

**CERTIFICATION**

The undersigned certifies that, he has read and hereby recommends for acceptance by the Open University of Tanzania this Dissertation titled **Assessment of Inventory Management in Parastatal Organisations in Tanzania: A case of VETA Kigoma** in partial fulfillment of the requirements for the Degree of Master of Business Administration (MBA).

.....

Dr. Odass Bilame

(Supervisor)

Date:.....

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**DECLARATION**

I, **John Medard**, declare that this Dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature:.....

Date:.....

## **DEDICATION**

I dedicate this dissertation to my beloved grandmother the late Elizabeth Abel Ngofilo may God let her rest in peace. I also dedicate it to my mother Cresensia John Mayeka and other family members for their encouragement.

## **ACKNOWLEDGEMENT**

It is quite true without any objection that this work could not have been completed without moral, tolerance and material assistance from a substantial number of people, either directly or indirectly participated in making sure that the work is successfully completed. For that fact it is impossible to thank all those whose assistance enabled me to produce this work, although the below mentioned some can represent the rest.

I wish to express my sincere appreciation to my research supervisor Dr. Odass Bilame the Senior Lecturer and Head of Department – Economics at St. Augustine University of Tanzania (SAUT) for his outstanding guidance, encouragement and commitment.

My appreciation should also go to the Open University of Tanzania (OUT) specifically to the Lecturers Dr. Ngatuni P and Dr. Katunzi T.M who real paved me a way on how to go about doing a research work through their class presentation on Research Methodology.

Moreover I would like to express my particular deep gratitude to the Management of VETA Kigoma(Kigoma RVTSC) under the Management of Mr. Ng'wandu Raphael the Principal for allowing me to pursue MBA – Executive programme at the Open University of Tanzania also special thanks should go to the members of Kigoma RVTSC Management Mr. Alban S. Kisomba – Human Resource and Administrative Manager, Mr. Hamenya K.Ntabaye – Registrar and Mr. Rodrick J. Mota – Bursar for their tireless support and encouragement despite the difficulties I faced on the study.

## **ABSTRACT**

The primary purpose of this study was to Assess the Inventory Management in Parastatal Organisations in Tanzania, VETA Kigoma being taken as a case of focus. The study was guided by three research objectives namely, to examine the adherence to professionalism with respect to materials management, to examine the level of technology adopted to ensure inventory control and to examine the method used in evaluating inventory.

120 respondents were involved in the study, data were analysed using Statistical Package for Social Sciences (SPSS 16.0 for windows). Purposive sampling was used together information from the targeted respondents as the study wanted to obtain relevant data from the field in order to have viable findings.

The study revealed that the centre had qualified personnel in materials management, the study realized that the centre had been using Materials Requirements Planning (MRP) technique to ensure inventory control, inventories were controlled electronically using inventory system called Microsoft dynamics – Navision. The study revealed that the centre used First In First Out (FIFO) system in evaluating or pricing stocks to ensure efficiency in stores operations.

The study concluded that there was a notable improvement in materials management in parastatals unlike previous years where stores functions were done by unqualified people which resulted to unnecessary losses to the government.

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## LIST OF ABBREVIATIONS AND ACRONYMS

A.B.C	Always Better Control
B.O.T	Bank of Tanzania
EOQ	Economic Order Quantity
FIFO	First in First Out
KASHWASA	Kahama Shinyanga Water Supply Authority
KGM	Kigoma
LIFO	Last In First Out
L.T	Lead Time
MRP	Materials Requirement Planning
MSD	Medical Stores Department
MTUWASA	Mtwara Urban Water Supply Authority
OUT	Open University of Tanzania
PA	Public Authority
RVTS	Regional Vocational Training Services Centre
SAUT	St Augustine University of Tanzania
SPSS	Statistical Package for Social Sciences
TPDC	Tanzania Petroleum Development Corporation
VETA	Vocational Education and Training Authority
W.C.M	Working Capital Management
W. I.P	Work in Progress



## **CHAPTER ONE**

### **1.0 INTRODUCTION**

#### **1.1 Background Information to the Problem**

Inventories in many organizations occupy a large part of costs which possibly affects the profitability of that organization. The route cause or source is mismanagement of inventories hence it may lead to deterioration, loss, theft, obsolescence, absolute and surplus or deficiency. This situation has been noticed to many parastatal organisations in Tanzania where they failed to meet customer requirements resulting to poor customer service being rendered, which actually caused by poor demand forecasting of raw materials and poor financial plan on inventories to be procured and then stored (Wambura, 2009).

Most firms keep raw materials and finished products on hand to meet demand. These are inventories and they allow the firm to have some stock in the ordering time for materials and services scheduled. Inventory kept at low levels so as to minimize storage costs and the need to keep inventory higher to meet customers demand.

Organizations including public and private face great challenges in managing inventories, poor inventory management may result in under stocking, overstocking as well as high inventory total costs. In order for the organizations to manage inventory effectively need to employ control methods such as the EOQ model to obtain

reasonable ordered quantities for its raw materials, he added that due to poor inventory management in 1990 Urafiki Textile Mills Co. Ltd failed to operate as resulted to financial problem by so doing between 1992 and 1994 the factory was privatized to the Chinese government through joint venture where Tanzania owns 49% and China owns 51% this agreement became effective since 1997 (Mwansele, 2011).

Inventories need management in order for the organisation to meet objectives of value maximization, when managing inventories remember that you want to avoid placing too much funds in inventory because it will result in declining profitability and returned cash flow.

Organizations need to manage efficiently inventories in order to prevent all types of wastage including over stocking, pilferage, expiry and stock outs. Factors contributing to those stock outs on one hand and over stocking on the other hand are not very clear, logistics skills level is poor and inventories are not well managed. Personnel dealing with supply chain activities need to be trained in procurement and inventory management as inventories are not well managed and most of the personnel did not know the method specifically to be used in controlling inventory (Kagashe, *et al.* 2012).

Holding of inventories can cost an organization about 25% to 40% of the value, lost sales and customer dissatisfaction can occur as the cause of inventory, therefore efficient inventory management is very important in supply chain operations as helps the organization to maintain competitive advantage. Inventories exist at every stage of

the supply chain so has to be kept optimal, although to most organizations inventory management section is ignored resulting to inventory mismanagement. (Makweba, 2009).

The above stated facts from different studies conducted by various academicians proves that inventories in both private and public organizations is not well managed resulting to unnecessary losses as inventories on the balance sheet represent from 20% to 60% of total assets so has to be handled with great care for smooth running of the organisation's operations.

## **1.2 Statement of the Problem**

The World Bank report shows that approximately 5% of global GDP disappear through mismanagement of resources as there is no proper control over the inventory as the result economy of most countries especially to less developed countries like Tanzania fail to grow at the reasonable and preferable percentage (Kant, 2007).

The annual report of the Controller and Auditor General (CAG) on the audit of Public Authorities (PA) and Other Bodies (OBs) for the financial year 2010/2011 revealed that several weaknesses were observed in relation to inventory management and these problems were encountered to seven Public Authorities which include, Tanzania Electricity Supply Company (TANESCO), Tanzania Petroleum Development Corporation (TPDC), Kahama Shinyanga Water Supply Authority (KASHWASA),

Mtwara Urban Water Supply Authority (MTUWASA), Arusha Water Supply Authority, Medical Stores Department (MSD) and Bank of Tanzania (BoT). Approximately 10.83 billion were lost by the Public Authorities which were mainly contributed by inventory mismanagement in parastatals (Utouh, 2012).

The main question of concern is why there has been poor inventory management in government parastatals? Is it because of poor skills of those stores / procurement specialists? Or is it because of lack of moral integrity? This proposed study will try to examine why there have been poor performances on inventory management by ascertaining the factors which probably might be the possible solution on the conceptual problem of “why inventory mismanagement in Tanzania” The study will base on three important objectives namely, to examine the adherence to professionalism with respect to materials management, to examine the level of technology adopted to ensure inventory control and to examine the method used in evaluating inventory.

The study will be conducted to parastatal organizations in Tanzania, taking VETA Kigoma as a case area of focus.

### **1.3 Objectives of the Research Study**

#### **1.3.1 General Objective**

The general objective was to assess the inventory management in parastatal organizations in Tanzania.

### **1.3.2 Specific Objectives**

The specific objectives of the study were;

- To examine the adherence to professionalism with respect to materials management.
- To examine the level of technology adopted to ensure inventory control.
- To examine the method used in evaluating inventory.

## **1.4 Research Questions**

### **1.4.1 General Question**

The general question was to what extent is inventory managed in parastatal organisations?

### **1.4.2 Specific Questions**

The specific questions of the study were;

- Does the education level of stores staff determine efficiency over inventory control?
- Is the system adopted adequate for proper control of stock?
- How is the inventory priced to ensure efficiency?

### **1.5 Significance of the Study**

The output of this research study was likely to be beneficial to the following groups as given below

The policy makers will be aware of the situation taking place to government owned organization especially on the issues associated with inventory management so as to revise the existing policies if possible so as to incorporate the recommendations and findings revealed from the study.

The study will be a stepping stone for new knowledge generation to future studies who will be interested in conducting further research study on related research topics, since will understand well how to go about their studies so as to come up with new findings which will be added to the existing knowledge.

The findings and recommendations will be used by Kigoma RVTSC itself in realising the importance of using various mentioned techniques of inventory management and bring awareness to personnel working in the organization and hence improve performance as inventory is a necessary evil has to be handled with great care.

The study will enable to have practical training by integrating theoretical knowledge obtained in library (reviewing various literatures) on inventory management with real situations happening and practiced by the organizations. Also as partial fulfillment of

the requirements for the award of the Degree of Master of Business Administration (MBA) of the Open University of Tanzania (OUT).

The Open University of Tanzania (OUT) will be informed about the real situation taking place to Parastatal organisations in Tanzania on inventory management a case of VETA Kigoma, since two original copies will be submitted to the OUT for library reference.

### **1.6 Limitation of the Study**

In conducting this study the researcher faced the following challenges

It happened that some questionnaires filled by respondents other than expected ones which resulted to reduced reliability and validity of information collected, some respondents demanded allowances or remunerations at abnormal rates which could not be afforded by the researcher, the frequent power cut affected the timely completion of the research report and the questionnaires for vocational trainees were prepared in English language therefore translation was necessary.

Since the study based on only one geographical area (Kigoma region) might happen that the findings not be a good representative to other parastatal organizations in the country although the study tried to make sure that the scope and objectivity of the study is maintained.

### **1.7 The Scope of the Study**

It is difficult to study all parastatal organizations which are government owned organizations being made to provide valuable services to the citizens of Tanzania that is why the study selected VETA Kigoma to represent among many known parastatal organizations in Tanzania. At Kigoma RVTSC the study involved the sections, finance section, purchasing section, warehouse/stores section, production section, training section, human resource section, administration section, principal office and registrar office. These were sections which the study considered to provide relevant and valuable information on the study of assessing inventory management.

### **1.8 Conceptual Framework (Conceptual Model)**

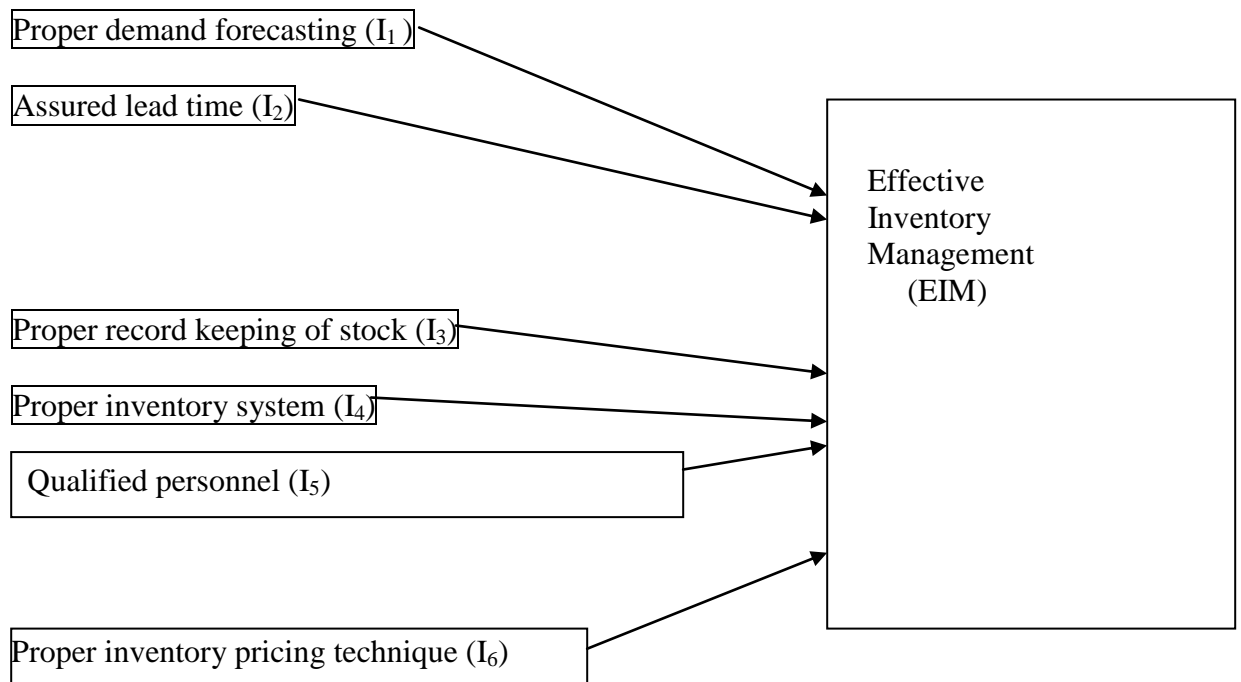
Conceptual framework is a level of theory in which descriptive categories are systematically placed within a broad structure of explicit and assumed propositions, statements of relationships between two or more empirical properties to be accepted or rejected (Nachmias, 2003).

In a conceptual framework, you are required to put the concepts together as in a jigsaw puzzle, you work out how all the concepts fit together and relate to one another. The first stage of theorizing identifies and clarifies concepts; second stage concentrates on the connections and relationships between the concepts. A conceptual framework is formed of patterns of concepts and their interconnections (Fisher, *et al.* 2010).



It has been found that various issues contribute to proper functioning of inventory management objective in any organization, some of these variables on which inventory management depends includes, proper demand forecasting, assured lead time, proper record keeping of stock, proper inventory system, qualified personnel and proper inventory pricing technique.

The variables under this study of inventory management were related by the study in the following manner as illustrated here below.



**Figure 1.1 Diagrammatic Presentation of the Relationship between Variables**

Source: Researcher's perception, 2013

### **1.9 Organisation of the Study**

The study was assessing inventory management at VETA Kigoma. The study covered five chapters, chapter one was about the overview of the study which included introduction of the study, background information of the study, statement of the problem, objectives of the research, research questions, significance of the study, limitation of the study, scope of the study and conceptual framework.

Chapter two was concerned with literature review which was divided into two parts that is theoretical literature review based on theories & concepts and empirical studies done by other researchers within and outside Tanzania on the same research topic resulting to the research gap.

Chapter three was concerned with research methodology which included, research design, study area, population, sample and sample size, sampling procedures, types of data sought, data collection methods, reliability and validity of measurement as well as data management and analysis.

Chapter four was concerned with data presentation, analysis and discussion of findings.

Chapter five was concerned with summary, conclusion, recommendation and areas for further studies.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 Theoretical Literature Review**

Before an effective system of inventory control can be implemented it is essential to analyse from records of usage what has been the trend of demand for a given item of stock over an approximate period of time with a view to forecasting future requirements. He further added that inventory or stock control refers to the techniques used to ensure that stocks of raw materials or other supplies, work in progress and finished goods are kept at levels which provide maximum service levels at minimum costs (Lysons, 2000).

Inventories are materials and supplies that a business or institution carries either for sale or to provide inputs or supplies to the production process. All businesses and institutions require inventories. Often they are substantial part of total assets. He further said that financially inventories are very important to manufacturing companies, on the balance sheet they usually represent from 20% to 60% of total assets. As inventories are used their value is converted into cash which improves the cash flow and return on investment. There is a cost for carrying inventories which increases operating costs and decreases profits hence good inventory management is essential (Arnold,*et al.* 2008).

### **2.1.1 Functions of Inventory**

Saleem (1997) contributed that inventories are essential for keeping the production wheel moving. Inventories keep the market going and distribution system intact. They serve as lubrication and spring for production-distribution system.

He has given the following important functions of inventories:

Inventories gear up production, inventories provide a cushion to prevent stock outs, inventories strike a balance between the objectives of the stores department and those of the enterprise as the whole, inventories help in avoiding unnecessary wastage and blocking up of valuable working capital, inventories act as an insurance against errors in demand forecasts and a well planned inventory scheme helps in efficient, smooth and effective service to customers at a lesser cost with the help of lower investment through planned but reduced inventories.

### **2.1.2 Inventory Management Concept**

William Fox points out that Management is the whole process of planning, organizing, and controlling are the organic functions of management. According to him, an organic function is a function which is invariably basic to, and inherent in, managerial activity whenever and wherever it is performed. These functions are performed in each and every situation. However, staffing and directing are also important functions of management (Saleem, 1997).

Inventory Management is responsible for planning and controlling inventory from the raw material stage to the customer. Since inventory either results from production or supports it, the two cannot be managed separately and therefore must be coordinated. Inventory must be considered at each of the planning levels and is thus part of production planning, master planning with end items and materials requirements planning with components, parts and raw material (Arnold, *et al.* 2008).

(Lysons and Farrington, 2006) contributed that inventory management covers a wide variety of activities. These activities will vary from organization to organization. The scope of inventory management will also be influenced according to whether it is primarily concerned with Materials Management (MM) or Physical Distribution Management (PDM) or centralized or decentralized. There is clearly a significant difference in the complexity of managing inventory based at a single location and that where inventory is located at possibly hundreds of distribution centres. Said that globalization is another factor that increases the complexity of inventory management. Irrespective of such considerations, however, inventory management is likely to be comprised of such activities such as:

Demand management – ensuring that required operational and maintenance supplies are available in the right quantities and at the right time, forecasting future demand requirements, managing items with difficult supply and demand patterns related to seasonal demand, changes in end use applications or meeting demands for the

customisation of products, reviewing safety stock levels and controlling minimum and maximum amounts of inventory items of both quantity and value, implementing lean inventory policies, such as just in time (JIT) contracts to minimize investment in inventory.

Liaising with purchasing section to ensure that supplies are replenished in accordance with corporate and procurement policies, developing cost-effective systems and procedures relating to the ordering, procurement and budgeting of supplies and controlling the receipt, inspection (where necessary), recording, location and issue of supplies to users.

Ensuring the safety and security of supplies and the avoidance of loss a result of deterioration, theft, waste and obsolescence, coordination of inventory to ensure that supplies can be rapidly located, preparation and interpretation of reports on stock levels, stock usage and surplus stock, liaison with auditors regarding all aspects of inventory, appropriate disposal of scrap, surplus and obsolete items.

According to them, the term supplies means all the materials, goods and services used in the enterprise regardless of whether they are purchased outside, transferred from another branch of the company or manufactured in house.

They have provided aims of inventory management which are four mainly known;

To provide both internal and external customers with the required service levels in terms of quantity and order rate fill, to ascertain present and future requirements for all types of inventory to avoid over stocking while avoiding 'bottlenecks' in production, to keep costs to a minimum by variety reduction, economical lot sizes and analysis of costs incurred in obtaining and carrying inventories and to provide upstream and downstream inventory visibility in the supply chain.

### **2.1.3 Cash Flow Analysis**

When inventory is purchased as raw material, it is recorded as an asset. When it enters production, it is recorded as work in progress (WIP) Inventory, and as it is processed its value increases by the amount of direct labour applied to it and the overhead attributed to its processing. The material is said to absorb overhead, when the goods are ready for sale they do not become revenue until they are sold.

However the expenses incurred in producing the goods must be paid for. This raises another financial issue, business must have the cash to pay their bills, cash is generated by sales and the flow of cash into a business must be sufficient to pay bills as they become due. Businesses develop financial statements showing the cash flows into and out of the business. Any shortfall of cash must be provided for perhaps by borrowing or in some other way.

This type of analysis is called Cash Flow Analysis. Financial Inventory Performance measures from a financial point of view, inventory is an asset and represents money that is tied up and cannot be used for other purposes. Inventory has a carrying cost that is the costs of capital, storage and risk. Finance people wants as little inventory as possible and needs some measure of the level of inventory (Arnold, *et al.* 2008).

Total capital in any organization is of two types namely capital invested in fixed assets such as buildings, plant, machinery etc, is termed as fixed capital and a cut in this cannot be effected, but a reduction in what is known as working capital, high percentage of which is locked up in inventories, is possible and there is a definite scope of increasing the profit earning capacity of the organization.

Thus, efficient management of inventories may result in more profit margins since it will reduce the operational and inventory cost resulting in reduction of production cost, more competitive capacity, heavy turnover and increase in profitability. Surpluses cause financial hardships because they tie up capital and shortages lead to poor operational results, but satisfactory and scientific inventory control eliminates these shortcomings. Thus proves its importance (Saleem, 1997).

#### **2.1.4 Methods of Evaluating Inventory**

There are four methods accounting uses to cost inventory namely first in first out (FIFO), last in first out (LIFO), average cost (A.C) and standard cost (S.C). Each has



implications for the value placed on inventory. If there is little change in the price of an item, any of the four ways will produce about the same results, however in rising or falling prices they can be a pronounced difference. There is no relationship with the actual physical movement of actual items in any of the method. Whatever method is used is only to account for usage.

**i. First In First Out (FIFO)**

This method assumes that the oldest (first) item in stock is sold first. In rising prices, replacement is at a higher price than the assumed cost. This method does not reflect current prices and replacement will be understated. The reverse is true in a falling price market.

**ii. Last In First Out (LIFO)**

This method assumes the nearest (last) item in stock is the first sold. In rising prices, replacement is at the current price. In a falling price market existing inventory is overvalued. However, the company is left with an inventory that may be grossly understated in value.

### **iii. Average Cost (A.C)**

This method assumes an average of all prices paid for the article. The problem with this method in changing prices (rising or falling) is that the cost used is not related to the actual cost

### **iv. Standard Cost (S.C)**

This method uses cost determined before production begins. The cost includes direct material, direct labor and overhead. Any difference between the standard cost and actual cost is stated as a variance (Arnold, *et al.* 2008).

## **2.1.5 Inventory Management Techniques/ Tools**

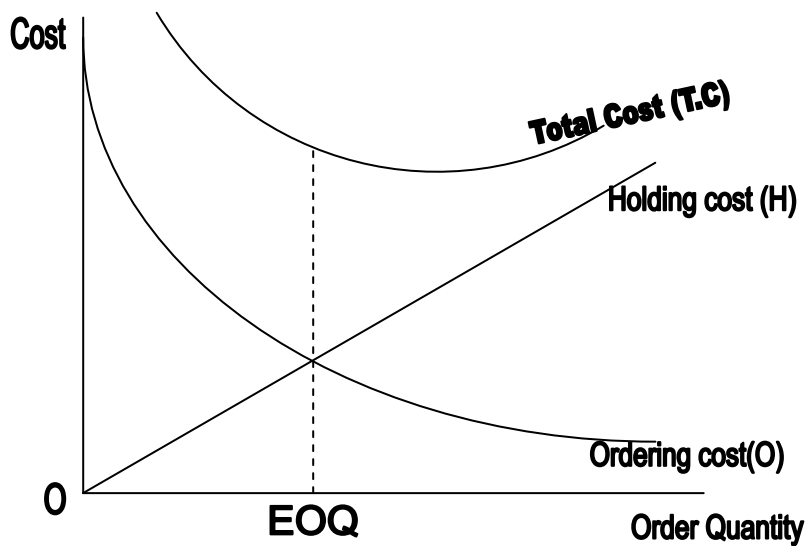
As it has been pointed out earlier, the goal of inventory management is framed on cost minimization so as to maximize the shareholders wealth, which is the main goal of the firm. Here under are the inventory management techniques / tools to be employed for efficiency production and profit maximization.

### **i. Economic Order Quantity Model (EOQ)**

It is the best known approach for explicitly establishing an optimum inventory level. It is a mathematical approach to the ordering of inventories where the combined costs of ordering and carrying inventory are kept at minimum. While the ordering cost are costs

associated with the purchases of inventory, the carrying costs are cost incurred from receipt inventories to the sale point.

The optimum order quantity is found where annual holding costs = annual holding costs as shown in the figure below.



**Figure 2.1 Cost versus Order Quantity**

Source: Arnold, *et al.* (2008)

Total cost (T C) = Ordering cost (O) + Holding cost (H)

EOQ occurs at an order quantity in which the ordering cost equal to holding costs

Solving mathematically then,

The formula is;

$$E = \sqrt{\frac{(2DO)}{H}}$$

**Where;**

- E = Economic order quantity
- D = Annual demand of units
- O = Ordering Costs per order
- H = Annual holding cost (Carrying cost) of one unit of stock

Source: Arnold, *et al.* (2008)

## **ii. Materials Requirements Planning (MRP)**

It is a product oriented computerized technique aimed at minimizing inventory and maintaining delivery schedules, it related the dependent requirements for the materials and improvements comprising and end products to time period known as “buckets” over a planned horizon (typically of one year) on the basis of forecast provided by marketing or sales and other input information.

A bucket is time period to which materials requirements planning relates for example one week.

The concept of the system is that production control and inventory management are integrated, this is done in such a way as to ensure that raw materials and components

are only made available when they are actually required and not before (Arnold, *et al.* 2008).

### **iii. Just In Time (JIT) Philosophy**

This has been defined by Lee white as an inventory control philosophy whose goal is to maintain just enough material in just the right place at just the right time to make just the right amount of product, just in time JIT is the method of managing inventories such that each item in production is made immediately as needed for the next step in the production process, or each item purchased is delivered just in time. This can reduce inventory levels virtually to zero. The basic goal of JIT is to have enough inventories on hand to meet immediate production needs. The inventory is produced or purchased just in time when needed (Lysons, 2000).

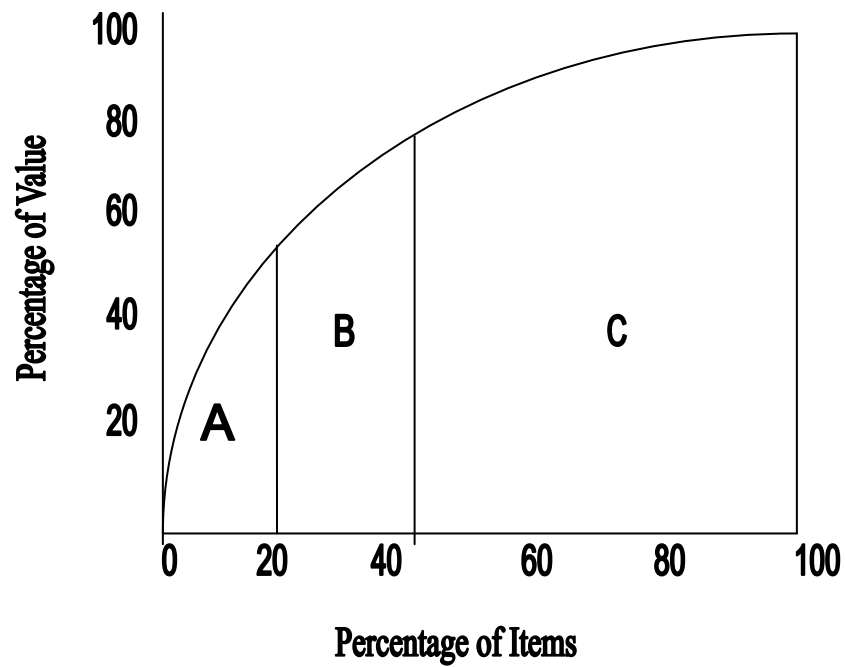
### **iv. The ABC Inventory Control Technique**

To have better control at a reasonable cost it is helpful to classify the item according to their importance. The ABC principle is based on the observation that a small number of items often dominate the results achieved in any situation. This observation was first made by an Italian law. As applied to inventories, it is usually found that the relationship between the percentage of items and the percentage of annual dollar usage follows a pattern in which three groups can be defined. Group A about 20% of the items account for about 80% of the dollar usage, Group B about 30% of the items account for

about 15% of the dollar usage and Group C about 50% of the items account for about 5% of the dollar usage (Arnold,*et al.*2008).

Note: The percentages above are approximately and should not be taken as absolute.

The figure below shows the classification of items.



**Figure 2.2 ABC Curve showing Percentage of Value versus Percentage of Items**

Source: Arnold,*et al.*2008.

#### **v. F S N Analysis Method**

This Analysis is based on movement of items in the storehouse. The items are classified as Fast moving (F), Slow moving (S) and Non moving (N). However this method of

analysis is useful in locating and identifying the absolute items. This analysis helps in avoiding investments in Non moving or Slow moving items, the FSN analysis is also useful in preventing obsolescence and facilitates timely control (Saleem, 1997).

#### **2.1.6 Reasons / Benefits for Holding Inventories**

(Lucey, 2003) has provided some benefits or reasons for holding inventories in an organization which includes:

To enable production process to flow smoothly and efficiently, to absorb seasonal fluctuations in usage or demand, to meet possible shortages in the future, to take advantage of bulk purchasing discount, to provide buffer between production process - this is applicable to work in progress inventory that effectively decouple operation, to absorb variation in demand and production, to ensure that sufficient goods are available to meet anticipated demand, as a deliberate investment policy particularly in times of inflation or possible shortages and as a necessary part of the production process, e.g. the maturity of the whiskey.

## **2.2 Empirical Literature Review**

Here under includes abroad cases and Tanzania cases regarding the research study.

### **2.2.1 Abroad Cases**

(Morgan, 2009) conducted a research study in United States of America on inventory management performance to Alien Technology Corporation as his case study which is a leading provider of radio frequency identification products for global customers, the company is also involved with pharmaceutical products where by other companies wins to supply pharmaceutical product to the government of United States of America because of its good customer services well organized and planned.

The findings revealed that Alien Technology Corporation is almost 95% efficiency on inventory management practices where by the corporation manufactures products very high volume and at a low costs. The company provides a family of Radio Frequency Identification product for a variety applications including supply chain management, logistics to improve inventory management and reduce operating costs.

The researcher added that efficiency inventory management of the Alien Technology Corporation is achieved by applying just in time purchase by assuring smooth and well maintained relationship with suppliers of materials to ensure constant supply when the corporation is in need of raw materials to facilitate production. The Alien Technology Corporation in the balance sheet shown 20% value of inventory and this is normal to the



Company since there are some materials which are available in small quantities and are essential to the company.

The researcher concluded that for any company to grow should take greater control on inventory because inventories are heart to the manufacturing companies for the purpose of meeting customer demand without running stock out or over stock situation.

Alien, Alientechnology and the Alien logo are trademarks registered of Alien Technology Corporation in the United States of America and other countries. More information about Alien Technology Corporation can be found on the company's website.

In United Kingdom, (Weber and Rick, 2008) revealed that organisations' goal and satisfaction are achievable within the given time limitations, however control of inventory system which typically represents 45% to 90% of all expenses for an organization, is needed to ensure that it has the right goods on hand to avoid stock outs also to prevent shrinkage and run certain accounting, many organizations have fair enough of their limited resources, capital tied up in their major assets and inventory. Worth than that, they may have their capital tied up in the wrong kind of inventory. Inventory may be old, worn out, shop worn, obsolete, or the wrong size, or colours, or there may be an imbalance among different product lines that reduces the customer appeal and concerns of the total operation. (Stevenson, 2006) revealed that inventory

management is a key operations management activity, effective inventory management is critical to the smooth operation of most businesses and their supply chains. Good inventory management has an impact on operations, marketing and finance departments. Poor inventory management hinders operations, reduces customer satisfaction and raises operating costs.

In Botswana, (Thiertel, 2000) revealed that the nature of Botswana Range Inventory Management Project and the fact that national range inventory and monitoring system has yet to be put in place, meaning that there has so far been no enhancement. In the opinion of the evaluations, any enhancement remains a distant and unlikely possibility.

In Kenya, (Gerald and Odhiambo, 2012) revealed that 23% of the organizations were found to recognize materials management as they had in charge reporting directly to the Chief Executive Officer. However generally Kenyan organizations are not practicing professionalism in materials management and owing to the huge amount of resources they are committing on materials related activities, a lot of emphasis need to be directed towards materials management and it should be recognized as a top management function. Also revealed that Kenyan organizations spend an average of 56% of their annual sales turnover on materials and materials related costs while the majority of the organizations had not given due recognition to materials function. 64% of the organizations were found to be applying materials management concept, though most were doing so unknowingly, majority of the organizations have material functions

performed by general managers and production managers. Most Kenyans have not yet recognized professionalism in materials management as most sensitive positions like purchasing and supplies are undertaken by non professionals. This is a great undoing in this globally competitive market and recommended that much emphasis and attention should be given to materials management to enable organizations achieve the best optimal cost structures as such need to create departments dealing with materials function to enable easy control and monitoring costs.

In Zimbabwe, (Lisa *et al.*, 2003) on their study revealed that inventory management, storage and distribution of goods to users is efficiently done for example to hospitals drugs are distributed in an efficient manner because qualified people are employed with right qualifications and experience in materials related functions and the entire system of inventory management is computerized to ensure good performance.

In South Africa, (Musara, 2012) conducted a study and revealed that the majority of organizations are not applying Just In Time (JIT) inventory management principles, he added that there are challenges impeding the implementation of Just In Time (JIT) principles in the organizations, these challenges include, lack of reliable supplier networks, lack of capital and lack of knowledge of immediate financial gain among others, further more statistically significant positive correlations between the application of JIT inventory management principles and cost efficiency, quality and flexibility were found. It is therefore deduced that organizations can benefit significantly in terms of

improved quality of products, increased operational, costs cuts and increased flexibility by applying the JIT inventory management principle.

In Uganda, (Namagembe, 2010) her study revealed that a significant positive relationship between information sharing and inventory management means that if chain partners implement information technologies and collaborate among each other, then inventory management could improve, also in her study revealed that a significant positive relationship between inventory management and customer satisfaction means that in order to obtain high levels of customer satisfaction there is need for better inventory management. She further showed that significant positive relationship between information sharing and customer satisfaction which implies that increased levels of information sharing among chains partners lead to improved levels in customer satisfaction.

### **2.2.2 Tanzania Cases**

The assessment of inventory management effectiveness can also be evaluated from the assessment of the effectiveness of inventory management and control process as one aspect that contribute to or enhance inventory management practices.

(Kazare, 2009) researched on the assessment of the effectiveness of inventory management and control process at Saint Augustine University of Tanzania (SAUT) – Mwanza. His findings revealed that 67% of respondents said two procurement

personnel are holder of first degree and 33% of respondents said that is just only one procurement personnel who hold degree plus C P S P. He said, this means that procurement personnel at SAUT are qualified approximately by 80%, and this is a good indicator that procurement and supply chain management field at SAUT is taken as field of professional.

Therefore effective inventory management and control could be achieved on the ground that the function is under competent and qualified professional people because the quality of the activities is determined by the quality of people.

He added that apart from the qualifications of procurement personnel, revealed that SAUT procure materials at the beginning of each semester whereby economic order quantity (EOQ) is being applied, procurement planning and how to procure and stock those requirement are being done accordingly too.

This implies that, the University Procurement Personnels are familiar with the scope of inventory management and control which encompasses with determination of what to acquire and stock, when to acquire and stock them and how much to acquire and stock with due regard to the associated costs of ordering, carrying and stock out costs.

Furthermore, the researcher revealed that procurement personnel at SAUT do not attend seminars on inventory management and control even once per year, and SAUT herself

had never provided short courses and training on inventory management and control to her workers, stores officer in particular.

(Utouh, 2012) according to the Controller and Auditor General (CAG) report for the financial 2010/2011 on the audit of Public Authorities (PA) and Other Bodies (OBs) in Tanzania observed that inventories as assets in the form of materials or supplies to be consumed in the production process or in rendering of services, inventories represent a large portion of the entity's investment and must be well managed in order to minimize losses that might result from inventory mismanagement. In fact, Public Authorities and Other bodies (OBs) cannot absorb the types of losses arising from poor inventory management over a period of time. Unless inventories are properly managed and controlled, they become unreliable, inefficient and costly. From the report recommended that Public Authorities should have a proper inventory system which can capture all the details regarding to inventory so as to establish a list of potential revenue and to avoid unnecessary losses incurred by the service providers.

### **2.3 Research Gap**

From the theoretical and empirical literature reviews the study realized that, there are notably inventory mismanagement to organizations leading to unnecessary losses not planned and the reason behind is unclear. Many studies have been addressing procurement procedures in parastatal organizations and ignoring inventory management which to Tanzanian context alarming losses has been reported by the Controller and

Auditor General on inventory mismanagement. Therefore this study has tried to ascertain the factors contributing to why inventory mismanagement to government parastatals? By taking VETA Kigoma as a case area of focus.

## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

#### **3.1 Research Design**

There are many definitions of research design but no one definition imparts the full range of important aspects (Cooper and Schindler, 2003).

Research design is the program that guides the investigator in the process of collecting, analyzing and interpreting observations. Or is blue print that enables the investigator to come up with solution to the problem and guides him or her in various stages of the research (Nachmias, 2003).

A research design is the conceptual structure within which research is conducted, it contribute the blue print for the collections, measurement and analysis of data (Kothari, 1990).

The study used a cross sectional type of research design due to the fact that the study was conducted once and involved only few variables which seem essential. A cross sectional survey method was used together information through asking questions to representative cross section of the population point in time.



### **3.2 Study Area**

The study used VETA Kigoma to represent all parastatal organisations available in Tanzania which are made to provide service to the citizens of Tanzania. VETA Kigoma which is known as Kigoma RVTSC is found in Kigoma Region and is located at Mulole area, provides vocational education to Tanzanians and has fifteen vocational courses which are; Welding and Metal Fabrication, Auto body repair/Panel beating, Information and Communication Technology, Painting and Sign writing, Motor vehicle mechanics, Auto electric, Tailoring/Designing Sewing and Cloth Technology, Food production, Carpentry and joinery, Masonry and Brick laying, Secretarial and Computer, Refrigeration and Air Condition, Plumbing, Electronics and Domestic Electrical Installation. It has capacity of taking four hundred eighty six trainees on which two hundred eight are boarding trainees and two hundred seventy eight are day trainees.

### **3.3 Population**

Population is defined as a cluster of statistically equivalent individuals or a collection of individuals who are genetically exchangeable (Lawson, 2012). For this study the population included all staffs and vocational trainees of Kigoma Regional Vocational Training Services Centre (VETA Kigoma). From the identified population, the representative sample was drawn.

### **3.4 Sample and Sample Size**

#### **3.4.1 Sample**

A sample is a subset or portion of the total population, where as population is totality of the objects under investigation (Blank, 1984).

An optimal sample should be one which fulfills the requirements of efficiency, responsiveness, reliability and flexibility (Kothari, 2006).

It should be noted that, from a study point of view the term population not only applicable to human beings but also to any case of interest in a study. In this study the targeted population on which the study obtained information was staffs and vocational trainees of Kigoma RVTSC where the representative sample was drawn.

#### **3.4.2 Sample Size**

Sample size is the number of items to be selected from the universe to constitute a sample. The size of sample should neither be excessively large nor too small. It should be optimum; an optimum sample is one which fulfills the requirements of efficiency, representativeness, reliability and flexibility. Budgetary constraint must invariably be taken into consideration when we decide the sample and the sample size (Kothari, 2004).

A sample size of 120 respondents was used in this study on which 40 respondents were staffs and 80 respondents were vocational trainees.

Actually the sample size of 120 respondents was enough to give good value of the data to be collected in the field leading to relevant research findings of the study on the assessment of inventory management to VETA Kigoma.

**Table 3.1 Sample Size Selection**

Category	Sample size	% of sample selected
Trainees	80	66.67
Staffs	40	33.33
<b>Total</b>	<b>120</b>	<b>100</b>

Source: Researcher, 2013

This approach was arrived at basing on Namagembe, (2010).

### **3.5 Sampling Procedures**

Sampling procedure refers to, techniques used in selecting the items for the sample.

The study used non probability sampling technique called purposive sampling.

Non probability sampling is that sampling procedure which does not afford any basis for estimating the probability that each item in the population has equal chance of being included in the sample. In this type of sampling, items of the sample are selected deliberately by the study; his choice concerning the items remains supreme (Kothari, 2004).

The study used purposive sampling because wanted to obtain information from the right people who can assist at large in coming up with valuable data which are valid and reliable when tested under the same conditions. Also the sample size was reasonable and attainable to use purposive sampling since was not too large and only the study was interested to get information from the respondents whom think that relevant data can be gathered for the study.

### **3.6 Types of Data**

Data are facts, figures and other relevant materials past and present serving as bases for study and analysis (Krishnaswami, 1993).

There are two types of data namely primary data and secondary data on which the study should keep in mind. In order for the study to be effective and reliable in bringing good value of the data to be collected the study employed both primary and secondary data in assessing the inventory management at Kigoma RVTSC.

### **3.6.1 Primary Data**

Primary data are those which are collected afresh and for the first time, and this happen to be original in character (Kothari, 2004).

The study used personal interviews with structured questionnaires where by the respondents were requested to fill in the questionnaires, the questionnaires had both closed and open- ended questions so as to obtain the opinions and comments of the respondents, also participant observation was used during the study.

### **3.6.2 Secondary Data**

Secondary data are those data obtained from literature sources, which have already been collected by other people for some other purposes; it is the second hand information which includes both raw data and published one (Saunders, et al. 2000).

The study extracted data from recorded documents at Kigoma RVTSC which seemed relevant to the study on assessment of inventory management.

### **3.7 Data Collection Methods**

The study collected information from the field using basically the following pointed out investigation methods of data collection, observation, interview, questionnaire and reviewing various documents relating to the topic understudy.

### **3.7.1 Observation**

Observation becomes a scientific tool and the method of data collection for the study when it serves in formulating research purpose, is systematic planned and recorded and is subjected to check and control of validity and reliability. Observation is the way an investigator observes things around him without asking from the respondents.

This method of data collection refers to the circumstance of being in or around an ongoing setting and recording facts as they are observed, listened or experienced. The investigator in this case actually works or interacts with the study setting (Ndunguru, 2007).

The study used participant observation as this approach was deemed to be more reliable together information easily. The main advantage of this method was that, subjective bias was eliminated and information that was obtained exactly related to what was happening.

### **3.7.2 Interview Method**

Interview method is the method of collecting data that involves presentation of oral - verbal stimuli and reply in terms of oral – verbal responses. Personal interview is the method of collecting data that requires a person known as the interviewer asking questions generally in a face to face contact to the other person or persons. At times the interviewee may also ask certain questions and the interviewer respond to these questions, but usually the interviewer initiates the interview and collects the information (Kothari, 2004).

Regarding to this study on assessment of inventory management, the study used personal interview method

### **3.7.3 Questionnaire Method**

Questionnaire is simply a formalized set of questions for eliciting information, the term questionnaire is often used by studies to refer set of questions which will be mailed to respondents for them to answer and turn to the sponsor of the study (Blank, 1984).

Structured questionnaires are those questionnaires in which there are definite concrete and predetermined questions. Resort is taken to this sort of standardization to ensure that all respondents reply to the same set of questions. The form of the questions may be either closed ( ie...of the type “yes” or “no” or open (ie..Inviting force response) but should be stated in advance and not constructed during questioning (Kothari, 2004).

The study constructed structured questionnaires both open ended and closed ended questions so as to grasp the reliable and valid data regarding to the assessment of inventory management at VETA Kigoma to which these questionnaires were filled by the respondents targeted. Closed ended questions are easier to analyse, easier to administer and are economical in terms of time and money, where as open ended questions permit depth insight to hidden issues which need to be explained. Also biasness is eliminated on the use of questionnaire method.

### **3.7.4 Review of Documents**

Documentation method is about gathering data from a secondary source. The documentary sources of data play an important role in disseminating knowledge in all disciplines. The documentary sources of data for research purposes include published books, manuscripts, journals, research reports, newspapers and other unpublished literary works (Ndunguru, 2007).

Documents are secondary form of data collected and stored by organizations or governments so as to be used by externals who are interested with those data to use in any relevant area to which can fit, these includes articles, income statements of the organizations, government manuals, reports etc (Saunders, *et al.* 2000).

## **3.8 Reliability and Validity of Data**

### **3.8.1 Reliability of Data**

Reliability is the extent to which data collection technique will yield consistent findings, similar observations would be made or conclusions reached by other researcher (Saunders, 2007).

Reliability of a measuring instrument is its ability to produce consistency measurement each time when we administer an instrument to the same population and contain a similar results we say that the instrument is reliable (Kumar, 2005).



The study tested or estimated the reliability of information collected to Kigoma RVTSC on assessment of inventory management through grouping questions in a questionnaire in two groups of respondents being given exactly the same questions of the same concept each group with similar conditions and the findings revealed that similar results were obtained by the study which proves the reliability of the information collected.

### **3.8.2 Validity of Data**

Validity is the degree to which a measuring instrument measures what it is supposed to measure (Nachmias, 2008). This was achieved by the study as respondents were cooperative and answers were correctly recorded and analysed properly, the sample chosen was representative where right questions were asked to respondents for the study to achieve its purpose.

The study assured high degree of accuracy through selecting the sample from a true representative of population and to use the current documents of VETA Kigoma to ensure validity of information to be collected.

### **3.9 Management and Analysis of Data**

#### **3.9.1 Data Management**

Data management is the whole process of detecting as well as correcting error and inconsistencies in data. It includes identification of missing data, detecting of entry errors and the like. The main purpose is to ensure data quality (Sharma, 2005).

Unsuitable data for the intended study were dropped and remained with suitable data only, and this was achieved through planning, organising and controlling the entire process of data collection from the targeted respondents by eliminating biasness situation and selecting only current data from the organization documents which can reflect reality.

#### **3.9.2 Data Analysis**

Data collected were edited and coded. These processed data were analysed using Statistical Package for Social Sciences (SPSS 16.0 for windows), the print out of information from the SPSS was analysed and was presented in the forms of tables and a discussion of the information contained in those table was done. This was done by preparing Data file starting on the variable view then proceed on Data view, the Data view displayed actual data and new variables created.

The variable view window contained the definitions of each variable in the data set including its name, type, label, width, alignment and other informations. The output

window was where the results of queries were done. To run the SPSS data were entered directly into the package, analysis function commanded then descriptive statistics resulted to preparing frequencies. The output was printed directly copied from the output viewer and pasted to word for presentation and discussion of findings in the study.

## CHAPTER FOUR

### 4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSION

#### 4.1 Introduction

This chapter presents the results of the study. Data gathered were coded, analysed using Statistical Package for Social Sciences (SPSS) and descriptive statistical methods which are frequencies and percentages interpreted and discussed. The findings have been presented in tabular forms for better and clear understanding.

#### 4.2 Respondents Involved in the Study

The study involved 40 respondents from staff of VETA Kigoma and 80 respondents from vocational trainees of VETA Kigoma. All questionnaires distributed to respondents were 100% collected as indicated in Table 4.1 below.

**Table 4.1: Involvement of Respondents in the Study**

<b>Questionnaires</b>	<b>Number of respondents</b>	<b>Collected</b>	<b>% of Total</b>
Kigoma RVTSC staff	<b>40</b>	<b>40</b>	<b>100</b>
Kigoma RVTSC trainees	<b>80</b>	<b>80</b>	<b>100</b>
<b>Total</b>	<b>120</b>	<b>120</b>	<b>100</b>

Source: Field data, 2013

## 4.2.1 Distribution of Respondents by Age

### 4.2.1.1 Staff Distribution by Age

Table 4.2 indicates the respondents' (staff) distribution by age on which the study revealed that 15% aged between 18 – 30 years, 60% aged between 31 – 45 years and 25% aged between 46 – 60 years. This implies that most of the staff aged between 18 – 45 years which amounted 75% by giving indication that the experienced staff still available at a good percentage which results to high quality training to vocational trainees as teachers still have enough energy to impart knowledge to trainees by so doing skilled labour force in the country increases resulting to reducing unemployed gap hence economic growth. The staff who are approaching the retiring age are between 46 – 60 years which constitute only 25%. This information is summarized by Table 4.2 below.

**Table 4.2 Staff Distribution by Age**

	<b>Age category</b>	<b>Frequency</b>	<b>Percent</b>
Valid	18 - 30 years	6	15.0
	31 - 45 years	24	60.0
	46 - 60 years	10	25.0
	<b>Total</b>	<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### 4.2.1.2 Vocational Trainees' Distribution by Age

Table 4.3 indicates the respondents' (vocational trainees) distribution by age on which the study revealed that 92.5% aged between 18 – 25 years, 6.2% aged between 26 – 30 years and 1.2% aged between 31 years and above. This implies that most of the vocational trainees aged between 18 – 25 years which amounted 92.5% by giving indication that the enrollment of VETA trainees lies at the age of 18 to 25 years which is a good age interval as trainees will acquire knowledge and use it effective while still strong enough and capable of working hard by so doing the economy of the country grow tremendously in the sense that most of them will be employed in various organizations or industries and others will be self employment as in their syllabus they are studying entrepreneurship aiming at self employment. Table 4.3 below shows vocational trainees' distribution by age.

**Table 4.3 Vocational Trainees' Distribution by Age**

<b>Age category</b>		<b>Frequency</b>	<b>Percent</b>
Valid	18 - 25years	74	92.5
	26 - 30 years	5	6.2
	31years and above	1	1.2
	<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field data, 2013

## 4.2.2 Distribution of Respondents by Gender

### 4.2.2.1 Staff Distribution by Gender

Table 4.4 indicates the respondents' (staff) distribution by gender on which the study revealed that 80% were male and 20% were female. This implies that most of the staff of Kigoma RVTSC are male which amounted 80% by giving indication that most of the teachers at the centre are males by that fact the government has the responsibility of encouraging girls in secondary schools to take science subjects so as to increase the number of female staff in higher learning institutions and by so doing women in one way or another are empowered. Table 4.4 below summarizes the distribution of respondents (staff) by gender.

**Table 4.4 Staff Distribution by Gender**

<b>Gender</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Male	32	80.0
	Female	8	20.0
	<b>Total</b>	<b>40</b>	<b>100.0</b>

Source: Field data, 2013

### 4.2.2.2 Vocational Trainees' Distribution by Gender

Table 4.5 indicates the respondents' (vocational trainees) distribution by gender on which the study revealed that 56.2% were male and the remaining 43.8% were female. This implies that there is a gender balance in making enrollment of vocational trainees to VETA institutions which by so doing reduces dependent gap as even girls are given

high priority in making sure that they acquire vocational education to increase the skilled labour force in Tanzania and hence improved life standard of women as will be imparted with knowledge to apply it in their future life. The slogan that “*to educate the woman is to educate the nation*” comes true through this observation. Table 4.5 shows vocational trainees’ distribution by gender.

**Table 4.5 Vocational Trainees’ Distribution by Gender**

<b>Gender</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Male	45	56.2
	Female	35	43.8
	<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field data, 2013

### **4.2.3 Respondents’ Marital Status**

#### **4.2.3.1 Staff Marital Status**

Table 4.6 indicates the respondents’ (staffs) marital status on which the study revealed that 15% were single (unmarried), 82.5% were married and 2.5% divorced. This implies that most of the staff of Kigoma RVTSC are married which amounted 82.5% by giving indication that learning process is well done as instructors are matured enough by that fact they are giving wise and constructive ideas concerning real life situations to trainees by so doing makes the trainees to work hard enough to attain their future expectations and hence improved life standard from the individual level to the national level. Table 4.6 shows staff marital status.



**Table 4.6 Staff Marital Status**

<b>Status</b>	<b>Frequency</b>	<b>Percent</b>
Valid Single	6	15.0
Married	33	82.5
Divorced	1	2.5
<b>Total</b>	<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.2.3.2 Vocational Trainees' Marital Status**

Table 4.7 indicates the respondents' (vocational trainees) marital status on which the study revealed that 95% were single (unmarried) and the remaining 5% were married. This has been reflected in Table 4.3 which showed that most of the vocational trainees aged between 18 – 25 years which amounted 92.5% by giving indication that the enrollment of VETA trainees lies at the age of 18 to 25 years. This is a good indicator that the young generation is real considered by the national policy in making sure that is skilled enough aiming at reducing the unemployment gap as to train the young generation is to train the whole nation. By that fact Vocational Education and Training Authority (VETA) have been established purposely by the Government through the VET Act No.1 of 1994 to make sure that the young generations acquire quality training on vocational education. Table 4.7 shows vocational trainees' marital status.

**Table 4.7 Vocational Trainees' Marital Status**

<b>Status</b>	<b>Frequency</b>	<b>Percent</b>
Valid Single	76	95.0
Married	4	5.0
<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.2.4 Respondents' Education Level**

##### **4.2.4.1 Staff Education Level**

Table 4.8 indicates the respondents' (staff) education level on which the study revealed that 2.5% form four leaver, 40% have certificates in various courses, 20% have diplomas in various fields, 22.5% have advanced diplomas in various fields 7.5% have bachelor degrees in various fields and 7.5% have master degrees in various fields. This shows that the institution (centre) has well qualified teachers / instructors in various fields which implies that the knowledge imparted by the instructors to trainees is of high standard in the sense that they have required skills to enable trainees acquire what is real expected to be acquired as per the syllabus standard. Those who have education level at the master degree level are at the top managerial level with the common goal of making sure that vocational training is maintained at the standard level in accordance with the national syllabus. In so doing the young generation real acquire the necessary skills to enable them perform well in industries and organizations hence improved economic growth of the country since industries and organizations will produce goods

and service of high standard using these skilled labour force. Table 4.8 shows staff education level.

**Table 4.8 Staff Education Level**

<b>Level</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Form four	1	2.5
	Certificate	16	40.0
	Diploma	8	20.0
	Advanced diploma	9	22.5
	Bachelor degree	3	7.5
	Masters degree	3	7.5
<b>Total</b>		<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.2.4.2 Vocational Trainees' Education Level**

Table 4.9 indicates the respondents' (vocational trainees) education level on which the study revealed that 5% were standard seven and 95% were form four. This implies that the form four education is a necessary education to all Tanzanians according to the national policy as every ward has a secondary school to make every pupil completing standard seven education to join with secondary education because learning environment have been improved by the Government to make sure that the young generation acquire the necessary education for their future life in so doing the poverty margin is a bit reduced if not eliminated. That is why the study revealed that 95% of trainees are form four leaver which is a significant improvement to the nation unlike the

previous years where most of the trainees enrolled by the Vocational Education and Training Authority (VETA) were standard seven. Table 4.9 shows vocational trainees' education level.

**Table 4.9 Vocational Trainees' Education Level**

<b>Level</b>	<b>Frequency</b>	<b>Percent</b>
Valid Standard seven	4	5.0
Form four	76	95.0
<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field data, 2013

## **4.2.5 Respondents' Physical Disability**

### **4.2.5.1 Staff Physical Disability**

Table 4.10 indicates the respondents' (staff) physical disability on which the study revealed that 12.5% had physical disability and the remaining 87.5% were physically fit. During investigation the study realized that those disabled staff the situation was not so critical enough as they continued with the normal routine of the centre's daily operations as the core activity is training. By that fact the centre is not losing any thing with the stay of 12.5% disabled staff whose disability was not critical to disrupt the learning process. Table 4.9 shows staff physical disability.

**Table 4.10 Staff Physical Disability**

<b>Disabled</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Yes	5	12.5
	No	35	87.5
<b>Total</b>		<b>40</b>	<b>100.0</b>

Source: Field data, 2013

**4.2.5.2 Vocational Trainees' Physical Disability**

Table 4.11 indicates the respondents' (vocational trainees) physical disability on which the study revealed that only 1.2% had physical disability and the remaining 98.8% were physically fit. This implies that most of the trainees enrolled by the institution (centre) are physically fit and by so doing even their practical performance in learning process is high as most of their practicals need a person who is actually physically fit especially to courses like Welding and Metal fabrication, Panel beating, Domestic electrical installation, Motor vehicle mechanics, Plumbing, Carpentry and joinery and others which need health fitness. Table 4.11 shows vocational trainees' physical disability.

**Table 4.11 Vocational Trainees' Physical Disability**

<b>Disabled</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Yes	1	1.2
	No	79	98.8
<b>Total</b>		<b>80</b>	<b>100.0</b>

Source: Field data, 2013

### **4.3 Rationale of Keeping Inventory**

The study on the respondents (staff) response on the rationale of keeping inventory revealed that all staff agreed that inventory is a necessary evil by any means to their daily centre operations have to stock in order to make sure that the learning process is efficiency and effective in the sense that materials are made available at the time when needed at a certain stage of training as theory and practical both go together to make trainees understand well the module which is taught, and is only possible to attain this if materials are stored and wait to be used at the time when needed.

### **4.4 Trainees Practical Training Materials**

Table 4.12 indicates the respondents (vocational trainees) response on the practical training for each module on which the study revealed that 92.5% said that they receive practical training for each module timely and the remaining 7.5% said that they do not receive practical training for each module timely. Since vocational trainees who said that practical training for each module taught to them timely amounted 92.5% this implies that the learning process at the centre is running effectively with the purpose of making sure that the trainees are competent to their field and by so doing the skilled labour force expected by the nation becomes true as trainees are well equipped with knowledge. Table 4.12 shows trainees practical training materials.

**Table 4.12 Trainees Practical Training Materials**

<b>Response</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Yes	74	92.5
	No	6	7.5
<b>Total</b>		<b>80</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.5 Method Used to Evaluate Inventory**

The study on the respondents (staff) response on the method used to evaluate inventory (How is the inventory priced to ensure efficiency?) revealed that all the staff said that First In First Out (FIFO) method is used to evaluate/price inventory in the organization which implies that the earlier the material received in store the first the material is issued from store, this situation or fact had been proved by the vocational instructors as their training materials request in accordance with what type of materials are needed first for the teaching module before the next module to start. By so doing this signifies that the first materials purchased are the first materials to be issued from store for use. This method of First In First Out (FIFO) has been discussed by Arnold, *et al.* 2008 which is based on the principle that the oldest (first) item in stock is issued first and vice versa.

#### **4.6 Examination of the Stores Officer Qualification**

The respondents agreed that the education level of stores staff determine efficiency over inventory control and the study on the respondents (staff) response on the qualification of the stores officer revealed that all the staff said that the stores officer of the centre (institution) has a Certified Procurement and Supplies Professional (CPSP) certificate hence is a well qualified personnel as far as materials management is concerning. This implies that the centre is well equipped to procurement and supplies section or unit in so doing efficiency and effectiveness in materials management is achieved as all procedures concerning stores operations are adhered. This has been supported by Kazare, 2009 who stated that effective inventory management and control can be achieved on the ground that all procurement and stores functions are under competent and qualified professional people because the quality of the activities is determined by the quality of people.

#### **4.7 Centre General Performance on Meeting Trainees' Needs**

Table 4.13 indicates the respondents (vocational trainees) response on the centre general performance on meeting trainees' requirements on the study revealed that 22.5% said that the centre general performance is very good, 67.5% said that the centre general performance is good and the remaining 10% said that the centre general performance is satisfactory. Here the general performance include trainees treatment, trainees meal time table, quality of food delivered, trainees teaching module, practical training attended and the general entertainments like sports and games materials. The study



realized that the centre general performance on meeting trainees' requirements as eligible trainees was doing good as is quite true that you cannot satisfy everybody a hundred percent in a group of say eighty trainees. Table 4.13 shows centre general performance on meeting trainees' requirements.

**Table 4.13 Ranking Centre General Performance**

<b>Ranking</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Very good	18	22.5
	Good	54	67.5
	Satisfactory	8	10.0
	<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.8 Costs for Inventory Mismanagements**

Table 4.14 indicates the respondents (staff) response on the costs of inventory mismanagement on the study revealed that 17.5% said that percentage of loss due to inventory mismanagement ranges from 0% to 20%, 30% said that the loss due to inventory mismanagement ranges from 20% to 40%, 37.5% said that the loss due to inventory mismanagement ranges from 40% to 60%, 10% said that the loss due to inventory mismanagement ranges from 60% to 80% and the remaining 5% said that inventory mismanagement affects nothing on the profitability of an entity and commented other factors which affects like ineffective customer care and others. According to Arnold, *et al.* (2008) said that on the balance sheet inventories usually

represent from 20% to 60% of total assets therefore have to be handled with great care. This statement is supported by 67.5% of respondents who said that the loss due to inventory mismanagement constitute from 20% to 60%. Table 4.14 shows response on percentage of loss due to inventory mismanagement.

**Table 4.14 Percentage of Loss due to Inventory Mismanagement**

<b>Ranking</b>		<b>Frequency</b>	<b>Percent</b>
Valid	0% to 20%	7	17.5
	20% to 40%	12	30.0
	40% to 60%	15	37.5
	60% to 80%	4	10.0
	Not applicable	2	5.0
<b>Total</b>		<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.9 Technique Used to Determine Demand of Materials**

Table 4.15 indicates the respondents (staff) response on the method/technique adopted to ensure inventory control which intended to observe if the system adopted was adequate for proper control of stock although they generally agreed that they are using adequate method/system for proper control of stock, the study revealed that 20% said that the institution / centre use Economic Order Quantity in determining demand of materials needed, 75% said that the centre apply Materials Requirement Planning (MRP) to determine demand of materials needed, 2.5% said that the centre use Just In

Time (JIT) Philosophy and the remaining 2.5% said that the centre apply The ABC inventory technique. Since Materials Requirement Planning method amounted 75% of respondents which imply that the institution real use MRP method in determining demand of materials needed as training materials are requested quarterly by the vocational instructors with the purpose of making sure that trainees modules are successfully completed in an efficiency manner, by so doing the all four quarters have their respective budget stating which materials to be ordered for the particular training module, this has been elaborated by Arnold, *et al.*(2008) who stated that the concept of the system is based on the fact that production control and inventory management are integrated, this is done to ensure that raw materials and components are only made available when they are actually required and not before. Table 4.15 shows method used to determine demand of materials.

**Table 4.15 Method Used to Determine Demand of Materials**

<b>Method</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Economic Order Quantity	8	20.0
	Materials Requirement Planning (MRP)	30	75.0
	Just in Time (JIT) Philosophy	1	2.5
	The ABC inventory technique	1	2.5
<b>Total</b>		<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### 4.10 Centre Inventory Management Effectiveness Ranking

Table 4.16 indicates the respondents (staff) response on the inventory management effectiveness ranking on the study revealed that 2.5% said that the centre on inventory management is effective by 20%, 2.5% said that the centre is effective by 40%, 22.5% said that the centre is effective by 60% and the remaining 72.5% said that the centre on inventory management is effective by 80%. This had been reflected in Table 4.15 which the findings revealed that the centre stores officer is qualified personnel holding a Certified Procurement and Supplies Professional (CPSP) certificate and is registered by the Procurement and Supplies Professional and Technicians Board (PSPTB). Since the respondents who said centre inventory management is effective by 80% amounted 72.5% which implies that the institution is performing well as far as materials management is concerned. Table 4.16 shows centre inventory management effectiveness ranking.

**Table 4.16 Inventory Management Effectiveness Ranking**

<b>Ranking</b>		<b>Frequency</b>	<b>Percent</b>
Valid	20% effective	1	2.5
	40% effective	1	2.5
	60% effective	9	22.5
	80% effective	29	72.5
<b>Total</b>		<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### 4.11 Stock out Situation

Table 4.17 indicates the respondents (staff) response on the stock out problem on the study revealed that 17.5% agreed that there is a notable stock out situation which was mostly caused by technicality of the materials requested by the users (technical specifications) which made the items needed to a bit delay to be delivered by suppliers or service providers, but the immediate solution of this problem is to make request earlier for materials whose specifications seem a bit complicated so as to give the procurement unit ample time to process the order and deliver the requested materials timely and training process successful, the remaining 82.5% said that there is no notable stock out problem on the centre daily operations as every activity is scheduled and put in procurement plan by so doing all the materials to be purchased for the whole year to facilitate training activities are known and specifications are put clear. Table 4.17 shows response on stock out situation.

**Table 4.17 Response on Stock out Situation**

<b>Response</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Yes	7	17.5
	No	33	82.5
<b>Total</b>		<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.12 Seminar Attendance Frequency for Capacity Building**

Table 4.18 indicates the respondents (staff) response on the frequency of seminar attendance for capacity building on the study revealed that 27.5% said that they attend seminar with regard to their professional once per year, 5% said that they attend seminars for capacity building twice per year, 5% said that they attend seminar with regard to their professional quarterly which means after three month period they attend a certain seminar or workshop to enhance their professional , 22.5% said that seminars which attend with regard to their professionals are unscheduled meaning that there is no proper schedule given by the human resource manager to employees concerning workshops or seminars to be attended for the year as per the budget and 40% said that Not applicable meaning that there is no such an arrangement to the centre or institution concerning sending employees/staff to seminars or workshops to enhance their professionals. This implies that to the centre there is a poor attendance of staffs/employees going to various seminars or workshops to enhance their fields of professional which is a bad image to the centre as is obvious understood that capacity building to staffs is of greater important since technology, syllabus and methods of teaching keep on changing therefore staffs have to equip with those changes and implement in the training process. Table 4.18 shows seminar attendance frequency for capacity building.

**Table 4.18 Response on Seminar Attendance Frequency**

<b>Response</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Once per year	11	27.5
	Twice per year	2	5.0
	Quarterly	2	5.0
	Unscheduled	9	22.5
	Not applicable	16	40.0
<b>Total</b>		<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.13 Status of the Centre Warehouse**

Table 4.19 indicates the respondents (staff) response on the status of the centre warehouse on the study revealed that 2.5% said that the centre warehouse is strongly well equipped with all required facilities of a warehouse, 60% said that the centre warehouse is in good condition and the remaining 37.5% said that the centre warehouse is at satisfactory level. This implies that the centre warehouse has no all required facilities of warehouse but is in a good condition which is supported by 60% of the respondents by that facts need to be maintained and more effort turned to it by the centre management minor improvement so as to be well equipped with all facilities of the warehouse which leads to efficiency and effective stores operations as far as materials management is concerned. Table 4.19 shows status of the centre warehouse.

**Table 4.19 Response on Status of the Centre Warehouse**

<b>Status</b>	<b>Frequency</b>	<b>Percent</b>
Valid Strongly well equipped	1	2.5
Good condition	24	60.0
Satisfactory	15	37.5
<b>Total</b>	<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.14 Stock Control Method Used by the Centre**

Table 4.20 indicates the respondents (staff) response on the status of the stock control method used by the centre on the study revealed that 20% said that the stocks are controlled manually using stores ledger and the remaining 80% said that inventories are controlled electronically using available inventory system known as Microsoft Navision which is implemented by the centre. This signifies that the institution is well equipped with stock control technology which ensures effective and efficiency management over inventories as is obvious understood that inventories carry 20% to 60% of total assets on the balance sheet so much control has to be exercised on inventories to ensure centre operations. By that fact the institution is performing well on inventory control as the system adopted is accuracy and reliable. Table 4.20 shows stock control method used by the centre.



**Table 4.20 Response on Stock Control Method Used by the Centre**

<b>Method</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Manually using stores ledger	8	20.0
	Electronically using available inventory system	32	80.0
	<b>Total</b>	<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.15 Centre Stock Taking Policy**

Table 4.21 indicates the respondents (staff) response on the centre stock taking policy on the study revealed that 97.5% said that the centre stock taking exercise is conducted annually (once per year) and the remaining 2.5% said that the centre stock taking exercise is conducted quarterly meaning that it is done every after three month period. This implies that the centre has a policy of conducting stock taking annually for the purpose of making physical verification of assets owned by the centre with their respective values. Stock taking exercise is very important to be undertaken with diligent care as determines how wealthy the organization is. The study revealed that the centre is doing well because adheres all procedures and instructions set for conducting stock taking exercise. Table 4.21 shows response on centre stock taking policy.

**Table 4.21 Response on Centre Stock Taking Policy**

<b>Period</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Annually	39	97.5
	Quarterly	1	2.5
	<b>Total</b>	<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.16 Centre Salary Scale Payment Satisfaction**

Table 4.22 indicates the respondents (staff) response on the centre salary scale payments on the study revealed that 20% said that they are satisfied with the salaries they are paid by the authority and the remaining 80% said that they are not satisfied with the salaries they are paid in the sense arguing that do not reflect the real life situations in so doing they decide to practice entrepreneurial activities so as to bridge the gap and cope with the current situation of life. This implies that some training activities are not performed properly by the staff because they are busy with their personal issues claiming that they are not satisfied by the salary structure they are paid which actually is a threat to the organization or institution so this salary problem has to be reconciled properly for staff betterment. Table 4.22 shows response on centre salary scale payment satisfaction.

**Table 4.22 Centre Salary Scale Payment Satisfaction**

<b>Response</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Yes	8	20.0
	No	32	80.0
<b>Total</b>		<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.17 Overtime Payment for Extra Working Hours**

Table 4.23 indicates the respondents (staff) response on the overtime payment for works done on extra hours on the study revealed that 32.5% said that when they work on extra hours they are paid overtime, 42.5% said that when they work on extra hours they are not paid overtime, 10% said that when they work on extra hours they are seldom paid over time and the remaining 15% said that there is no such an arrangement. This implies that there are some cadres in the institution paid overtime and others not which is not a good thing in managing employees because employees become happy and perform work effective when they observe that they are highly valued by the organisation and by so doing increase productivity of the centre, to rescue the situation here the top management has to restructure overtime payments to extra works to encourage staff work hard and think that they are all valued by the authority and not just part segment of staff valued. Table 4.23 shows response on Overtime payment due to works done on extra hours.

**Table 4.23 Overtime Payment for Extra Working Hours**

<b>Response</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Paid	13	32.5
	Not paid	17	42.5
	Seldom paid	4	10.0
	No such arrangement	6	15.0
	<b>Total</b>	<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.18 Annual Procurement Plan Adherence**

Table 4.24 indicates the respondents (staff) response on the annual procurement plan adherence on the study revealed that ten 10% said that the centre annual procurement plan is strongly adhered, 85% said that the centre annual procurement plan is satisfactory adhered and the remaining 5% said that the centre annual procurement plan is somehow adhered. Since respondents who said that the centre annual procurement plan is satisfactory adhered amounted 85% it implies that the centre is doing good in making sure that everything needed to be procured in the year is incorporated in the annual procurement plan and proposing the appropriate method of procurement to fit as per the budget estimate. By so doing the centre discourages any purchases out of the annual procurement plan which results to efficiency and effective operation. Table 4.24 shows response on adherence of annual procurement plan.

**Table 4.24 Annual Procurement Plan Adherence**

<b>Response</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Strongly adhered	4	10.0
	Satisfactory adhered	34	85.0
	Somehow adhered	2	5.0
	<b>Total</b>	<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.19 Receipt of Requested Materials Timely Without Delay**

Table 4.25 indicates the respondents (staff) response on the receipt of requested materials on the study revealed that 65% said that they receive requested materials timely without any delay and the remaining 35% said that they do not receive their requested materials timely and the identified critical reasons for that delay is technicality of the materials ordered (complex specifications) and suppliers incompetency caused by the nature of environment of Kigoma. Despite the existence of these factors for the material delay but the centre is doing good as respondents who agreed that they receive their requested materials timely without any delay constitute to 65% which signify that the material delivery is not poor. This also reflected in Table 4.13 which was investigating if trainees receive practical training for each module timely. Table 4.25 shows response on receipt of requested materials.

**Table 4.25 Response on Receipt of Requested Materials**

<b>Response</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Yes	26	65.0
	No	14	35.0
<b>Total</b>		<b>40</b>	<b>100.0</b>

Source: Field data, 2013

#### **4.20 Instructions Prepared for Stocktaking Exercise**

The study on the respondents (staff) response on the instructions prepared for stocktaking exercise revealed that all the respondents agreed that the instructions for the stocktaking exercise are prepared and given to all members involved in the stocktaking exercise accompanied by an official letter for that appointment stating the commencement of the exercise and the sections or areas which the appointee will be dealing with, one day seminar is conducted by the centre procurement unit on how the stock taking exercise will be conducted. This implies that the centre is aware about the significant of the stocktaking exercise because it involves stock count and the physical verification of all assets of the centre which are reflected in the balance sheet of the organization, in so doing identifies all the organization assets.

#### **4.21 Codification of Centre Assets for Control Purpose**

Table 4.26 indicates the respondents (staff) response on the codification of centre assets on the study revealed that 82.5% said that all centre assets are coded to ensure control

and the remaining 17.5% said that not all centre assets are coded. During the interview the respondents said that for the newly purchased assets which are not coded by that time waiting to be coded later are issued to the user department using an official stores document to signify receipt of that centre property.

This implies that the organization is very careful on its assets as proper control is exercised over centre assets and by so doing the centre minimizes the risks of losing of assets unnecessarily due to improper control.

The study observed that this was successfully done because the organization had competent and qualified procurement personnel responsible for making sure that everything is done in accordance with the organization policy and public procurement act with its corresponding regulations. Table 4.26 shows response on codification of centre assets.

**Table 4.26 Response on Codification of Centre Assets**

<b>Response</b>		<b>Frequency</b>	<b>Percent</b>
Valid	Yes	33	82.5
	No	7	17.5
<b>Total</b>		<b>40</b>	<b>100.0</b>

Source: Field data, 2013

## **CHAPTER FIVE**

### **5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Summary of Findings**

The study revealed that the centre had a competent and qualified personnel in materials management which resulted to effective and efficiency performance of the stores operations and procurement functions as all the procedures of stores and procurement are adhered. By that fact the centre general performance on meeting trainees' requirements had been realized to generally good which had been reflected in Table 4.13.

Through the findings the study revealed that Materials requirement Planning (MRP) technique was used to by the organization to ensure inventory control whereby the materials or items to support training were ordered quarterly by the vocational instructors with the purpose of making sure that trainees' modules are successfully done, this was reflected in analysis of Table 4.15, in addition to that inventories were controlled electronically using inventory system called Microsoft Dynamics – Navision, 2009 Version which had been implemented by the centre to ensure accuracy and reliability of stores operations from the material requisition order stage to issuing stage of materials, therefore the centre had moved from manual stores operation system to electronically computerized inventory system.



The study also came to realize that First In First Out (FIFO) system was used to evaluate or price inventories to ensure efficiency lying under the principle that “the earlier the material received in store the first the material is issued from store” and this method was appropriate as staff request materials needed for the first module before the next module to start as planned in the teaching modules.

## **5.2 Conclusion**

Overall the study found that inventory management in parastatal organizations is improving as the government is struggling to make sure that qualified and competent professionals are employed and highly paid and who are knowledgeable with the computerized inventory system with the goal of ensuring high performance as far as materials management is concerned, unlike previous years where materials management functions were or stores operations were conducted manually using stores ledger which was not effective and in addition to that materials management functions were ignored and operated by unqualified people in materials management on which the government resulted to operating parastatal organizations at loss with no any return since no proper control was exercise over materials management section.

### **5.3 Recommendations**

Based on the findings of the study, the following recommendations have been put forward.

1. In order for the centre to enhance and maintain quality training the technical materials have to order from the suppliers who are potential and have capability of delivering the requested materials as per specifications and ignoring suppliers or service providers whose capability and financial position is poor to enable them deliver the items ordered timely.
2. The government have to improve the salary scale to staff or employees as their morale of for work had been decreased because they are underpaid, this had been noted by the study to employees of VETA Kigoma as they were complaining that salaries do not reflect the real life situation, if this problem will not be taken seriously by the government professional and experienced employees shall quit from employment and look for green pastures somewhere else whose payments to employees are satisfactory.
3. Capacity building to staff with regard to their professionals have to be exercised as the technology is always changing therefore staff have to cope with the

changing environment so as to be up to date resulting to efficiency and effective performance due to the fact that employees will be well equipped and current.

4. Warehouse has to be well equipped with all necessary facilities and make sure that the stores officer becomes the custodian of the warehouse because it keeps most valuable organization property therefore much care have to be exercised to make sure that warehouse is maintained at the standard level and all responsibilities and control of stores operations left to only one person to ensure protection of materials stored.
5. The study revealed that the function of codification of assets of the organization was centralized to head quarter which is not proper because delays the function of codification of newly purchased assets resulting to attracting people to steal as arrangement of people coming from the head quarter with the purpose of coding items not coded takes time and cost to the organization. Therefore it is advised to decentralize the function of codification of newly purchased assets whereby all centres shall make arrangement for codification of uncoded assets for the purpose of ensuring control of the organization property.

#### **5.4 Areas for Further Study**

In the view of the study findings with the purpose of establishing dependable, reliable, valid and comprehensive conclusion on the assessment of inventory management in parastatal organizations in Tanzania, another study from other environments not Kigoma (as the study was limited to only Kigoma Region) could be carried out taking a large representative sample of the entire population that was not covered in this study for the purpose of validating the findings revealed by this study.

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## APPENDICES

### Appendix I. Questionnaires to the Targeted Respondents (Staff)

#### General guiding

- i. Please put tick (✓) where appropriate
- ii. Briefly explain shortly where necessary in space provided there in
- iii. Please don't respond to the question which you are not sure with (leave it)

#### Questions

##### 1. Gender

- a) Male            [     ]
- b) Female        [     ]

##### 2. Age

- a) 0 – 17 Years                    [     ]
- b) 18 – 30 Years                   [     ]
- c) 31 – 45 Years                   [     ]
- d) 46 – 60 Years                   [     ]
- e) 61 years and above            [     ]

##### 3. Marital status

- a) Single                            [     ]
- b) Married                           [     ]
- c) Divorced                         [     ]

d) Widowed [      ]

4. Education level

a) Standard seven [      ]

b) Form four [      ]

c) Form six [      ]

d) Certificate [      ]

e) Diploma [      ]

f) Advanced diploma [      ]

g) Bachelor degree [      ]

h) Postgraduate diploma [      ]

i) Masters degree [      ]

j) Doctor of Philosophy (PHD) [      ]

k) Others, please specify [      ]

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5. Do you have any disability or physical unfitness?

a) Yes [      ]

b) No [      ]

6. Do you think that keeping inventories in your organization is beneficial?

a) Yes [      ]

b) No [      ]

7. What method does the organization use to evaluate inventory?

- a/ First in first out ( FIFO) [   ]
- b/ Last in first out (LIFO) [   ]
- c/ Average cost (A C) [   ]
- d/ Standard cost (S C) [   ]
- e/ Others please specify [   ]

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8. Does the organization have a computer system analyst?

- a/ Yes [   ]
- b/ No [   ]

9. What is the qualification of the stores officer in your organization?

- a/ standard seven with experience of Materials Management [   ]
- b/ Form four with experience of Materials Management [   ]
- c/ Form six with experience of Materials Management [   ]
- d/ Certificate in Materials Management [   ]
- e/ Diploma in Materials Management [   ]
- f/ Advanced Diploma/ Degree in Materials Management [   ]
- g/ Certified procurement and supplies professional ( C P S P) [   ]
- h/ Advanced Diploma/ Degree in Computer Study [   ]
- i/ Any other qualifications (please specify) [   ]

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10. Does inventory mismanagement affect the profitability of your organization?

a/ Yes [    ]

b/ No [    ]

11. If the answer in question ten above is 'Yes' affects to what extent?

i/ 0% to 20% [    ]

ii/ 20% to 40% [    ]

iii/ 40% to 60% [    ]

iv/ 60% to 80% [    ]

v/ 80% to 100% [    ]

12. "Professionally, one should not either under or over stock"

What are the methods/ techniques your organization employs to determine the demand of materials your customers need?

a/ Economic Order Quantity (EOQ) [    ]

b/ Materials Requirements Planning (MRP) [    ]

c/ Just In Time (JIT) Philosophy [    ]

d/ The ABC inventory technique [    ]

e/ Fast moving, Slow moving and Non moving items (FSN) Analysis [    ]

f/ Others please specify [    ]

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13. How can you assess inventory management effectiveness in your organization?

- a/ 20% effective [    ]
- b/ 40% effective [    ]
- c/ 60% effective [    ]
- d/ 80% effective [    ]
- e/ 100% effective [    ]

14. Have you noticed several times that your organization faced a problem of out of stock?

- a/ Yes [    ]
- b/ No [    ]

15. If the answer in question fourteen above is 'Yes' what is the main cause?

- a/ Suppliers' financial constraints [    ]
- b/ Late provision of orders to Suppliers [    ]
- c/ Stores officer incompetency [    ]
- d/ Technicality of materials ordered [    ]
- e/ Late requests placed by the user department [    ]
- f/ Others please specify [    ]

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16. Do you attend seminars with regard to your professional?

a/ Yes [     ]

b/ No [     ]

17. If the answer in question sixteen above is “Yes” how frequency?

a/ Once per year [     ]

b/ Twice per year [     ]

c/ Quarterly [     ]

d/ Unscheduled [     ]

e/ Others please specify [     ]

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18. Does your organization have a warehouse?

a/ Yes [     ]

b/ No [     ]

19. If the answer in question eighteen above is “Yes” is it well equipped with all required facilities of a warehouse?

a/ Strongly well equipped [     ]

b/ Good condition [     ]

c/ Satisfactory [     ]

d/ Bad condition [     ]

20. How do you control stocks in your organisation?

a/ Manually using stores ledger [     ]

b/ Electronically using available inventory system [     ]

21. Do you conduct stock taking in your organization?

a/ Yes [     ]

b/ No [     ]

22. If the answer in question twenty one above is “Yes” how frequency is done?

a/ Annually [     ]

b/ Semi annually [     ]

c/ Quarterly [     ]

d/ Unscheduled [     ]

e/ Others please specify [     ]

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23. Are you satisfied with your salary scale you are paid?

a/ Yes [     ]

b/ No [     ]

24. When you work on extra hours are you paid overtime?

a/ Paid [     ]

b/ Not paid [     ]

c/ Seldom paid [     ]

d/ No such arrangement [     ]



25. Does your organization prepare annual procurement plan?

a/ Yes [     ]

b/ No [     ]

26. If the answer in question twenty five above is “Yes” how effective is it adhered?

a/ Strongly adhered [     ]

b/ Satisfactory adhered [     ]

c/ Somehow adhered [     ]

d/ Not adhered at all [     ]

27. Do you receive your requested materials timely without any delay?

a/ Yes [     ]

b/ No [     ]

28. If the answer in question twenty seven above is “Yes” .Do you receive all materials as you requested without any deficit?

a/ Yes [     ]

b/ No [     ]

29. Is there any instruction prepared and send to all staff involved in the stock taking exercise for information before?

a/ Yes [     ]

b/ No [     ]

30. Are the organization’s assets all coded to ensure control?

a/ Yes [     ]

b/ No [     ]

31. If the answer in question thirty above is “No”, what way used to ensure control to some organisation properties not coded?

- a/ Kept in store waiting for codification [    ]
- b/ Given to user department with official stores document [    ]
- c/ Given to user department without official stores document [    ]
- d/ Others please specify [    ]

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32. What is your position in the organization?

- a) Principal [    ]
- b) Human resource manager [    ]
- c) Registrar [    ]
- d) Bursar [    ]
- e) Accountant [    ]
- f) Stores officer [    ]
- g) Supplies assistant [    ]
- h) Vocational instructor [    ]
- i) Librarian [    ]
- j) Assistant librarian [    ]
- k) Kitchen supervisor [    ]
- l) Cook [    ]
- m) Personal secretary [    ]

- n) Receptionist [    ]
- o) Registry assistant [    ]
- p) Office attendant [    ]
- q) Others please specify [    ]

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**Thank you for your Cooperation**

## **Appendix II. Questionnaires to the Targeted Respondents (Vocational Trainees)**

### General guiding

- i. Please put tick (✓) where appropriate
- ii. Briefly explain shortly where necessary in space provided there in
- iii. Please don't respond to the question which you are not sure with (leave it)

### Questions

#### 1. Gender

- a) Male [      ]
- b) Female [      ]

#### 2. Age

- a) 0 – 17 Years [      ]
- b) 18 – 25 Years [      ]
- c) 26 – 30 Years [      ]
- d) 31 years and above [      ]

#### 3. Marital status

- a) Single [      ]
- b) Married [      ]
- c) Divorced [      ]
- d) Widowed [      ]

## 4. Education level

- a) Standard seven [     ]
- b) Form four [     ]
- c) Form six [     ]
- d) Certificate [     ]
- e) Diploma [     ]
- f) Others, please specify [     ]

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## 5. Do you have any disability or physical unfitness?

- a) Yes [     ]
- b) No [     ]

## 6. Are you getting practical training of each module timely?

- a) Yes [     ]
- b) No [     ]

## 7. If the answer in question six above is “Yes” to what extent satisfied?

- a) 20% [     ]
- b) 40% [     ]
- c) 60% [     ]
- d) 80% [     ]
- e) Above 80% [     ]

8. Are you satisfied with the delivery schedule of your daily meals at the centre with regard to trainees' meal timetable?

a) Yes [     ]

b) No [     ]

9. If the answer in question eight above is 'Yes' to what extent satisfied?

a) 20% [     ]

b) 40% [     ]

c) 60% [     ]

d) 80% [     ]

e) Above 80% [     ]

10. How can you comment on the general performance of the centre towards meeting your requirements as eligible trainee?

a) Very good [     ]

b) Good [     ]

c) Satisfactory [     ]

d) Worse [     ]

11. Are your practical and theoretical training materials delivered timely for each quarter?

a) Yes [     ]

b) No [     ]

12. If the answer in question eleven above is “No” what are the reasons for that late delivery?

- a) The stores officer is not competent [     ]
- b) Top management problem in giving decisions [     ]
- c) Poor capabilities of suppliers for the materials [     ]
- d) Others, please specify [     ]

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**Thank you for your Cooperation**