

QUALITY IMPROVEMENT OF INFORMAL MECHANICAL WORKSHOPS AT WA MAGAZINE IN THE UPPER WEST REGION OF GHANA

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ABSTRACT

The aim of the study was to examine the quality improvement in informal mechanical workshops at Wa Magazine in the Upper West Region of Ghana. Survey research design was employed in the study, with the questionnaire as the research instrument. A sample of 496 respondents (396 mechanics and 100 clients) was purposively selected. The Statistical Package for Social Sciences (SPSS) (Version 16.0) software was used to analyze the data. The results were presented in frequency tables and percentages. The study revealed that artisans and their clients at Wa Magazine believe that on the average the artisans have lived up to expectation by meeting delivery deadlines. Both artisans and clients at Wa Magazine are also aware of total quality management and are therefore working towards achieving it. However, artisans/mechanics at Wa Magazine do not use any quality control system and there has never been any attempt in the past by government, management or any stakeholder to introduce and implement quality improvement at Wa Magazine. Based on the findings, it is recommended that effective operations system founded on sound policies and operating procedures should be established for these artisans/mechanics with corresponding on the job to improve performance. Furthermore, there is the need to also build on the quality consciousness of the artisans in these informal workshops by establishing and reinforcing a strict adherence to quality policies and procedures in whatever they do. There is also the need to identify and eliminate the operating bottlenecks indicated by both the artisans and their clients. The outcome of this research will provide recommendations for improvements to be implemented by the relevant stakeholders and government in particular.

KEYWORDS: Services, Social Responsibility, Survey Methods & Ethics

INTRODUCTION

The economy of Ghana has different and rich resources. This includes the manufacturing, exportation of goods, and many rich resources such as hydrocarbon and industrial minerals. The Ghanaian economy in 2012 turned around services; this accounted for over fifty per cent of GDP and employed close to thirty per cent of the workforce. 53.6% of Ghana's workforce was employed in agriculture in 2013.

As a developing country, the role of mechanical workshops in the automobile industry cannot be over-emphasized. Most mechanics can be found in the informal sector with quite a few of them found or employed in the formal or the government sector to manage the fleet of vehicles owned by those organizations and their workshops. The sector is also confronted with many operational challenges which the research intends to highlight.

A preliminary survey was undertaken in mid of 2012 to appraise the researches of the actual situation for workshops in the Wa Municipality called Wa Magazine where a variety of technical services and products such as repairs of vehicles are provided. Various assignments such as automobile spraying and painting, welding services and general work are performed by repairers in Wa Magazine.

Our findings brought to the fore certain peculiar problems such as non-meeting of deadlines, not executing of contracts to specification and a high degree of delivery failures. Although the workshops are bereft with these challenges, the industry seems to play an important role in the socio-economic development of the lives of the people in the region, a lot still remains to be done in providing an improved set-up in quality appreciation and adherence to well-established standards to enable them to cooperate favourably in the new world order.

It has therefore, become very important for the industry players to give priority attention to customer needs and expectations if these workshops are to remain profitable and sustainable in the long run. The study is therefore aimed to further explore the issues with the aim of making recommendations for an improved service and product delivery in the Wa Magazine of the Upper West Region of Ghana.

OBJECTIVES OF THE STUDY

The main objective of the study was to study and evaluate the quality improvement in informal mechanical workshops at Wa Magazine in the Upper West Region.

METHODS

Wa Magazine was chosen for the case study analysis. For a social survey, the descriptive and evaluative research designs are very crucial; hence this study used both methods. We used the descriptive research design to enable us to obtain a general overview of TQM at Wa Magazine. To assess the perceptions of the informal workshops and their clients in Wa Magazine, we also made use of the evaluative research design. To ensure that we get a very comprehensive data, our data collection technique used both the open and closed-ended questionnaire.

The Wa Magazine is located in the industrial area of Wa, in the Upper West Region of Ghana. The land size of Wa Magazine is about 35.6 hectares. It was founded in October 2010. About 600 workers are estimated to be there. The workers comprise of manufacturing units, automobile repairs, maintenance centers, metal forming units, etc. This information is present in Table 1. The study engaged 396 male workers.

Table 1: Product Groupings and Services at Wa Magazine.

Major Sectors	Services
Vehicle repairs and maintenance	Engine overhauling, auto electrical work, vehicle interior upholstery, auto body Straightening and spraying
Sale of engineering materials and accessories	Sheet meals, bars, iron rods hand tools, fasteners etc
Metalworking	Metal fabrication and plant construction
Sale of automobile spare parts	Secondhand engines and parts, car decorating materials

The study used the purposive and quota sampling techniques. Purposive sampling technique allows the selection of sample based on the judgment of the researchers and that those selected are the key individuals who can provide the information required for the study. Quota sampling was used to identify and select the relevant categories of the population from the various service providers of Wa Magazine. The study population consisted of mechanics at Wa Magazine and

their clients. In all 396 male workers were involved. To seek the views of clients on the quality performance at Wa Magazine, we also engaged 100 clients. This information is presented in Table 2.

Table 2: Sampling Distribution of Respondents

Categories of Respondents	Males	Females	Total
Artisans and mechanic	396	-	396
Customers /Clients	92	8	100

Two questionnaires were prepared. We prepared one for the artisans and mechanics at the Magazine and prepared another for the clients. The questionnaires had five sections. Data collection for our study started on 11th December 2012. We completed the data collection after one week. We moved from person to person to reach the respondents. Prior to the distribution, discussions were held with the respondents to explain the need for the research. The questionnaires were left with them, to be collected at a later date by the researchers.

The responses to the questionnaires were then analyzed. We used the Statistical Package for Social Science (SPSS) software for the analysis.

RESULTS AND DISCUSSIONS

The analysis of the data collected from the respondents is presented in this section.

Artisans/Mechanics Understanding in Wa Magazine

Statistical Characteristics of Respondents: The respondents' gender, age, and education were analyzed.

Education status, Gender and Age Range: The respondents of the study were made up of only males. This is shown in Table 3. Majority of the respondents were between the age range of 18 and 35. This is an indication that the youth form majority of the artisans and mechanics in Wa Magazine as at the time of our study.

Table 3: Respondents Gender, Age Range and Educational Status

Respondents Demographic Characteristics	Frequency (n=396)	Percentage (%)
Gender		
<i>Male</i>	396	100
<i>Female</i>	-	-
Age Range		
<i><18years</i>	-	-
<i>18-35years</i>	283	71.5
<i>36-53years</i>	113	28.5
<i>>53 years</i>	-	-
Educational Status		
<i>Primary</i>	113	28.5
<i>Middle /JSS</i>	170	43.0
<i>Vocational/SHS</i>	57	14.4
<i>None</i>	56	14.1

Key Service Delivery Provisions and Clients

From Table 4 it can be seen that 23% of the respondents were in the Auto Mechanic services. 18% were into Auto Electricals and 9% were engaged in interior upholstery.

Table 4: Technical Specialization of Respondents

Technical Specialization	Frequency(n=396)	Percentage (%)
Auto Mechanic	92	23.0
Auto Electricals	70	18.0
Interior Upholstery	34	9.0
Vulcanizes	60	15.0
Auto body straightening and spraying	75	19.0
Engine overhauling	65	16.0

When asked if the length of time of working in the Magazine, a majority of the respondents constituting 33% range between 1 to 3 years. This is followed by those who have been working in the magazine for periods greater than 5 years also accounting for 28 % of the total number of respondents. Cumulatively, 86% of the respondents have been working as artisans/mechanics for more than a year at Wa Magazine as shown in Table 5. This implies that the respondents are knowledgeable about the area and their work processes and hence the information they provided for this study could be said to be quite authentic.

Table 5: Length of Service as Artisan or Mechanic

Years	Frequency (n=396)	Percentage (%)
Less than 1 year	56	14
1 to 3 years	130	33
4 to 5 years	110	28
More than 5 years	100	25

The target customers for artisans and mechanics of the respondents are shown in Table 6.

Table 6: Target Customers

Customers	Frequency (n=396)	Percentage (%)
Private car owner	170	43.0
Commercial car driver	110	28.0
Government institutions	59	15.0
Non-governmental institution	57	14.0

Opportunities and Challenges in the Informal Mechanical Workshops

Over 90% of the respondents indicated that they are able to meet delivery deadlines. Further details are in Table 7.

Table 7: Artisans/Mechanics Ability and Inability to Meet Deadlines of Clients

Response	Frequency	Percentage
Yes	358	90.4
No	38	9.6
Total	396	100.0

From Table 8 it is observed that over 60% of the respondents see customer satisfaction with the services provided by the mechanics to be on the high.

Table 8: Respondents' Perception of Level of Satisfaction of Clients

Level of Satisfaction	Frequency	Percentage
High	240	60.6
Average	106	26.8
Low	50	12.6
Total	100	100.0

Our findings further revealed that the respondents see their clients as loyal. Despite this fact, the respondents also indicated some challenges affecting the effective performance of their jobs. This is presented in Table 9.

Table 9: Challenges of Artisans/Mechanics in Wa Magazine

Response	Frequency (n=396)	Percentage (%)
Lack of refresher training	112	28.3
High cost of tools	227	57.3
Customers delay in payment of bills	57	14.4

Total Quality Management Factors Prevailing in the Informal Mechanical Workshop

We asked the respondents to indicate the quality control systems prevailing in the workshop. None of them mentioned that such systems prevail. This warrants that the artisans have to be educated formally to seek continuous development in the work they do.

Factors of TQM that will improve the Informal Mechanical Workshop and the Wellbeing of the Workers

About 85% of the respondents answered that the government or any stakeholder has not given them any support to introduce and implement Quality Improvement at Wa Magazine. Around 14% had no clue about any implementation of quality improvement programmes. This is shown in Table 10.

Table 10: Effort to Introduce and Implement Quality Improvement at Wa Magazine

Response	Frequency (n=396)	Percentage (%)
Yes	0	0
No	339	85.6
Do Not Know	57	14.4

Perceptions of Clients/Customers Accessing the Services of Wa Magazine

Customers Gender and Occupational Statuses Table 11 below shows the various kinds of clients that receive their services at Wa Magazine. Most of the clients interviewed are commercial drivers.

Table 11: Gender and Occupational Statuses

	Frequency(n=100)	Percentage
Gender		
<i>Male</i>	92	92.0
<i>Female</i>	8	8.0
Occupation		
<i>Government institutional drivers</i>	5	5.0
<i>NGO</i>	5	5.0
<i>Commercial drivers</i>	65	65.0
<i>Private car owners</i>	25	25.0
<i>Government institutional drivers</i>	5	5.0

CONCLUSIONS

The study examined the quality improvement of informal mechanical workshops in Wa Magazine in the Upper West Region of Ghana. The study employed a survey research design using the semi-structured questionnaire as the main instrument of data collection. The study revealed that the artisans and mechanics at Wa Magazine are knowledgeable about their operations and hence the information they provided for this research could be said to be quite authentic. It can be said that, artisans at Wa Magazine have lived up to their mandate of promoting enormous growth and sustaining the road transport industry in Ghana. Attempts in the past to introduce quality improvement training initiatives at Wa Magazine have not been made. Adoption and application of quality improvement initiatives do not exist at Wa Magazine.

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