mostly in use and these demand a lot of efforts to achieve a near perfect operation. Whereas a double needle industrial machine would perform a top stitching operation with accuracy and precision, the manufacturer using a hand sewing machine would struggle to use much time to try and have an even folding and stitching which is perfect and evenly spaced. Using serger, for instance, allows one to stitch a seam and

neaten it at the same time while the manual machine can only stitch without neatening it.

Manufacturers use modern machines to enhance and make production faster. However, in Ghana the majority of our garment manufacturers fall under micro and small scale enterprise and because of that most of them do not have enough machines to produce as expected. Due to this, the majority of garment producers lack the requisite knowledge and key skills to help their apprentices to come out with construction details which will assist them to become good garment producers in future.

The number of machines used by the six manufacturers was collated and the frequency and percentage for each category computed. Table 13 shows the distribution of kinds of machines used by the manufacturers who produced FSUs.

Table 13: Types of Machine Used

Machine Type	Don't have such machine	I have and used such machine	Have the machine but didn't use it.
	Freq (%)	Freq (%)	Freq (%)
Industrial Lock stitch	3(50)	1(16.7)	2(33.3)
Industrial Embroidery	4(66.7)	1(16.7)	1(16.7)
Industrial Hemmer	4(66.7)	2(33.3)	-
Industrial Neatening	3(50)	2(33.3)	1(16.7)
Industrial Over-lock	3(50)	1(16.7)	2(33.3)
Industrial Button Hole	2(33.3)	3(50)	1(16.7)
Neatening	2(33.3)	2(33.3)	2(33.3)
Straight Stitch (electric)	1(16.7)	4(66.7)	1(16.7)
Swing Needle (electric)	3(50)	1(16.7)	2(33.3)
Treadle /Foot	3(50)	3(50)	-
Hand Machine	-	6(100)	-

Source: Field data, 2014

Although the manufacturers use different types of sewing machines, most of them use hand sewing machines more. From Table 13, all the six (100%) manufacturers use hand sewing machines. This confirms a study done by Sarpong et al (2011) on types of machines used by fashion designers for production which showed that many manufacturers used hand sewing machines which slow down production and quality. Unlike computerised or electronic sewing machines which serve many purposes, manual machines do not. Apart from straight stitches, it is not designed to perform functions such as zigzag and cross stitching. Although it offers the user an opportunity to adjust the length of stitches, the user is limited by the few choices hand sewing machine provides.

Another issue with the use of this machine type is that it does not come with attachments such as zipper foot, zigzag foot and button sewing foot, which if used well, helps to construct quality garments. Irrespective of these outlined limitations associated with the hand sewing machine, manufacturers nonetheless, use them for purposes it was not meant for. As indicated by them, they use the hand sewing machine for example in creating buttonholes and fixing invisible zips. The end result is that, the constructional quality of the garment is compromised.

Research Question Five

What are the Views of Teachers, Parents and Pupils on the Construction Quality and Fit of the FSUs?

Garment manufacturing processes depend on some steps and techniques. The cut pieces of fabrics are joined together to produce quality construction that later results in a durable garment. Fit, on the order hand, is the way a garment conforms to the body of the wearer. A good fit is achieved

when a person feels comfortable, moves freely, looks smart and wrinkles do not form on the garment. Research question five sought to find the views of teachers, parents and pupils on the constructional quality and fit of the FSUs.

The Views of Teachers on the Constructional Quality and Fit of the FSUs

Teachers' views on the constructional quality fit of FSUs and their general comments about their construction can be found in Table 14. The opinions are classified as: U/I - Uncertain/Indeterminate, BE - Below Expectation, NI - Need Improvement, G – Good and VG - Very Good.

Looking at the results from Table 14 with regard to teachers' opinions about the construction of the FSUs, 18(50%) of the teachers indicated that the general appearances of the uniforms were good and 16(44%) also agreed that the thread used perfectly matched the colour of the fabric. In addition, the sizes of the collars used for the shirts for both boys and girls were of correct size. However, the majority of the teachers indicated that darts, pleats and gathers (66.7%), sleeves (66.7%) as well as buttons and buttonholes (61%) needed improvement. For quality construction, the arrangements of fullness need to be done in a way that will give shape and fit when the wearer puts on the dress.

Table 14: Teachers' Opinions about the Construction of the FSUs

Specific Area	U/I	BE	NI	G	VG
	Freq (%)	Freq(%)	Freq(%)	Freq(%)	Freq(%)
General Appearance	- (-)	2(5.6)	14(38.9)	18(50)	2 (5.6)
Thread (match) and Stitching	2(5.6)	4(11.1)	10(27.8)	16(44.4)	4(11.1)
Darts, Pleats and Gathers	- (-)	- (-)	24(66.7)	10(27.8	2(5.6)
Collars	2(5.6)	2(5.6)	6(16.7)	26(72.2)	- (-)
Sleeves	- (-)	- (-)	24(66.7)	12(33.3)	- (-)
Placket and/ or zipper	6 (16.7)	2 (5.6)	14(38.9)	14(38.9)	- (-)
Hems	- (-)	6(16.7)	16(44.4)	14(38.9)	- (-)
Buttons and Buttonholes	- (-)	6(16.7)	22(61.1)	8(22.2)	- (-)
How does the uniform fit on your pupils?	2(5.6)	4(11.1)	16(44.4)	4(11.1)	10(27.8
Level of satisfaction in terms of the quality of construction of school uniform supplied	- (-)	2(5.6)	22(61.1)	12(33.3)	- (-)

Source: Field data, 2014

The teachers' general satisfaction with the FSUs in terms of size and fit was sought and the result can be found in Table 15.

Table 15: Teachers' General Satisfaction with the FSUs in terms of Size and Fit

	Satisfactory		Unsatisfactory	
Specific Area	Freq	(%)	Freq	(%)
Level of satisfaction in terms of the size	8	22.2	28	77.8
Level of satisfaction in terms of the fit	9	25.0	27	75.0

Source: Field data, 2014

Table 15 depicts that 28(77.8%) of the teachers saw the size of the uniforms to be unsatisfactory. They agreed that some of the uniforms were tight and others loose for the pupils. This was as a result of giving out the uniforms based on ages. As such a pupil might be 15 years but small in nature while another may be 10 years but bigger. To solve some of this it might mean that the head teachers would have to ignore the ages and distribute to fit the pupils. According to 27(75%) of the teachers, the fit of the uniforms was also unsatisfactory. They claimed that the uniforms looked too small on some of the pupils' while others were too big for some of the pupils. This made the children not to look smart in doing things in school. This view of the teachers reflects the point made by Robotham (2009) that children are expected to wear comfortable clothing for various activities in order to be physically, socially and mentally active and fit.

According to Zakaria (2011) children in different age groups have widely varying physical, social and psychological requirements for their clothing. These differences must be put into consideration and not just putt all them into three groups (small, medium and large) as used by the

manufacturers. Also, since the contracts were given to different manufacturers, they used different sizing systems to produce the uniforms as indicated by some teachers. In the school set up, when a child wears oversized uniform, friends and school mates tease him or her which makes the child uncomfortable.

Brown and Rice (2001) maintain that sizing standards generally vary from one company to another as a way to build up a distinctive fit that appeal to their target customers. Lack of sizing standards for school uniforms may create confusion and irritation and be a major cause of consumer dissatisfaction. The use of different sizing standards may result in a preference for specific brands and specific retailers. It should, however, not be promoted due to the confusion that may occur. Teachers explained that some of the uniforms were given to pupils in nursery as the sizes were undersized for the pupils' who the FSUs were meant for. This is an indication that the problem of sizing defect was not only for the pupils in the West Akyem Municipality.

As teachers are always with school children, the same teachers normally see those with problems. As such they are able to detect problems with pupils' uniforms. Table 16 shows a cross tabulation of the problems teachers identified.

Table 16: Problems with the Free School Uniforms Identified by Teachers

	I have seen some			
	Yes		No	
Problem Identified	Freq	(%)	Freq	(%)
Armhole tear	28	77.8	8	22.2
Shirt side seam tear	18	50	18	50
Torn belt holes	18	50	18	50
Tight fit around hipline	18	50	18	50
Loose buttons	30	83.3	6	16.7
Torn pockets	20	55.6	16	44.4

Source: Field data, 2014

From Table 16, 28(77.8%) of the teachers saw pupils with armhole tear, 30 (83.3%) indicated that the pupils had loose buttons and 20 (55.6%) were of the view that there were torn pockets. With some knowledge in clothing and textiles, these teachers assessed the school uniforms based on what they have learnt, and observed that the FSUs needed to be restructured in terms of production. Their general impression was that they were not satisfied with the quality of construction and the fit of the FSUs. Most of the problems identified were related to seams and stitches. This is an indication that the seams and stitches of the FSUs were not strong enough for the fabric and the daily stresses it undergoes. According to Ukponmwan and Mukhopadhyay (2000), when long stitches are used, usually they are less durable and considered to be of lower quality because they are subjected to abrasion and likely to snag. The size of a sewing thread can also be crucial for seam quality

as the improper selection of sewing threads size directly affects the seam quality of the uniforms.

The Views of Parents on the Constructional Quality and Fit of the FSUs

The views of parents during the usage of the FSUs were sought in order to ascertain the problems they encountered with the uniforms. In order to get a wholesome view on the constructional quality and fit of the uniforms, parents' opinions about the construction of the FSUs, their general satisfaction with the FSUs, when they started repairing their wards' uniforms and their recommendations were important for the study. Table 17 depicts problems parents identified on their wards' uniforms.

Table 17: Problems with the Free School Uniforms Identified by Parents

	I have seen some			
	Yes		No	
Problem Identified	Freq	(%)	Freq	(%)
Armhole tear	35	53.8	30	46.2
Shirt side seam tear	30	46.2	35	53.8
Torn belt holes	6	9.2	59	90.8
Tight fit around hipline	8	42.3	57	87.5
Loose buttons	31	47.7	34	52.3
Torn pockets	22	33.8	43	66.7
Other problems	15	23.1	50	76.9

Source: Field data, 2014

The study revealed that 53.8 percent had problem with armhole tear, 46.2 percent experienced problems with side seam tear whiles 47.7 percent also had problems with loose buttons. On the other hand, 59 parents representing 90.8 percent had not seen problems with belt holes, 87.7 percent thought the fit was good for their children and 76.9 percent of the parents had other problems. Many of the problems were associated with poor fit and

improper stitching. Problems experienced may contribute to dissatisfaction with school uniforms due to non – conformance with expectation. Parents who did not identify any problem with their wards' uniform told the researcher that their children have an extra one in addition to the FSU received. They indicated that they haven't identified any problem yet. Others explained that the uniforms given to their children were oversized and as a result, they haven't been used. With those who identified problems with the uniforms, Table 18 depicts areas parents made repairs on and their frequencies.

Table 18: Frequencies of repairs made by parents on their Wards' Uniforms

Specific Area	No Repairs Freq (%)	0-6 Months Freq(%)	7-11 Months Freq(%)	1-2 years Freq(%)	Above 2 Years Freq (%)
Blouse (female)	24(36.9)	16(24.6)	17(26.2)	8(12.3)	-
Pinafore (female)	25(38.5)	20(30.8)	17(26.1)	3(4.6)	-
Shirt (male)	20(30.8)	23(35.4)	16(24.6)	4(6.2)	2(3.0)
Shorts (male)	21(32.3)	26(40.0)	14(21.6)	3(4.6)	1(1.5)

Source: Field data, 2014

Table 18 shows that, 24(36.9%) of the parents made no repairs to their wards blouses indicating that the remaining 63.1percent made some repair works within the first two years. Out of that, 16 (24.6%) repaired blouses within the first six months. With respect to the pinafore, 25(38.5%) had no repairs done on it while 20(30.8%) were repaired within the first six months. For boys' shorts, 44 (67.7%) parents made repairs on it, however, 26 (40.0%) made repairs within the first half of the year upon receiving the uniforms. It can be observed from Table 18 that a lot of repairs were done within the first

year of receiving the uniforms. Considering the period of time for repairs as a yardstick for determining the quality of the uniforms, the girls uniforms could be said to be better than that of the boys. This notwithstanding, the usage and care of the uniforms could have also called for the repairs not necessarily because of poor quality. Problems on fabrics can never be eliminated since dresses or uniforms, no matter their quality, will surely become out of use.

Parents were asked to give their general views or opinions on the uniforms of their ward. The result can be found in Table 19.

Table 19: Parents' Opinions about the Construction of the Free School Uniforms

Specific Area	Uncertain /Indeterminate Freq (%)	Below Expectation Freq(%)	Need Improvement Freq(%)	Good Freq(%)	Very Good Freq(%)
General Appearance	2(3.1)	4(6.2)	8(12.3)	51(78.5)	- (-)
Thread (match) and Stitching.	- (-)	4(6.2)	15(23.1)	46(70.8)	- (-)
Darts, Pleats, and Gathers.	11(16.9)	- (-)	17(26.2)	37(56.9)	- (-)
Collars.	- (-)	1 (2.1)	17 (35.4)	30 (62.5)	- (-)
Sleeves.	1 (1.5)	4(6.2)	24(36.9)	35(53.8)	1 (1.5)
Zipper.	1 (1.5)	5(7.7)	16(24.6)	43(66.2)	- (-)
Waistline area treatment	8(12.3)	3(4.6)	20(30.8)	34(52.3)	- (-)
Buttons and Buttonholes.	1(1.5)	6(9.2)	18(27.7)	39(60.0)	1 (1.5)
How does the uniform fit on your ward?	- (-)	9(13.8)	25 (38.5)	31(47.7)	- (-)

Source: Field data, 2014

Parents assessed the constructions on the uniforms through visual inspection. Their assessment was done based on how the uniform fit the child, period the buttons and seams took before getting off. On the parents' opinion, 51 (78.5%) were of this view that the appearance of the uniforms was good. With the stitching, 46 (70.8%) thought that it was also good. On zippers 43 (66.2%) of the parents explained that the way the zippers were fixed was good. On the buttons and buttonholes, 39 (60.0%) agreed that they were well done while six (9.2%) said the fixing of buttons were below expectation.

Table 20: Parents' General Satisfaction with the Free School Uniforms in Terms of Size and Fit

Specific Area	Too Small (Tight)		Too Big(Loose)		Good	
	Freq	(%)	Freq	(%)	Freq	(%)
Level of satisfaction in terms of the size of the FSUs supplied to your ward(s)	19	29.2	16	24.6	30	46.2
Level of satisfaction in terms of the fit of the FSUs supplied to your ward(s)	19	29.2	14	21.5	32	49.3

Source: Field data, 2014

As part of the general opinions of parents on the uniforms, they were specifically asked of the size and fit of the uniforms on their wards. Table 20 shows that parents were greatly satisfied in terms of the size and fit of the FSUs provided by the government of Ghana. The table depicts that 30 (46.3%) respondents expressed satisfaction with the size and 32 (49.3%) with fit of the

FSUs. There was no difference between those who said that the uniform was too small 19(29.2%) and the 19(29.2%) who said it was too big. Parents explained that when uniforms are bigger than a child's size, he or she can take it to the next class and also because they grow fast, the uniform can cater for the growth. The views of respondents confirm the submission of Robotham (2009). According to the author, children grow quickly in different ways and at different rates, therefore sizes of clothing are significant in giving them the right fit which allows room for growth.

Since the supply of the FSUs seemed to have been welcomed by the parents who benefitted from it, their recommendations were sought. Table 21 provides summary of some comments received from parents.

From table 21, 36(55.4%) parents suggested changes in the FSUs procedures, that the users (pupils) should be measured before sewing of the uniforms is done to make the school uniform fit well. Parents with this view further explained that when children are measured, the problem with sizing will be reduced drastically. Other respondents, 14 (21%), however, indicated that the construction quality could be well done if necessary measures are put in place. It was only one parent (1.5%) who suggested that government should stop providing the uniforms.

Table 21: Parents' Recommendations on the Constructional Quality of the Free School Uniforms supplied?

Recommendation	Freq	%
Tailors should take their time to sew	3	4.6
Users should be measured before sewing	36	55.4
Materials should be given to parents to sew	3	4.6
Tailors should be given enough time	2	3.1
Correct thread that matches the fabric colour should be used	3	4.6
The construction quality could be improved	14	21.5
Stop providing the uniforms	1	1.5

Source: Field data, 2014

The Views of Pupils on the Constructional Quality and Fit of the FSUs

The respondents were asked about the maintenance of the school uniforms to establish how soon repairs were made. An indication of the type of repairs is reflected in Table 22.

Table 22: Time that Pupil Started Repairing their Uniforms

Specific Area	No Repairs Freq (%)	0-6 months Freq(%)	7-11 months Freq(%)	1-2years Freq(%)	Above 2 years Freq(%)
Blouse (female)	34(25)	20(15)	24(17.6)	26(19)	32(23.4)
Pinafore (female)	32(23.5)	30(22.1)	15(11)	32(23.5)	27 (19.9)
Shirt (male)	65(38.7)	72(42.9)	18(10.7)	8(4.7)	5 (3.0)
Shorts (male)	76 (45.2)	58(34.5)	25(14.9)	5(3.0)	4 (2.4)

Source: Field data, 2014

Table 22 shows repairs that were made by users and the highest were done on shirts for boys as indicated by respondent 72(42.9%) of the shorts 58(34.5%). On the part of the girls, 27(19.9%) said that they used their pinafore for two years before repairs were made on them while 32(23.4%) of the girls said they used their blouse for two year before repairs. Bringing together the uniforms of genders, 49 percent of girls and 84 percent of the boys had no repairs on their uniforms within the period under review. Such responses were in line with the evaluation of the product quality as literature had indicated that consumers continue to judge the quality of the products based on their performance and service life (Brown & Rice, 2001). Pupils were those who used the FSUs so they were asked to come out with specific problems they had with their uniforms. Table 23 shows the results obtained.

Table 23: Problems with the Free School Uniforms Identified by Pupils

	Yes		No	
Problem Identified	Freq	(%)	Freq	(%)
Armhole tear	149	49	155	51.0
Shirt side seam tear	45	14.8	259	85.2
Torn belt holes	25	29.4	60	70.6
Tight fit around hipline	86	28.3	218	71.7
Waistline seam tear	69	22.7	235	77.3
Loose buttons	180	59.2	124	40.8
Torn pockets	139	45.7	165	54.3
Other problems	114	37.5	190	62.5

Source: Field data, 2014

There were 259 (89.2%) of pupils who indicated that there was nothing wrong with the side seams with 45 (14.8%) experiencing side seam tear. With buttons, 180 (59.2%) pupils experienced loose buttons while 124 (40.8%) did

not. Failure of school uniforms to meet pupils' expectations will inevitably result in consumer dissatisfaction. Pupils' expectations of the uniforms were considered in terms of their size and fit. Their views can be found in Table 24. There were 144 girls who responded to issues concerning the pinafore and 168 boys who responded to issues concerning the shorts. They all had shirts to wear and so a total of 312 respondents addressed issues on the shirts and gave their general impressions of the FSUs. With the pinafore for girls, 30 pupils, representing 22.1 percent said they were good. This indicate that 77.9% of the girls had some problems with their pinafores, either they were loose or tight or long or short.

With respect to the width of the shorts, 50 (29.7%) said it was good, 88 (52%) said it was big (loose). Out of the 168 boys, 43, representing 26 percent explained that the shorts length was good, with 77 (45.8%) of them indicating the lengths were long. The waist of the shorts for the boys was said to be good by 75 (44.6%) with 71 (42.3%) indicating that it was big.

Taking into consideration the shirts, 48 (15.8%) of the respondents explained that they were good, 108 (35.5%) said they were big (loose) while 118 (38.8%) were neutral. With the length of the shirts, 98 (32.2%) indicated that it was long. With the sleeves length, 115 (37%) pupils pointed out that the length was good while 98 (32.2%) said it was long. However, 114 (37.5%) were not decisive. Taking into account the width of the sleeves, 109 (35.9%) of the pupils agreed that it was good but 152 (50%) said it was big (loose). Seven pupils who represented 2.3 percent pupils indicated that it was small.

Table 24:Pupil'sGeneral Satisfaction with the Free School Uniforms in Terms of Size and Fit

What is your satisfaction with:	Good Freq (%)	Big (Loose) Freq (%)	Small (Tight) Freq (%)	High Freq (%)	Low Freq (%)	Short Freq (%)	Long Freq (%)	Indeterminate Freq (%)
--waistline level	46(33.8)	-(-)	-(-)	39(28.7)	51(37.5)	-(-)	-(-)	-(-)
--pinafore (length)	30(22.1)	28(20.6)	16(11.8)	-(-)	-(-)	25(18.3)	37(27.2)	-(-)
--pinafore (width)	61(44.8)	47(34.6)	28(20.6)	-(-)	-(-)	-(-)	-(-)	-(-)
--shorts (width)	50(29.7)	88(52.4)	27(16.1)	-(-)	-(-)	-(-)	-(-)	3(1.8)
--shorts (length)	43(25.6)	-(-)	-(-)	-(-)	-(-)	45(26.8)	77(45.8)	3(1.8)
--short (waist fit)	75(44.6)	71(42.3)	19(11.3)	-(-)	-(-)	-(-)	-(-)	3(1.8)

Table 24 Continued

What is your satisfaction with:	Good Freq (%)	Big (Loose) Freq (%)	Small (Tight) Freq (%)	High Freq (%)	Low Freq (%)	Short Freq (%)	Long Freq (%)	Indeterminate Freq (%)
--shirt	48(15.8)	108(35.5)	30(9.9)	-(-)	-(-)	-(-)	-(-)	118(38.8)
--shirt (length)	44(14.5)	-(-)	-(-)	-(-)	-(-)	48(15.8)	98(32.2)	114(37.5)
--sleeve (length)	115(37.8)	-(-)	-(-)	-(-)	-(-)	35(11.5)	122(40.1)	32(10.5)
--sleeve width	109(35.9%)	152(50%)	7(2.3%)	-(-)	-(-)	-(-)	-(-)	36(11.8)
--the fit of the FSUs supplied to you.	79(26.0)	128(42.1)	90(29.6)	-(-)	-(-)	-(-)	-(-)	7(2.3)

Source: Field Data, 2014

Looking at the general fit of the FSUs, 79 (26%) of the pupils submitted that the uniforms were good while 128 (42.1%) explained that they were big with 90 (29.6%) indicating that they were small. This points to the fact that the majority (225) representing 74 percent of the pupils, were dissatisfied with the FSUs. They gave several reasons which included: uniforms either being loose, tight, long or short.

Pupils who were satisfied with the school uniforms mentioned that the style was good, and were satisfied with the fit. Others mentioned that the school uniforms gave them some joy on what to wear for school. The reasons that pupils provided for their satisfaction coincided with those of their teachers, that is, providing a choice of what to wear to school and as a way of identification with mates. With this analysis, one could agree with Zakaria (2011) that school uniform is an integral element of every child's school-going years. Pupils' in different age groups have widely varying physical, social and psychological requirements for their clothing.

Therefore, designers must sew to cater for various characteristics mentioned above. However, basing the size system on age alone results in poor representation of actual body dimensions and shapes. Several studies have revealed that children of similar age may have varying height, shape and body proportion (King, Choi & Do, 2001). Also, poor sizing system used by manufacturers creates more fit problems as consumers have to try on a garment before buying it or alter it before wearing it to ensure a good fit. Chen (2008) also

attests to the notion that clothes do not often fit children well because the sizing system used to manufacture their school uniforms is not based on a scientific understanding of body shapes and sizes of this group. This confirms the problem of fit with FSUs by pupils, where some were given uniforms that were either oversized or undersized.

Hypothesis Testing

In trying to find out the difference between the quality assessment of the uniforms as observed by the assessors and the manufacturers, the following hypothesis was tested.

H_O1. There is no statistically significant difference between the quality assessment of the assessors and the manufacturers.

The assessor used the observation guide provided for them (see Appendix F) to assess the 18 uniforms that were sewn by the manufacturers. The ratings of the assessors as compared to the manufacturers with their means and standard deviations are provided in Table 25.

Table 25: Manufacturers' and Assessors' Ratings of the Quality of the Garments on Specific Construction Processes

Items	Manufactures		Assessors		t-value	P Value	SIG
	Mean	SD	Mean	SD			
Stitch and Seams	3.67	.65	2.30	.58	2.85	.01	S
Interfacing	3.60	.73	2.36	.62	1.56	.12	NS
Hem	3.79	.80	2.79	.58	2.33	.02	S
Pockets	2.55	.70	2.52	.58	.62	.54	NS
Buttons	3.45	.56	2.37	.53	1.63	.10	NS
Collar	2.45	.60	2.52	.61	1.59	.12	NS
Sleeve	3.70	.73	2.60	.63	-1.47	.14	NS
Structural Trims	3.47	.55	2.44	.51	3.60	.00	S
Averages	**3.49**	**.59**	**2.04**	**.57**	**10.17**	**.00**	**S**

*****significant p=<0.05, SD=Standard Deviation***

Source: Field Data, 2014

From Table 25, the manufacturers rating obtained an average mean of 3.49 and that of the assessors rating obtained an average mean of 2.04. The assessors fell within the score band of 1.6 – 2.4 which is interpreted as fair whereas the manufactures fell within a score of 2.5 – 3.4 which is interpreted as average.

The Null Hypothesis was tested at statistical significance level of 0.05 and the results shows that the rating of manufacturers (M = 3.49, S.D = .59) is better

than that of the assessors (M = 2.04, S.D = .57; t (5) = 10.17, p = .00). Therefore the Null Hypothesis which stated that there is no statistically significant difference between the quality assessment of the assessors and the manufacturers was rejected. This implied that manufacturers of the FSUs in the West Akyem Municipality had put up their best and believed that their work was up to expectation but the assessors saw it not to meet international standards.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of the study was to assess the quality of the construction processes and the fit of government supplied uniforms produced in the West Akyem Municipality in the Eastern region of Ghana. In this chapter, the most important findings are highlighted. Some recommendations are offered to draw attention to quality issues found and their implication for policy direction for FSUs.

Summary

The study assessed the quality of the construction processes and the fit of the FSUs produced in Ghana. Five research questions and one hypothesis guided the study. These covered areas of whether specific constructional processes present meet international quality standards, quality related problems in the garment production, the kinds of machines used and an assessment of quality from the point of view of pupils, parents and teachers.

A descriptive survey was employed for the study. The West Akyem Municipality was the study area from where 419 respondents were sampled through the disproportionate stratified sampling technique. The respondents comprised 6 manufacturers, 65 parents, 36 teachers and 312 pupils. Two quality

control personnel were purposively selected in addition to the sampled FSU beneficiaries. The instruments used for data collection were observation guide and questionnaire. The observation guide was used by the assessors in rating the quality construction of the FSUs. Means and Standard deviations were used in analysing research question 2 while the remaining ones were analysed using percentages and frequencies.

Key Findings

The key findings of the study were that:

1. all the manufacturers had gone through formal education to a certain level and the form of training schemes for garment making skills were formal school instruction and apprenticeship. However, it was evident that few had had additional courses to upgrade themselves to produce quality.
2. the majority of the manufacturers rated the quality of constructional processes of the FSUs they produced as good even though they did not meet assessment standards for quality constructed garments.
3. Assessment by the quality control personnel revealed that the FSUs were of poor quality when compared with international standards. However the boys' uniform was slightly better than that of the girls.
4. The sizing system used by manufacturers which is based on age was not effective as the majority of uniforms produced were either oversized or undersized for those they were meant for.

5. The kind of machines used by the garment manufacturers was chiefly, manually operated and they affected the quality of the construction of the FSUs since they were used for purposes they were not meant for. This compromised the overall quality of the FSUs
6. The views of pupils, parents and teachers on the constructional quality and fit of the FSUs were that the appearances of the uniforms were not good.

Conclusions

Counting on the verification by external experts other than the manufacturers themselves, the world over is viewed to be very effective when dealing with quality issues. This is so because in a money elusive economy like Ghana manufacturers will do anything for money. Based on the findings of this study the following basic conclusions were made with regards to the quality of construction processes and the fit of government supplied uniforms in the West Akyem Municipality.

Beneficiaries of the FSUs have different views about the uniforms quality. Manufactures as well as parents were of the view that the quality of the FSUs was good. However, manufacturing experts who assessed the uniforms affirmed pupils and teachers view that their quality was not good when compared with international standards. The experts revealed that the manufacturers performed poorly on “making an opening/closure”, “fusing interfacing” and “waist band”.

The fit of a garment irrespective of its functional purpose is dependent on an effective sizing system. With respect to the fit of the FSUs, they rarely fitted

well on pupils' who benefit from the initiative as they were either undersized or oversized. The study has shown that age based sizing system employed by the manufacturers is not effective as the needed results of good fit were hardly achieved.

In producing a quality constructed garment, the kind of machines used plays an important role. Using a machine for its intended purpose helps to produce the needed quality desired.

Recommendations

The government policy on supplying free school uniforms to needy pupils has been a laudable idea and so its quality cannot be looked down upon. For this reason, the following recommendations are put forward:

1. The government of Ghana in collaboration with well-established apparel producers should come out with an effective sizing system for manufacturers to use. This will help the manufacturers to produce FSUs that will fit well on pupils.
2. The government of Ghana should support dressmakers and tailor's associations and other garment experts in monetary terms so that workshops can be scheduled for manufacturers to upgrade their knowledge on commercial sewing and sizing in general.
3. The dressmakers and tailors associations through whom contracts are awarded should come out with laid down criteria that must be met by

interested manufacturers. This will to a great extent, ensure that FSUs produced will be of standard quality and good fit.

4. Manufacturers should be encouraged to use sewing machines for their right purpose(s) so that quality of constructional processes is not compromised.

Suggestions for Further Research

1. There is proliferation of brands of sewn uniforms from China on Ghanaian market today. A research could be done to find out the quality construction and the fabric used to ascertain the nature of those uniforms.
2. Details on the performance of the seams and thread brands used for the construction of the FSUs could also be researched into. This will give an overall picture of the performance of seams in FSUs.
3. In addition to the above points, the effect of washing can also be looked at. This is to ascertain whether the detergents and the washing procedure have negative effect on the durability of the FSUs.
4. A comparative study can be conducted on the sizing system used generally for the construction of private and public basic schools.

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APPENDICES

APPENDIX A

UNIVERSITY OF CAPE COAST

DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION

QUESTIONNAIRE FOR PUPILS

Dear pupil,

The researcher is researching on the topic **Assessment of the Quality of Constructional Processes and the Fit of Government Supplied Uniforms.** You have been selected to be a respondent to this questionnaire so that the researcher can use it for her academic work. She is aware that you are young and have school work to do, but your participation can assist in making her work effective and to be successful. It is not a test so feel free to provide genuine responses. Thank you.

…….

MAVIS KORANTENG

A. BACKGROUND INFORMATION

Please tick (√) in the space you find appropriate to you. Thank you very much in anticipation of your co-operation.

1. MALE [ ] FEMALE [ ]
2. AGE: i. 6 and below [ ] iv. 13 – 15 [ ]
   ii. 7 - 9 [ ] v. Above 15 [ ]
   iii. 10 – 12 [ ]
3. In what year was the school uniform given to you? ……..

4. When did you start making repairs on the following parts of the school uniforms?

Uniform	0 -6months	6months – 1 year	1year – 2years	2 years +
Blouse				
Pinafore				
Shirt				
Shorts				

5. What problems have you encountered on the following parts since you started using the uniforms?

Problems experienced	**Tick as many as may apply**
Armhole tear	
Shirt side seam tear	
Tight fit around waistline	
Waistline seam tear	
Loose buttons	
Torn pocket	

Others (state) ……

……..

6. What is your level of satisfaction in terms of the following features of the free school uniform supplied to you:

i.	Waist line level	Good	[ ]	High	[ ]	Low [ ]
ii.	Pinafore (length)	Good	[ ]	long	[ ]	short [ ]
iii.	pinafore (width)	Good	[ ]	Big	[ ]	Small [ ]
iv.	Waist Fit	Good	[ ]	Tight	[ ]	Loose [ ]
v.	Sleeve Width	Good	[ ]	Big	[ ]	Small [ ]
vi.	Sleeve Length	Good	[ ]	Long	[ ]	Short [ ]
vii.	Shirt	Good	[ ]	Big	[ ]	Small [ ]
viii.	Shirt (length)	Good	[ ]	Long	[ ]	Short [ ]
ix.	Shorts	Good	[ ]	Big	[ ]	Small [ ]
x.	Shorts (length)	Good	[ ]	Long	[ ]	Short [ ]
xi.	Shorts (waist fit)	Good	[ ]	Tight	[ ]	Loose [ ]

7. What is your level of satisfaction in terms of the fit of the free school uniform supplied to you?

Very Satisfied [ ] Satisfied [ ] Not Satisfied [ ]

8. What is/are your recommendation on the constructional quality of yourschool uniform?

.....

.....

APPENDIX B
UNIVERSITY OF CAPE COAST

DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION

QUESTIONNAIRE FOR PARENTS

Dear parent,

The researcher is researching on the topic **Assessment of the Quality of Constructional Processes and the Fit of Government Supplied Uniforms.** You have been selected to participate in the study so that the researcher can use it for her academic work. She is aware that you are busy and have many works to do, but your participation can assist in making her work effective and to be successful. Please feel free to provide genuine responses. Thank you.

…….

MAVIS KORANTENG

A. BACKGROUND INFORMATION

Please tick (√) in the space you find appropriate to you. Thank you very much in anticipation of your co-operation.

1. AGE:
   - i. 20 and below [ ]
   - ii. 21 -25 [ ]
   - iii. 26 – 30 [ ]
   - iv. 31 – 35 [ ]
   - v. 36 -40 [ ]
   - vi. 41 and above [ ]

2 What is your highest educational level?

i. Basic School [ ]

ii. Vocational/Technical/Secretarial School [ ]

iii. Secondary/Technical Senior High [ ]

iv. Training College(Teaching/nursing) [ ]

v. Polytechnic [ ]

vi. University (degree) [ ]

vii. Others (specify) …….

3. How many of your children have benefited from the free school uniform policy? ……..

4. When did you start making repairs on the following parts of the school uniforms?

Uniform	0 -6months	6months – 1 year	1year – 2years	2 years +
Blouse				
Pinafore				
Shirt				
Shorts				

5. What problems have you encountered with your ward(s) uniform?

Problems experienced	**Tick as many as may apply**
Armhole tear	
Shirt side seam tear	
Torn belt holes	
Tight fit around hipline	
Loose buttons	
Torn pocket	

Others: state ……

……

6. **Clothing Construction Evaluation for Parents**

	Very good	**Good**	**Needs improvement**	**Below expectation**
General Appearance				
Thread (match) and Stitching				
Darts, Pleats, and Gathers				
Collars				
Sleeves				
Waistline Area Treatments				
Placket and/or Zipper				
Buttons and Buttonholes				
How does the uniform fit on your child?				

7. What is your level of satisfaction in terms of the size of the free school uniform supplied to your ward?

   Very Satisfied [ ] Satisfied [ ] Not Satisfied [ ]

8. What is your level of satisfaction in terms of the fit of the free school uniform supplied to your ward?

   Very Satisfied [ ] Satisfied [ ] Not Satisfied [ ]

9. What is/are your recommendation on the constructional quality of the school uniforms supplied?

.....

.....

.....

APPENDIX C

UNIVERSITY OF CAPE COAST

DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION

QUESTIONNAIRE FOR HEADS AND TEACHERS

Dear teacher,

The researcher is researching on the topic **Assessment of the Quality of Constructional Processes and the Fit of Government Supplied Uniforms.** You have been selected to participate in the study so that the researcher can use it for her academic work. She is aware that you are busy and have school work to do, but your participation can assist in making his work effective and to be successful. It is not a test so feel free to provide genuine responses. Thank you.

……

MAVIS KORANTENG

A. BACKGROUND INFORMATION

Please tick (√) in the space you find appropriate to you. Thank you very much in anticipation of your co-operation.

1. MALE [ ] FEMALE [ ]

2. AGE: i. 20 and below [ ] iv. 31 – 35 [ ]

ii. 21 -25 [ ] v. 36 -40 [ ]

iii.26 – 30 [ ] vi. 41 and above [ ]

3. What is your highest educational level?

i. Basic School [ ]

ii. Technical/Secretarial School [ ]

iii. Secondary/Technical Schools [ ]

iv. Training College [ ]

v. Polytechnic [ ]

vi.University (degree) [ ]

vii. Others (specify) ……..……

4a. Were all pupils in the school supplied with the free school uniforms?

YES [ ] NO [ ]

4b. If no, give reason(s) for answer

.....

5. What is your level of satisfaction in terms of the quality of construction of the free school uniform supplied to your pupils?

i. Very good [ ]

ii. Good [ ]

iii. Needs improvement [ ]

iv. Below expectation [ ]

6. **Clothing Construction Self Evaluation**

	Very good	**Good**	**Needs improvement**	**Below expectation**
General Appearance				
Thread (match) and Stitching				
Darts, Pleats, and Gathers				
Collars				
Sleeves				
Placket and/or Zipper				
Hems				
Buttons and Buttonholes				
How does the uniform fit on your pupils?				

7. What is your level of satisfaction in terms of the size of the free school uniform supplied to your pupils?

   Very Satisfied [ ] Satisfied [ ] Not Satisfied [ ]

8. What is your level of satisfaction in terms of the fit of the free school uniform supplied to your pupils?

   Very Satisfied [ ] Satisfied [ ] Not Satisfied [ ]

9. Which of the following parts have you seen problems on pupils' uniforms since they started using?

Problems experienced	**Tick as many as may apply**
Armhole tear	
Shirt side seam tear	
Torn belt holes	
Tight fit around hipline	
Loose buttons	
Torn pocket	

Others: state ……

10. Do you have any recommendation(s) on the school uniforms supplied?

Yes [ ] No [ ]

11. If yes, what is/are your recommendation(s)?

.....

.....

APPENDIX D

UNIVERSITY OF CAPE COAST

DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION

QUESTIONNAIRE FOR MANUFACTURERS

Dear manufacturer,

The researcher is researching on the topic **Assessment of the Quality of Constructional Processes and the Fit of Government Supplied Uniforms.** You have been selected to participate in the study so that the researcher can use it for her academic work. She is aware that you are busy and have school work to do, but your participation can assist in making his work effective and to be successful. It is not a test so feel free to provide genuine responses. Thank you.

……

MAVIS KORANTENG

1. MANUFACTURER…….. CODE NO ……

8. MALE [ ] FEMALE [ ]

9. AGE: i. 20 and below [ ] iv. 31 – 35 [ ]
ii. 21 -25 [ ] v. 36 -40 [ ]
iii. 26 – 30 [ ] vi. 41 and above [ ]

3. What is your highest educational level?

i. Basic School [ ]

ii. Vocational/Technical/Secretarial School [ ]

iii. Secondary/Technical School [ ]

iv. Training College [ ]

v. Polytechnic [ ]

vi. University (degree) [ ]

vii. Others (specify) …….

4. How did you acquire your knowledge in dressmaking/tailoring?

i. Through formal school instruction [ ]

ii. Through apprenticeship [ ]

iii. Through workshop / short training programme [ ]

iv. Natural gift/self-taught [ ]

v. Other (specify) ……..

5. If you were trained how long did your training take?

i. Less than 1 year [ ]

ii. 1 year [ ]

iii. 2 years [ ]

iv. 3 years [ ]

v. 4 yrs and above [ ]

6. What additional training have you had since your initial training in garment manufacturing?

i. Attending workshops [ ]

ii. Reading dressmaking/tailoring magazines [ ]

iii. Apprenticeship [ ]

iv. None at all [ ]

7. How long have you practised as a dressmaker/tailor?

i. Less than 1 yr	[ ]	iv. 4-11-15yrs	[ ]
ii. 1 - 5 yrs	[ ]	v. 16 - 20 yrs	[ ]
iii. 6-10yrs	[ ]	More than 20 yrs	[ ]

8. Rate the overall quality of the free school uniforms on the following specific construction processes using the ratings below.

Excellent (5) **Very Good** (4) **Good** (3) **Fair** (2) **Poor** (1)

NO.	CONSTRUCTION PROCESSES	5	4	3	2	1
1	Stitch/Seam making					
2	Fixing of Sleeve					
3	Fixing of Collar					
4	Making an Opening/Closure					
5	Making a pocket					
6	Fusing Interfacing					
7	Finishing a hem					
8	Overall finish					

9. Who does the construction of the garments you produce?

i. Mainly by self []

ii. Workers mainly []

iii. Apprentices mainly []

iv. Self with the help of workers []

v. Workers with the help of apprentices [ ]

vi. Self with the help of workers and senior apprentices [ ]

10 What sizing system did you use to produce the free school uniforms?

……

……

……

11. How did you get the measurements for each size used?

……..

……..

…….

12. Indicate the type and number of machines you use at your workshop for production.

TYPE		Tick (√)	Number
Industrial Machine			
1	Embroidery		
2	Hemmer		
3	Neatening		
4	Over-lock		
5	Button hole		
Domestic Electric			
7	Straight Stitching		
8	Swing needle		
9	Neatening		
Manual Machine			
10	Treadle /Foot		
11	Hand machine		

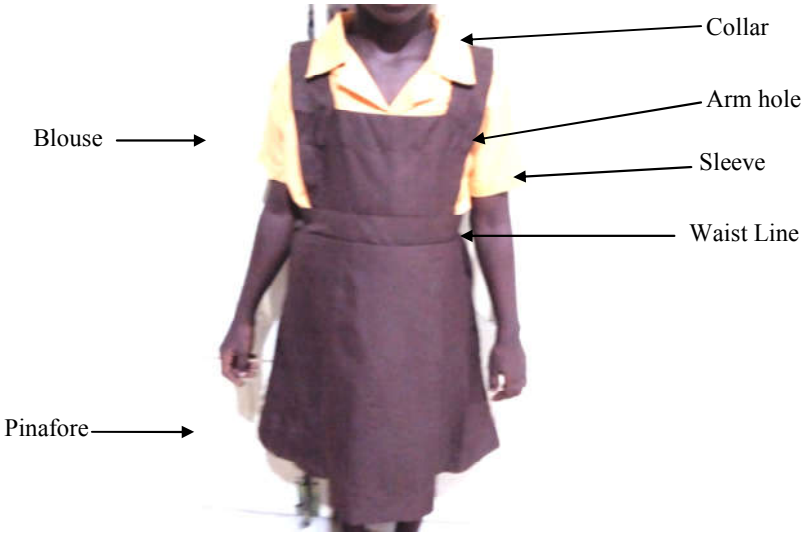
13. What problems under the following do you encounter in your production, which may affect the quality of your products?

HUMAN	MACHINERY

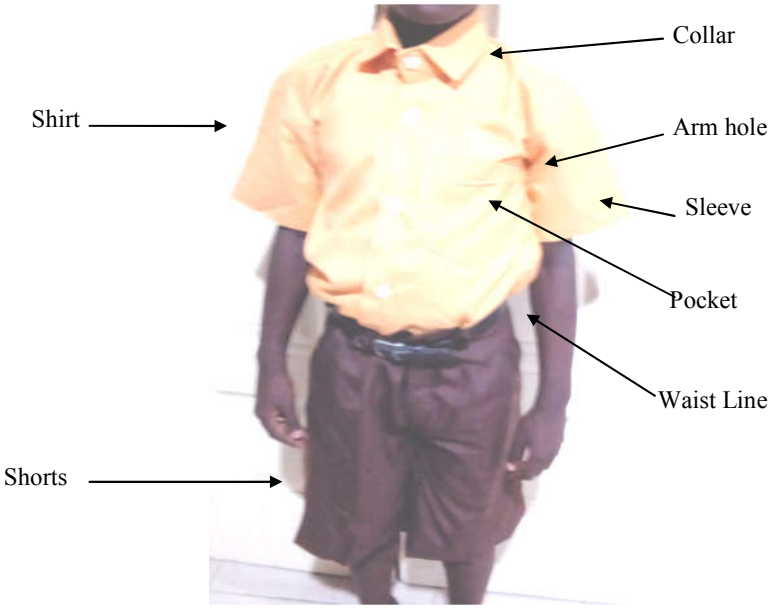
APPENDIX E

FEATURES OF SCHOOL UNIFORMS

GIRL



BOY



APPENDIX F
UNIVERSITY OF CAPE COAST
DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
OBSERVATION GUIDE FOR GARMENT QUALITY ASSESSMENT FOR QUALITY CONTROL PERSONNEL

Dear quality control personnel,

The researcher is researching on the topic **Assessment of the Quality of Constructional Processes and the Fit of Government Supplied Uniforms.** You are required to give ratings to the outlined elements with the following scales:

5 – EXCELLENT **4** – GOOD **3** – AVERAGE **2** - FAIR **1** – POOR

ELEMENT OF STITCHES BEING ASSESSED	**5**	**4**	**3**	**2**	**1**	**REMARKS**
Is stitch length appropriate to fabric and expected stress?						
Does the thread match the garment fabric in colour?						
Are the thread ends properly secured?						
Is stitching appropriate to fabric and is stitching straight?						
Are the seams even?						
Has the correct stitch length been used for the seam?						

ELEMENT OF SEAMSBEING ASSESSED	5	4	3	2	1	REMARKS
Are seams lying flat or there are puckers or pulls?						
Has the seam been finished according to the seam type, fabric and projected care?						
Can the finish chosen prevent fabric from raveling, rolling or stretching?						
Does the finish add bulk to the seam?						
Can the finish remain secure during normal wear and care?						

ELEMENT OF UNDERLYING FABRICS; BEING ASSESSED: INTERFACING	5	4	3	2	1	REMARKS
Does the interfacing complement and reinforce the fabric without overpowering it?						
Have heavy interfacings been caught in seams?						
Does the interfacing show through to the right side of garment?						
Are interfacings cut the same grain as area to be interfaced?						
Are interfacings used in any area requiring shape, body, support and reinforcement?						

ELEMENT OF PATCH POCKETS BEING ASSESSED	5	4	3	2	1	REMARKS
Are they conveniently placed for use?						
Is opening large enough for hand?						
Is the pocket depth correct for the location?						
Were pockets cut on grain?						
Designs matched. If cut on bias, has it been stabilized with a lining?						
Have corners been trued with no raw edges or facing fabric visible?						
If curved, are edges smooth and sides symmetrical?						
If paired are heights, size, and shape same?						
If top stitched, is it equal distance from edge at all points?						
Has appropriate stitch length been used and have all loose thread ends been removed?						
Are pocket ends reinforced properly?						
Are facings or hems deep enough to stay in position?						
Do pockets and flaps lie flat without pulling, twisting, sagging or rolling?						

ELEMENT OF POCKETS BEING ASSESSED – In - Seam Pockets	5	4	3	2	1	REMARKS
Are pockets positioned conveniently for use?						
Are openings large enough for hand?						
Is the pocket depth correct for the location?						
Are openings, flaps, and welts interfaced?						
Are pockets cut on grain with fabric patterns matching. If cut on bias were they properly stabilized and not stretched during application?						
Are enclosed seams trimmed to 1/4 inches or less?						
Are there holes, pleats or puckers at the ends?						
If flaps are present are they the same length as the welts and do they lie flat?						
Has fashion fabric been applied beneath the pocket opening to prevent pocket lining from showing?						
Is the lining fabric appropriate for the location and weight of fashion fabric as well as care requirements?						
Are paired pockets identical in length, width and distance from garment edge?						
Do pockets lie flat without pulling, twisting or rolling?						

ELEMENT OF NECKLINE TREATMENTS/ COLLARS BEING ASSESSED	5	4	3	2	1	REMARKS
Is collar interfaced where necessary with appropriate interfacing?						
Are the outer edges smooth and even with no seam wells or holes?						
Have enclosed seams been trimmed to reduce bulk?						
Is size and shape consistent from one end to the other? (except for design variation)						
Does the collar fit the neck edge without stretching or gathering?						
Does the collar assume proper position on garment as intended? (flat collar lies flat instead of rolling)						
Is the placement symmetrical on garment?						
Are raw edges carefully concealed?						

ELEMENT OF SLEEVE TREATMENTS BEING ASSESSED: SET IN SLEEVES	5	4	3	2	1	REMARKS
Have shoulder seams been sewn finished and pressed before sleeves were set in?						
Has the sleeve been matched to the bodice armscye at the cap and shoulder line, underarm seam of bodice and sleeve and at the notches at each side of sleeve?						
Are eases evenly distributed with no puckers, pleats or dimples?						
Are the sleeves adequate in size for the label size?						
Are sleeves for left and right armscye correctly fitted?						

ELEMENT OF BUTTONSBEING ASSESSED	5	4	3	2	1	REMARKS
Are buttons of good material and well made?						
Do the buttons coordinate with the garment design and fabric?						
Are the buttons spaced correctly for their size and for the location of their use?						
Are stress points considered in the placements?						
Are buttons reinforced according to fabric and position?						
Are buttons well secured?						
Are there threads hanging from button?						

ELEMENT OF BUTTONHOLESBEING ASSESSED	5	4	3	2	1	REMARKS
Are buttonholes the correct type for the garment design and fabric?						
Are the buttons and buttonholes correctly aligned?						
Are buttonholes securely stitched with no fraying or loose threads?						
Do the buttonholes fit the buttons without gaping or coming out easily?						

ELEMENT OF HEM TREATMENTSBEING ASSESSED: HEM AND HEM FINISHES	5	4	3	2	1	REMARKS
Is the hem of even depth?						
Is the hem flat and smooth with no puckers, ripples, pulling or pleats?						
Is the hem type appropriate for the garment fabric and style.						
If topstitched, is hem evenly stitched with appropriate thread and stitch length?						
If hem is at garment opening is it covered by the facing						

ELEMENT OF STRUCTURAL TRIM BEING ASSESSED	5	4	3	2	1	REMARKS
Are tucks and pleats composed of straight even folds?						
Is adequate fabric depth provided to ensure the proper look?						

ASSESSOR ……..…….

APPENDIX G

INTRODUCTORY LETTER I

UNIVERSITY OF CAPE COAST
CAPE COAST, GHANA
FACULTY OF EDUCATION
Department of Vocational and Technical Education

Telephone: 024-3443[illegible] & 3348[illegible] Ext. 292
Direct: 03321 33803
TELEX 2552, UCC, GH
Telegrams & Cables: University, Cape Coast

University Post Office
Cape Coast, Ghana

Date: 10-03-2014

THE DIRECTOR
G.E.S
ASAMANKESE

Dear Sir,

LETTER OF INTRODUCTION

The bearer of this letter ~~Mr~~/Miss MAVIS KORANTENG is a student of this Department. He/She requires information for a course he/she is taking this Semester. The information requested is required strictly for an academic exercise.

We would be grateful if you could give him/her the assistance needed.

Thank you.

Yours faithfully,

Kankam Boadu (PhD)
HEAD

INTRODUCTORY LETTER II

UNIVERSITY OF CAPE COAST
CAPE COAST, GHANA
FACULTY OF EDUCATION
Department of Vocational and Technical Education

Telephone: 042-35441-9 & 33480 9 Ext. 262
Direct: 03321-33803
VHF/FAX: 2552, UCC, G.I.
Telegrams & Cables: University, Cape Coast

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Dear Sir,

LETTER OF INTRODUCTION

The bearer of this letter Mr/Miss. MAVIS KORANTENG is a student of this Department. He/She requires information for a course he/she is taking this Semester. The information requested is required strictly for an academic exercise.

We would be grateful if you could give him/her the assistance needed.

Thank you.

Yours faithfully,

Kankam Boadu (PhD)
HEAD

APPENDIX H
SAMPLE SIZE DETERMINATION CHART

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970