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Quality of Construction Processes of Government Supplied Uniforms in the West Akyem Municipality of Ghana

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Abstract:
The purpose of this study was to assess the quality of construction processes of government supplied uniforms in the west akyem municipality of Ghana. The study was a descriptive survey carried out at the west akyem municipal assembly. Purposive and simple random sampling techniques were utilized to select respondents. The manufacturers were those recruited to sew the uniforms in the municipality. Two (2) quality control personnel were contacted to assess the constructional details of the free school uniforms sewed. Data was quantitatively collected using observation guide and questionnaire. Data collected was tabulated, interpreted and discussed using descriptive statistics. This involved the use of frequencies, percentages, means and standard deviations. Though the manufacturers rated themselves as excellent, the assessors rated the uniforms unsatisfactory. Most of the constructional processes in the fsus did not meet international quality standards. Based on the findings, the study recommends that before a project of such kind starts, a brief course should be organised by stakeholders for manufacturers involved.

Keywords: Assessment, durability, fit, quality of construction

1. Introduction

In the garment industry, quality control is practiced right from the initial stage of sourcing raw materials, to the stage of final finished garment to assure consumers of product quality (Danquah, 2010). Quality is sometimes defined in terms of a particular quality certification, and international quality programmes like International Organisation for Standardization (ISO) 9000 series lay down the broad quality parameters based on which companies maintain export quality in the garment and apparel industry. However, quality attributes vary from individual to individual. Ampong (2004) citing Mehta and Bhardwaj indicates that quality means different things to diffident people. Also, Stamper, Sharp and Donnel (2005) assert that there is no mechanical device that can measure in very precise terms the quality of garments. However, response of what quality is depends 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. In this respect, Chowdhary and Poynor (2006) indicated that perceived apparel quality is a function of intrinsic and extrinsic cues. Intrinsic cues are an inherent part of the apparel product, and represent 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.

It has been noted that the achievement of quality construction in garments, and for that matter apparel products, depends on several factors. Some of which includes constructional process, equipment for manufacturing, Expertise of manufacturers and the Views of consumers or customers. To produce quality sewn uniforms, the constructional processes are key. 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 good, the seams, stitches and other constructions will show defects.

Well-made clothing not only looks better when worn, but also lasts longer, thus giving the buyer much more value for money. The question is how can one evaluate the quality of a garment? Quality is determined by every detail in a garment, from its fabric to the final finishing details. In Ghana, school uniforms are used at all levels except in the tertiary institutions. This study therefore sought to evaluate the quality of construction processes of the Free School Uniforms (FSUs) supplied by the government of Ghana.

1.1. Research Questions
- To what extent do specific constructional processes present in the FSUs meet international quality standards?
- What are the quality related problems in garment manufacturing in the FSUs?

2. Methodology

2.1. Research Design
The descriptive survey design was used and data was collected at different points in time. 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 (Fouche & Delport, 2002).

2.2. Population
The target population for this study consisted of the six manufacturers (tailors and seamstresses) in the Eastern Region of Ghana who sewed the FSUs, parents and pupils who benefited from the FSU and teachers.

2.3. Sampling Procedure
All the six manufacturers were purposively selected for the study. The sample sizes for both the pupils and the parents was chosen based on the table of Krejcie and Morgan(1970) which provides range of figures that represent population and their related appropriate sample sizes. By replacement method of the simple random probability sampling procedure, a total sample size of 65 parents and 312 pupils were selected.

2.4. Instruments
The main instruments used to collect the data were Observation Guide and Questionnaire. The observation guide, for the Assessors, was replicated from Ampong (2004) based on a scale developed by Stamper, Sharp and Donnel (2005). With the constructional qualities assessment, two (2) Quality control personnel assisted in assessing the constructional details of the free school uniforms supplied.

2.5. Data Collection
The collection of the data was based on direct contact with respondents. The researchers established rapport with the respondents and explained items that needed to be explained. We provided money for the leader of the manufacturers to buy the material to be distributed to the other manufacturers for each of them to sew a set (small, medium and large) for the sexes the same way as they sewed it for the government free school uniform project. The materials for the uniforms were given to the seamstresses and the tailors to work on according to how they were instructed by the authorities.

2.6. Data Analysis
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, mean and standard deviation. 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 means and standard deviation values and analyzed quantitatively. Others were interpreted using percentages and frequency counts.

3. Results and Discussion
The results and discussion are presented based on the research questions. It covers what assessors and manufacturers rated the sewn uniforms, rating specific constructions to meet international quality standards by both manufacturers and assessors and finally.

3.1 Research Question One: To What Extent Do Specific Construction Processes Present in the Fsus Meet International Quality Standards?
The manufacturers were also made to do a self rating of their own products. The means and standard deviations of their ratings are found in table 1. The scores were interpreted using the score bands as follows:
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'.

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

Table 1: Manufacturers' Rating of the Quality of the Garments on
Specific Construction Processes
Source: Field data, 2014

From table 1, 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 respondents (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, 91% of the manufacturers answered in the affirmative. The dissenting 9% admitted that their products were of high quality. Brunsma (2006) also found in Tanzania that 86% out of 27 manufacturers contracted to produce prison inmate uniforms were of the opinion that their products were first class 13% said that theirs were second class.

It must be noted that literature accessed by the researchers 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.

After the manufacturers had finished sewing the uniforms and assessed themselves, we took the uniforms to the assessors at CAD Textile Production for further assessment. Table 2 provides the results from the 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

Table 2: Assessment of Uniforms by Assessors
Source: Field data, 2014

From Table 2, the boys' uniform obtained an average mean of 2.17 and that of the girls' uniform also obtained an average mean 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 construction processes as fair which is below average.

An in-depth look at the table 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 is a close fit of that of Zakaria (2011) which showed that constructional processes for the Bolgatanga Senior High School students' uniforms was very poor. However, Sarpong, Howard, and Osei-Ntiri(2011) on their part found the constructional processes in their study on the uniform for the St. Peters seminary students as good.

- Research Question Two: What are the quality related problems in garment manufacturing in the FSUs?

The researchers were also interested in finding out the quality related problems identified by the assessors and so the question what are the quality related problems in garment manufacturing in the FSU's? Table 3 provides a summary of the sewing defects in the boys' shorts and shirts and girls' shirts and pinafore identified by the assessors.

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

Table 3: Sewing Defects
Source: Field data, 2014

In answering Research Question 2, Table 3 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 there was no statistical significant differences between the boys' and the girls' uniform in terms of quality.

Colour was assessed in terms of evenness of colour all through the garment. A result of (M=3.1, SD= .75) for boys' and girls' (M=3.2, SD= .91) shirts shows that the colour was not even in the shirts. 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. Again, 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 the sewing defects (M=1.97, SD=.27) and (M=1.11, SD=.54) respectively. The sewing defects included open seams, wrong stitching techniques, usage of different colour threads on the garment, miss out of stitches in-between, creasing of the garment, erroneous thread tension and raw edges were some of the sewing defects that were identified.

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 a large group, the quality is usually compromised. We join compliments to Doshi, a point in case is a nationwide production with regard to the FSUs. 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 works they rush through them and hence compromise the 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. Sherevealed in her study that, the same company produced for both males and females and this in his 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 as such some producers of the FSUs could have similar problems, though the male manufacturers were believed to have sewn the boys' uniforms with the female manufacturers sewing that of the girls.

However, Firmin, Smith and Perry (2006) found 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, the time frame for producing them and the type of machines used.

4. Conclusion

Based on the findings of this study it could be concluded that the manufactures as well as parents were of the view that the quality of the FSUs was good. There was however a contrast when manufacturing experts assessed the uniforms where this confirms the view of pupils and teachers that most of the uniforms were not standard.

The experts' observations were extrapolated and were found that on some specific constructional process the findings did not match or confirm the responses the manufacturers had given. The experts revealed that the manufacturers performed poorly on "making an opening/closure", "fusing interfacing" and "waist band". They added that aside these specific constructional process, the manufacturers had done excellently on the other specific constructional

process under consideration. The researchers in this light therefore conclude that most of the constructional processes in the FSUs did not meet international quality standards.

5. 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:

Workshops should be scheduled by associations and garment expert for manufacturers to update their knowledge on commercial sewing. Before a project of such kind starts, a brief course should be organised by stakeholders for manufacturers involved to have details of what is expected of them. It is suggested that further studies are conducted on Details on the performance of the seams and thread brands used for the construction of the FSUs and effect of washing to ascertain whether the detergents and washing procedure have negative effect on the durability of the FSUs.

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