

***A STUDY OF MATERIAL RESOURCE MANAGEMENT IN  
PREPARATORY SCHOOLS OF ARSI ZONE OF OROMIA  
REGIONAL STATE***

**BY**

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**ADDIS ABABA UNIVERSITY  
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REGIONAL STATE***

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## TABLE OF CONTENTS

Acknowledgements .....	i
Table of Contents .....	ii
List of Tables .....	v
Abbreviations .....	vi
Abstract .....	vii

### **CHAPTER ONE**

1. The Problem and its Approach .....	1
1.1. Background of the Study .....	1
1.2. Statement of the Problem .....	3
1.3. Significance of the Problem .....	4
1.4. Delimitation of the Study .....	5
1.5. Limitation of the Study .....	6
1.6. Research Methodology, Procedure and Source of Data .....	6
1.6.1. Research Methodology .....	6
1.6.2. Procedure of the Study .....	6
1.6.3. Sources of Data .....	7
1.6.4. Instruments for Data Collection .....	7
1.6.5. Sample Population and Sampling Techniques .....	7
1.6.5.1. Sample Population .....	7
1.6.5.2. Sampling Techniques .....	8
1.6.6. Methods of Data Analysis .....	8
1.7. Definition of Terms .....	8
1.8. Organization of the Study .....	9

### **CHAPTER TWO**

2. Review of Related literature .....	10
2.1. Concepts of Resource .....	10
2.2. Material Resources .....	11

2.2.1. Material Resources Management .....	12
2.2.2. Scope of Material Resources Management .....	14
2.3. Planning .....	14
2.3.1. Overview of Planning .....	14
2.3.2. Educational Planning .....	15
2.3.3. Material resources planning .....	16
2.3.4. Steps in the planning process .....	18
2.4. Acquisition and Supplement of Educational Materials .....	18
2.5. Organization and Staffing of Materials Management .....	19
2.5.1. Organizing Materials Management .....	19
2.5.2. Staffing Materials Management .....	20
2.6. Purchasing Educational Materials .....	21
2.6.1. Parameters of Purchasing .....	23
2.6.2. Purchasing Cycle .....	24
2.6.3. Purchasing Policy .....	25
2.6.4. Steps or Procedures of Purchasing .....	26
2.7. Production of Educational Materials .....	27
2.8. Store Keeping / warehousing .....	29
2.8.1. Objectives of Store Keeping/ Warehousing .....	30
2.9. Allocation and Distribution of Educational Materials .....	31
2.9.1. Allocation of Educational Materials .....	31
2.9.2. Distribution of Educational Materials .....	32
2.10. Materials Handling .....	33
2.11. Proper use of Material Resources .....	34
2.11.1. Controlling Material Resources .....	34
2.11.2. Inventory .....	35
2.12. Efficiency and Effectiveness of Resource Management.....	36
2.13. Standards in Educational Materials .....	36
2.14. Disposition .....	37

2.14.1. Managing Disposition .....	38
2.15. Responsibility and Authority in Material Resources Management .....	38

**CHAPTER THREE**

3. Presentation and Analysis of the Findings .....	40
<i>Part One:</i> Characteristics of the Study Population .....	41
<i>Part Two:</i> Analysis and Interpretation of the Study .....	44

**CHAPTER FOUR**

4. Summary, Conclusion and Recommendations of the Study .....	75
4.1 Summary .....	75
4.2 Conclusion.....	80
4.3 Recommendations .....	81

References .....	84
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Appendices

- Appendix 1: Questionnaire for teachers.
- Appendix 2: Questionnaire for some teachers and ETBM (oromigna version)
- Appendix 3: Interview for ZEO and WEOs
- Appendix 4: Interview for store keepers (oromigna version)
- Appendix5: Observation check list

## LIST OF TABLES

	<b>Page</b>
Table I: Respondent Groups Described by their Characteristics .....	42
Table II: Teachers' and Principals' Teaching Load per week .....	43
Table III: In School Responsibilities of Teachers and Principals .....	44
Table IV: Policy Guide Line of Material Resources Management .....	45
Table V: Organization of Material Resources Management .....	47
Table VI: Planning of Material Resources Management .....	49
Table VII: Purchasing Material Resources .....	51
Table VIII: Production of Material Resources .....	54
Table IX: Storage of Material Resources.....	55
Table X: Allocation and Distribution of Material Resources .....	57
Table XI: Standards of Material Resources .....	60
Table XII: Availability and Utilization of Material Recourses .....	63
Table XIII: Control and Inventory System of Material Resources .....	67
Table XIV: Disposal of Material Resources .....	69
Table XV: Skill, Knowledge and Participation of concerned bodies .....	72

## Abbreviations and Acronym

CCA	Co - Curricular Activities
EDUC	Education
EMPDA	Educational Materials Production and Distribution Agency
ESRDF	Ethiopian Social Rehabilitation and Development Found
ETB	Education and Training Board
ETBM	Education and Training Board Members
ETP	Education and Training Policy
MRM	Material Resources Management
MIS	Management Information System
MOE	Ministry of Education
MOEFA	Ministry of Education and Fine Arts
PTU	Parent Teachers' Union
REB	Regional Education Bureau
TGE	Transitional Government of Ethiopia
UNESCO	United Nation Education, Scientific and Cultural Organization
WEO	Wereda Education Office
WFEDO	Wereda Financial and Economic Development Office
ZEO	Zone Education Office

## ABSTRACT

*The purpose of this study was to investigate the status of the management of material resources in the preparatory schools of Arsi Zone of Oromia Regional State; and hence to discover if differences exist among teachers, ETB members and principals in perceiving the problems identified. To this end, answers to basic questions pertaining to the management of school material resources, which consists Material resources planning, acquisitions and supplement of educational materials, Organization and staffing material resources, Management, purchasing educational materials, production of educational materials, warehousing, Allocation and distribution of educational material resources, materials handling, proper use of material resources, efficiency and effectiveness of resources management, standards in educational materials, disposition, Responsibility and authority in material resources management were sought.*

*Following a review of the literature related to the problem understudy, a survey questionnaire was developed, Pilot tested, modified and distributed to a sample of 105 teachers, 30 ETB members and 5 principals drawn from 5 preparatory schools of Arsi zone. Of the respective total sample size of the three study groups, 92.4 percent teachers, 90 percent ETB members and 100 percent of the principals, filled in and returned the questionnaire.*

*Some of the major findings include:*

- The preparatory schools were not in a position to manage their material resources properly.*
- The necessary guidelines to manage material resources were not disseminated to the users.*
- Appropriate number of man power was not assigned to the stores of the sample schools.*
- There was poor coordination among the concerned bodies to implement managerial functions, in the system.*
- Managing and controlling of material resources was left to the store keepers*
- Material resources were not identified, arranged, recorded and coded properly.*
- Most of the principals and the administrative staff in these schools did not have the necessary professional training and experience in relation to their position.*
- Most of the concerned bodies seldom participate in material resources management.*

*Recommendations for efficient resources management include:*

*The managerial functions of principals and administrative staff should be strengthened and training on management of material resources should be given.*

*The schools should closely work with teachers, students, parents and community to secure effective and efficient resources management. Attempts could be made to Improve the professional training and experience of administrative staff.*

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1 Background of the Study

Education may be regarded as the center of every civilization. It is an important sector for economic, social and cultural development aimed at satisfying the needs, desires and hopes of a society. It lets the individual learner become a thinking, empowered and responsible citizen. Therefore, it is crucial to have well skilled, educated manpower if a country seeks to reach a desirable level of economic, social and cultural development. Relevant education can be fully realized when important resource inputs, necessary to facilitate the whole instructional process, are made available and well managed. One of the major activities in which schools are inevitably involved in material resources management (MRM) is the activity of management which is concerned with the efficient flow of materials to, thorough and out of an organization for optimum use of materials (Datta, 1988: 3).

Material resources include all necessary supplies and equipment which are useful to maintain organizational production or service such as land, buildings (the classroom itself with its walls, windows, ventilators, together with their glass fittings, doors with their handles and hinges), furniture (desk, tables, chairs, chalk boards, etc.). Material resource may also include machine, computer, books, manuals, geographical maps and globes, educational media like radio, television sets, overhead projectors, other audio visual aids and raw materials consisting organic and inorganic materials such as scientific apparatus or chemicals, any specimen of plants and animals (Aroral, et al. 1980: 15), (Ayalew, 1992: 7),(MOEFA, 1963: 84).

The success of the teaching – learning process is practically dependent up on how schools are capable of managing and utilizing their resources. That is, effective and efficient management of school material resources may lead to success as much as improper and poor handling of the same resources are liable to lead to failure (Candoli,et al, 1984: 219). Bray (1988: 45), states that: “The management and utilization of school property shall be efficient to create the proper condition for an effective teaching learning process and improving on the quality of education”.

Hence, school systems affected to make the best use of their scarce material resources to attain their goals and objectives.

*Management of material resources involves planning (for materials), organizing (for stores and materials function), staffing and motivating people (personnel work in the department), controlling and coordinating (supervising the operations and harmonizing for a smooth flow of materials) necessary for the achievement of corporate objectives, (Datta, 1988:3).*

We are living in a time where the importance of material resources management activities is continuously increasing in utilization, recognition and importance. Nevertheless, in Ethiopia, many organizations, including educational organizations, have not yet understood the benefits that could be derived from efficient and effective material resource utilization. As a result, not only the concepts of material utilization but also material resource related activities are in general neglected (Bekuretsion, 2005:3). Hence, in order to achieve the educational objectives effective utilization of resources is unquestionable. When there is a process of allocation of resources, due attention should be given on selecting, organizing, allocating, distributing and controlling to minimize wastage. So, careful identification of resources and organization based on usage of maximum educational result is essential. According to the educational and Training policy of Transitional Government of Ethiopia (TGE, 1994: 98), in order to promote the quality, relevance and expansion of education, it has been made the focus of attention to supply, distribution and utilization of educational materials, educational Technologies and facilities.

One of the most critical educational problems in Ethiopian schools was inadequacy of material resource and over crowdedness of classrooms (Amare, 1999:59). In addition the educational and training policy (1994:27) claimed that the past education system was faced with inadequate facilities, insufficient training of teachers, over crowded classes, shortage of books and other materials.

The quality of education to day has become to pressing issue of the country. Most of the schools are ill equipped. The government is not able to allocate budget to all schools. The capacity of the community to fund schools is limited or non-existent. Moreover, inefficiency in material management is one of the major features of the education system of Ethiopia. Due to this and other management inefficiency factors, the overall education system faces many setbacks. Sosale put this fact as follows. "Past experiences in developing countries assert that government

monopolies that have prescribed published, and distributed educational materials have been largely inefficient and ineffective in attaining the objective of supporting education for all (1999:2)".

This study aimed at identifying the existing practices and problems of material resource management in preparatory schools of Arsi Zone; because there were various problems that are associated with MRM. The researcher tried to gather some information informally that in the past, material resources were not managed properly. Based on the findings, conclusions and feasible recommendations are made towards the end, which indeed; to be followed by utmost effort to translate out comes of the research in to practice for improvement of the schools in MRM in the zone.

## **1.2. Statement of the Problem**

The school exists in order to provide the learner with desirable change of behavior. Our schools are concerned with the learning of students, especially their cognitive learning (David H. et al, 1996: 27). We must, therefore, consider the question of the type of knowledge or experience that the learner is to have in school (Roos James, 1942: 194). For this, activities such as material resources management are mandatory. Because, material resources are the means through which organizational activities productive services and satisfaction ends are attainable. According to UNESCO (1984: 16-17), they are also the media of instruction used for training and teaching all subjects, equipment for technology and vocational training. In many organizations of developing countries like Ethiopia, it seems that material resources management has not been given due concern (Bekuretsion, 2005: 5). Nevertheless, today, due to the aggravated problems of scarcity of material resources and to the continuously increasing cost of materials, the materials element has drawn the attention of many educational managers.

There was no adequate study made on material resource management in Ethiopia in general and in Arsi Zone in particular. However, from studies made in other regions such as Tigray, it has been realized that inefficiency in materials management was one of the major features of the education system of Ethiopia. In preparatory schools of Arsi zone it was demonstrated that teachers did not often take advantages of materials including books even when they are available. Some teachers do not set them selves as good examples for their students.

To identify problems at lower level management and wastage of resources in the school, the skill, competence and qualification of managers is important in light of the existing challenges and obstacles, which exist in the education system of the preparatory schools of Arsi zone.

The purpose of this study was, therefore, to examine the magnitude and problems of unwise use of material resources in preparatory schools of Arsi zone. The study emphasized on investigating the degree to which absence of guidelines and ineffective use of the existing ones, lack of qualification of personnel and participation of concerned bodies contribute to the overall wastage of material resources in preparatory schools. Besides, the difference among teachers, ETBM and principals in their perception and opinion on the management activities of material resources was examined.

In summary, the study was aimed at answering the following basic questions.

- ✓ 1. To what extent are the managerial functions of planning, procurement, allocation, distribution, and utilization, etc. of material resource effective?
- ✓ 2. Are there guidelines for material resources management in the preparatory schools? If there are, to what extent do they help in managing material resources?
3. To what extent do professionals and administrative personnel participate in the effective management of material resources?
- ✓ 4. Does the educational qualification of school principals, administrators and the school personnel have significant importance in the management of material resources in the preparatory schools?
5. To what extent are schools capable enough to facilitate the teaching-learning process with educational material resources available to them?
- ✓ 6. What are the major factors that influence the management of material resources in the preparatory schools of Arsi zone?
7. Is there any difference among teachers, principals and ETBM in their perception and opinion about the management of material resources?

### **1.3. Significance of the Study**

Getting educational resources and managing them properly are the major challenges that confront educational managers.

Material resources management is important, because we are living in the area of shortage of all kinds of materials. Optimum utilization of available scarce resource and prevention of all types of waste are required by adapting scientific system of management and control of materials (Bekuretsion, 2005: 8). Controlling involves establishing standards of performance, measuring results of work activities, and taking corrective measures on time if deviations are detected (Donnely. et al., 1992: 8-9).

Thus, the significance of this study lies in that it could be important for the following points.

- It will suggest alternative solutions to be used by teachers, principals and administrative personnel to minimize their poor management of material resources.
- It is expected to create awareness among members of the preparatory schools to take individual responsibility for the use of material resources and to encourage higher authorities, educational policy makers and planners to pay more attention to material resources management problems existing in schools.
- It shall also provide management and other operating staff with the understanding of how material resources management are being carried out in preparatory schools and how improvements could made in this area.
- Ultimately, the study shall contribute as an additional source of information useful for future studies.

#### **1.4. Delimitation of the Study**

This study involved 5 preparatory schools of Arsi zone of Oromia Regional State. These schools were:

Arbegnoch Preparatory school

Asella Preparatory school

Bekoji Preparatory school

Dide'a Preparatory school

Huruta Preparatory school

In order to make the study more manageable, other levels of schools were not included or represented. The zone is one of the administrative zones in Oromia regional state located at about

175 km South East of Addis Ababa. Arsi zone was chosen on the basis of its centrality to the region where much of its problems were more or less related with the rest zones in the region.

The study focused on the area of material resources management, because, it was very difficult to manage in terms of time and other resources, regarding to include other aspects of educational resources management in the zone.

### **1.5. Limitation of the Study**

The most serious limitation of the study was the difficulty of access to get adequate and up to date information to support the study with necessary background. Besides, for lack of time and resources, other than questionnaire, interview and document analysis, other instruments such as focus group discussion to collect descriptive data were not employed. Thus, the study may not include all the internal feelings and perceptions of the study population about material resources management.

Therefore, due to these and other short comings, the study by no means claims to be conclusive. It would rather serve as a spring board to study the problem of material resources management in a more detailed and comprehensive approach.

### **1.6. Research Methodology, Procedure and Source of data**

#### **1.6.1 Research Methodology**

Descriptive survey method was employed in this research, because the study was aimed at examining and describing the major problems encountering the current management system of material resources in preparatory schools of Arsi zone. Comparison was made to establish differences among the three study groups (Teachers, ETB members and principals), in their perception of the elements of the problem under study.

#### **1.6.2 Procedures of the Study**

The investigator read available literature on material resources management. Then, basic questions of the study on which the design of the questionnaire based on was established. The draft of the questionnaire was modified in accordance with relevant comments obtained from the researcher's thesis advisor and then, pilot tested.

The next step was to approach principals of the 5 sample preparatory schools in person, and presented to them a letter of cooperation written from the Head department of Educational planning and management (A.A.U). After that, the questionnaire was distributed to teachers, ETB members and principals selected from the respective sample preparatory schools.

Generally, the researcher distributed the survey questionnaire to teachers, ETB members and principals with and through cooperative practicing educational administrators for the 5 sample preparatory schools.

### **1.6.3 Source of Data**

There were primary and secondary data gathering sources in this study. The primary sources for the study were the first hand information that was obtained to do this research. There were information collected from zone education office, Wereda education office and the store keepers through interview and the data obtained from teachers, ETBM & principals through questionnaire. In addition the personal observation of the researcher also served as supplement to primary data gathering sources.

The second- hand information for this study include information gathered from various books, reference materials and other published and unpublished sources. Furthermore, relevant documents were also used as secondary sources.

### **1.6.4 Instruments of Data Collection**

A set of survey questionnaire, 140 in total, was distributed to 105 teachers, 30 ETB members and 5 principals selected from 5 preparatory schools of Arsi Zone. The questionnaire involved a total of 52 items. All the questionnaires were close - end. Besides, structured interview was used to gather information from schools' store keepers, Wereda and zonal education officers. To supplement the study, personal observation was also made.

### **1.6.5 Sample Population and Sampling Techniques**

#### **1.6.5.1 Sample Population**

Information on the current management of material resources was collected from three groups. These were teachers, ETB members and principals.

The study was decided to take place in preparatory schools of Arsi zone because of its centrality to the region where much of its problems were related with the rest zones of the region.

As per 1997/98 statistics of Arsi zone education office, there were 10 preparatory schools in which 10 principals 215 teachers and 80 ETB members were assigned. Five preparatory schools, 50.00 per cent of the total, were selected purposely, because the rest 5 schools were newly up graded from high schools. Hence, relevant data may not be available. As a result 105 teachers, 5 principals and 30 ETBM were involved.

### **1.6.5.2 Sampling Techniques**

There were a total of 140 teachers, 5 principals and 40 ETB members in the aforementioned 5 sample preparatory schools. Out of these 105 of the teachers, 5 of the principals and 30 of the ETB members were involved in the study. All principals of the sample schools were included because of their manageable size. To decide the number of sample teachers from each school quota sampling was employed. It was difficult to get ETB members at the needed time. In order to avoid such difficulty available sampling was employed to select samples from ETB members. The size of teacher representatives for each school in the study was set by a technique of simple random sampling. Then, 140 of the total number of teachers was computed and a total sample size of 105 teachers was drawn.

### **1.6.6 Methods of Data Analysis**

In analyzing the findings of the study data collected were organized in tabular forms and in terms of frequency or percentages of respondents selecting each response option appeared in each item of the questionnaire. To test perceptual differences among teachers, ETB members and principals in material resources management related problems chi square ( $\chi^2$ ) test at the 0.05 level of significance was adopted.

## **1.7. Definition of Terms**

Material resource: is any device in the school or its environment that may be organized and assist the teachers to transmit facts, skill, attitudes, and knowledge, understanding and application to learner intended to facilitate learning.

Material resource management: - It is an aspect of management with planning, acquisition, allocation, distribution, and controlling the proper use as well as maintenance of educational materials and facilities in order to realize the objectives of the education system.

Perception - a mental image or view towards certain activities

Preparatory school: - A school, which, as a result of ETP of 1994, provide education for students completed ten years of general secondary education

Purchasing: - is the function of buying raw materials or acquiring supplies, equipment and materials required by the education system

Wereda: any of the sections into which a zone is divided to facilitate its delivery.

Zone: any of the sections into which a region is divided to facilitate its delivery.

## **8. Organization of the Study**

The study is divided in to four chapters. The first chapter deals with the problem and its approach in which background of the study; statement of the problem and basic questions; significance, delimitation, and limitation of the study; research methodology and procedures of the study; and definition of key terms used are involved. While the whole of the second chapter deals with the review of the related literature, the third chapter is meant for presentation and analysis of the findings. Finally, summary, conclusion and recommendations are presented in chapter four.

## CHAPTER TWO

### 2. REVIEW OF THE RELATED LITERATURE

#### 2.1 Concepts of Resource

Resources in general are defined as something that lies for use or that can be drawn up on for aid to take care of a need. To sustain the life of any organization, resources are essential inputs. This is because, without the aid of resources, there is hardly any type of human activity which can be performed in any kind of organization. Furthermore, Durbin et al (1989:4) point out that, resources are the only means through which organizational activities; production, service and satisfaction ends are attainable.

Like in any organization, resources are the major inputs of educational system. Thus, effective teaching-learning process can take place through the assistance of proper and relevant educational resources. The concept of resources incorporate different things; such as school building, equipment, supplies and laboratory (Nebiyu, N.Y: 260). To Sherlekar and others (1988: 473), people and things (materials) are the two most important resources. UNESCO (1992: 152-153), further explains that anything in the school or its environment that may be organized for use in the process of teaching in the school and learning that are understood as human resources, material resources, physical resources, financial resources and time resources are called resources or educational resources.

The social demand for education is rising constantly from time to time. This is because, education entails both social and economic objectives and these derive from the overall social and economic goals in the development process. Thus, a provision of available resources is required to attain its desired goals for any educational organization. These resources, according to Aggarwal (1995: 395), include: human resources, material resources, financial resources Information resources and time resources.

Of the above mentioned resources, material resources are among one of the important factors for the achievement of goals in any educational institution. They are also the media of instruction used for teaching all subjects, equipment for teaching technology and vocational training

(UNESCO, 1984: 16-17) However, material resources are scarce. As a result they need careful management.

Materials management means many things to many people. This is because of the organizational fragmentation and complete compartmentalization of some of the basic management functions concerned with materials incorporate activities (Datta, 2004:1). This indicates that different organizations practice various ways of materials management.

However, material management usually includes the major activities such as planning, organizing, purchasing and/or producing, warehousing, distribution, controlling and disposition (Gaither, 1982: 439). These activities form the frame work for studying the nature and scope of management. According to Hailesilasi (1995:15), in schools, the management of resources is mostly concerned with two basic elements. Namely: human elements and non human and other school properties.

Elsbee and McNally (1959: 477) put that educational resources management is also a challenging managerial activity. This can be seen from different angles. For instance, the kind of educational materials that exist in the school and the manner in which they are administered could have a considerable influence up on the teaching- learning process. Hence, the interaction between available educational resources on the one hand and the management aspect on the other hand is an important issue.

## **2.2 Material Resources**

The term material has been defined by various experts in various ways. According to Gaither, material is any commodity used directly in producing a product or service, such as: raw materials, component parts, sub assemblies and supplies (1982: 438).

Regarding the scope of material resources, different writers have various ideas. To Arora et al (1980:15), all necessary supplies and equipment which are very useful to maintain organizational production or services are material resources. Such resources include: land, buildings, furniture, office or other equipment, machines, computers, etc. In connection to educational material resources, Bekuretsion (2005:15), states that material resources include renewable and immediate use items. Each item is used for specific objectives and the integration of all items can be used for specific objectives and the integration of all items can help to promote the education process.

Generally, material resources in general and educational material resources in particular are stated in different ways. Nevertheless, the central idea of all writers is almost the same.

*Although, material resources are defined by different writers differently, they are the life blood of any organization (Ahuja, 1993: 358), thus, the objectives of any organization can be attainable with the great help of material resources. Regarding educational materials Nebiyu (N.Y: 295) supports the above idea as: learning is believed to be run through the assistance of educational materials. Furthermore, material resources are any inputs or consumable items that are fixed or recurrent objects used in the process of production.*

To sum up, however they are stated and defined differently by different writers, material resources are the major inputs of all activities in any organization.

Material resources are classified as fixed (durable properties which can last relatively longer life) and raw materials (those properties which can exist a relatively shorter life, usually one or less than two years) (stoops et al, 1981: 163). The physical scientist Kumar in Hailesilasi (1995:15), distinguishes resources as biological and non-biological. On the other hand, Juditrees (1985: 13), categorizes resources as stock (non-renewable) and flow (renewable). Moreover, Durbin et al (1984:4), classify as human, physical and technological. For economists, particularly material resources are grouped in to raw material resources and capital resources (Certo, 1986:15). It is also classified as: software, hardware, consumable and Durable (non – consumable) UNESCCO, 1984:64).

Generally, the classification of material resources is based on the concept or understanding of different scholars in various disciplines such as physical science, economist etc.

### **2.2.1 Material Resources Management**

As Datta (1988:7), has explained in detailed in the early years of the present century, attempts were made to professionalize the area of material management. At present, school material resources management function is observed as an integral part of the school management function. However, there is a considerable variation in the nature and position of school material resource management function. This is due to the fact that there is varying size of the school system and the complexity of the educational programs (Hoyle & McMohon, 1986:41).

Material resources management has been defined by various authorities. For instance, Datta (1986:3), states material resources management as: essentially an activity of enterprise for the procurement and use of materials distinctly separated from the process of procurement and use of human skill and labor for the ultimate deployment to attain some predetermined objectives.

He has also emphasized that material resources management is not an exact science. Adesina (1990:7), has also defined material resources management in general as “. . . organization and mobilization of all human and material resources in a particular system for the achievement of identified objectives in the system.” Thus, material resource management in general is concerned with managing human beings and materials.

The concept of having one department responsible for the flow of materials, from supplier through production to consumer is relatively new. Although many organizations have adapted this type of organization system, there are still a number of organizations which do not have. If companies wish to minimize total costs in this area and provide a better level of customer services, they will have to move in this direction (Arnold, 1998:7).

In supporting this idea, Sherelekar and others (1988: 473-474), state in detail that scientific management of material resources is a cost-reducing device and important means to bring about improvement in production, capacity of plants, Saving of labour time, reduction of inventories, reduction in storage space, reduction in damage to materials, smooth flow of production control, reduced employees fatigue and so on.

Therefore, a material resources management as a discipline is the flow of a system with comprehensive and feasible controls from procurement till the final goods reach at the hands of users.

Material Resource management (MRM) is a strategic alternative to disposal contracting and emphasizes cost-effective resource efficiency through prevention, recycling, and recovery in addition to environmentally sound hauling and disposal. To this connection, Datta (1986: 4-19), has divided the merits of material resources management objectives of any system in to two major categories. Namely: primary and secondary objectives. According to him, activities included in the primary objectives are purchasing, storing and inventory management continuity of supply, quality of materials, good supplier relations and department efficiency. On the other

and, regarding the secondary objectives, the following points have been included. These are making or buying decisions, values analysis and engineering, standardization and price demand and requirements forecasting.

## **2.2.2 Scope of Material Resources Management**

Regarding the scope of material resource management, various ideas have been forwarded by different writers. According to Datta (1986:3), for instance, the scope of material resource management is essentially an activity of an enterprise for the procurement and use of materials that is distinctly separated from the process of procurement and use of human resources. As he has stated further, material resources management does not appear in a vacuum. For Dobler (1977:27), material resources management includes the primary responsibilities which are generally found in the purchasing department and other major procurement responsibilities including inventory management, traffic, receiving, warehousing, surplus and salvage, and frequently production planning and control.

To sum up, materials management is the integrated function of purchasing and allied activities so as to achieve the maximum coordination and optimum expenditure in the area of materials. In this case, for most writers the major elements of material resources management deals with planning, acquisition and supplement, purchasing, production and controlling, allocation and distribution, inventory and disposal.

In relation to education, Nebiyu (N.Y: 300), also states the functions of educational materials management as “. . . the coordination of planning, purchasing, moving, storing and controlling materials in an optimum manner so as to provide education services at a minimum cost.”

## **2.2.3. Planning**

### **2.2.3.1 Overview of Planning**

A number of management thinkers have given their own definition of planning, with central core being that making decisions now that will affect the future of the company (Chandan, 1987:57). To him, planning has three characteristics. These are:

- i) Planning is anticipatory: a decision must be made as to what to do and how, before it is actually done.

- ii) Planning is a system of decision: It involves a process of making decisions which will define what is to be achieved in the future and the formulation of action plans for achievement of goals.
- iii) It is focused on desired future results: planning is a means of ensuring that the important organizational objectives are accomplished as and when desired.

According to Euske (1984:14-15), Planning is defined in short as deciding in advance what is to be done. For Durbin (1989:6), planning is the establishment of goals or objectives and the course of action for achieving them. Getachew (1999:105), in his part, defines planning as the package of objectives and goals, the available resources and constraints and the various policy instruments and strategies to be used with in a time horizon. Moreover Bekele (2003:1), defines planning as *"the process of preparing a set of decisions for actions in the future directed at achieving goals by optimal means."*

To sum up, the above already given definitions of planning constitutes the major characteristics of planning that it is a continuous process, it involves, decision making, it is action oriented, future oriented, goal oriented and it is achieving by optimal means.

Bantie et al (2004:8), states that planning is the first function that all managers engage in because it lays the ground work for all functions, it defines the goals and alternatives, it maps out courses of action that will commit individuals, departments, and the entire organization for days, months and years to come. According to them, planning is currently an important managerial function in order to attain organization objectives.

Planning in business and industrial organizations considerably differs from educational planning; yet the concept is similar through out. Regarding educational plans Candoli and others (1984: 23), state that unless educational plans are developed and followed, the already scarce resources will be tragically inadequate and often misused by the system. Because, of the multiplicity of overlapping functions which can lead to duplication of program effort or the part of staff. From this point of view, it is important to look at planning in light of materials planning in education.

### **2.3.2 Educational Planning**

Planning refers to a whole range of tasks involved in developing a plan. The essential ingredients of the planning process are: it involves the identification of a sequence of actions and

interventions designed to ease economic and social problems in the future. And it involves the time horizon in to the future (Getachew, 1999: 105).

TO UNESCO, (1992: 72-73), problems of educational planning in relation to material resources planning are as follows:

1. Planners have not been given an opportunity to plan for they are often issued with directives and orders to be implemented by politicians.
2. Little critics of government policies is entertained and technical experts who act as "devil's advocates are hardly listened to"
3. Appointments of Key positions of power are based on subjective criteria in order to get men and women who support the government policy
4. There are also frequent changes of top bureaucrats that make it difficult for them to follow an innovation through its implementation
5. Policies that are guided by political sentiments are often contradictory
6. Poor coordination of educational programs and projects with a resulting possibility of duplication of efforts.
7. Over-reliance on foreign experts and resources for implementing the educational plans, which leaves the planner at the merely of donor
8. Shortage of funds for recurrent expenditure that should enable the planner to buy the much needed material and meeting running costs of the plan
9. Lack of trained educational planners and implementing.
10. Poor communication and transport system render it difficult to supply materials and equipment as well as monitor effective implementation of educational plans and
11. Poor control of machinery which could ensure that scarce educational resources are efficiently used.

### **2.3.3. Material Resources Planning**

Materials planning is the scientific way of determining the requirements of raw materials, components, spares and other items that go in to meeting the production needs within economic investment policies (Gopalakrishan, 1990:23). However, it is the most neglected area in the purchasing activity. Major weakness in the material management system of developing countries

like Ethiopia, is the lack of proper materials planning and coordination. The lack of coordination has led to fragmentation, which in some cases has prevented the development and maintenance of uniform standards (ibid).

Data (1986:11) points out planning from material points of view as: “. . . primarily involved in the formulation of an integrated scheme of action designed to accomplish its objectives effectively and economically.”

The question of proper planning in any country especially in developing countries like Ethiopia, where deep rooted economic problem exist, is in dispensable. To do this planned educational development at different levels particularly at national level helps for optimum utilization of available scarce national resource and prevention of all types of wastes (Sherlekar & others, 1988:473). In addition, proper planning needs proper information system (net work) in any organization. For Candoli and others (1984:73), the newly introduced management information system (MIS) has the purpose of generating, storing, retrieving, computing and disseminating information to decision makers. They further state that traditionally the technology of performing these tasks consists of filing systems, type writers and copying equipment. Thus, to achieve this advantage, national planners in general and educational managers in particular have to plan for the best use of material resources.

Accordingly, it will be ensured that there is no duplication of services and efforts, which normally lead to the wastage of scarce resources to cope up with significant managerial problems.

Planning involves various functions such as projection of demand, preparing budget, forecasting the levels of inventories, scheduling the orders and monitoring performance. In addition, operating procure needs to be established regarding how the demand for educational materials are projected and which department is responsible to carry out the forecast.

According to Adam et al (2003:522) in recent years material requirements planning system have replaced reactive inventory systems in many organizations. Managers using reactive system ask, “What should I do now? “Where as managers using planning systems look ahead and ask, “What will I need in the future? How much? And when?”

Material resource planning is a requirement oriented system, whose objective is to deliver materials to the user department to meet their intended requirement. Therefore, materials

planning or planning the future requirements is based on the user's needs or forecasts and materials consumption control tends to formulate the broad norms of consumptions for individual items of regular use or spare parts.

### **2.3.4 Steps in the planning process**

In the context of material resources planning, UNESCO (1992:155), States that planning of material resource starts with collection, compilation and analysis of data and information pertaining to the use of available material resources in education. Furthermore, the major factors considered in identification of material resource for the short, medium and long range requirements have been identified as:

*. . . the level of education, mode of supply which may hinge on production procurement or construction, etc; Time needed to secure the desired materials; Distance involved and the form of transport for distribution; overall cost in relation to cost per unit (unit cost can be calculated by dividing the overall cost of materials by the total number of users; the rate of frequency of use, especially pertaining of classroom and other facilities and mode of use i.e. individual use or group use.*

Regarding planning steps, different authors have put their view point in different ways. For instance, Datta (1988: 62-63), has identified the following planning steps:

1. *Establish and define clearly the central and overall objectives of the organization: A well - defined objective can make the difference between success and failure of an enterprise*
2. *Determining your current position relative to your objectives make an assessment of your weakness and strengths.*
3. *Develop forecast and future conditions*
4. *preparation of derivative /selection/ plans*
5. *implement the plan, evaluate its results*

## **2.4 Acquisition and Supplement of Educational Materials**

Acquisition and supplement of material resource management briefly covers Purchasing i.e. negotiating, ordering, communicating and controlling supply needs; provisioning; stock control; administration of supplies from intake to dispatch, but excluding actual use in process of production. In theory acquisition and supplement management covers only the acquisition stages of supplies from receipt of the "notice of need" to the final clearance of the invoice including negotiation, placing purchase order, chasing delivery, recording purchase, and clearing price checks on invoice. In practice most purchasing officers find themselves covering the entire

supplies and materials management field, thus fulfilling the functions of supplies managers (Compton, 1979: xviii-2).

Management of modern supply and equipment management is a complex process. This is because, significant percentage of the annual expenditure of school system is being spent for supplies and equipment (Stoops and others, 1981: 163). Therefore, the daily tasks of the educational process will require the use of various types of these requirements. In connection to this, Harris (1989: 173), has emphasized on the need for materials acquisition and supplies as some supplies are consumed at a rapid rate while the consumption rate of others might be at a much slower pace. Stoops and others (1981: 163), have also divided them in to consumable and non - consumable. To them, consumable are such materials as small tools, scissors, staplers and the like. Equipment refers to non - expendable items, which are more or less permanent or exist for long period of time. Equipment is most of the time referred as a capital expenditure.

- Acquisition and supplement of material resources is the major that comes after planning. This refers to the determination and definition of types and quality of materials needed for the effective implementation of goals (Mbamba, 1992).

In Ethiopia, material resources needed for educational activities such as books, buildings, furniture, etc are mostly from the government with some assistance from society and individuals. Besides, institutions may have some other sources of help from international organizations (MOE 2001:14).

## **2.5 Organizing and Staffing of Materials Management**

Organizing and staffing are the most important managerial functions in any type of organization or activity. Hence, in order to achieve organizational objectives, materials management has to be organized and staffed properly.

### **2.5.1 Organizing Materials Management**

Social interaction follows organized patterns that are common to all. These ordered patterns are facilitated by communication which leads to a common understanding. In addition, Bentic et al (2004: 9), state that organizing as a management function is concerned with assembling the resource necessary to achieve to organization's objectives and establishing the activity, authority relationship of the organization. Arora (1980:89), specifically states that organizing material

resources are the function to the creation of duties and functions to the achievement of the objective of an organization. The institutions are to be organized in duties and functions. They are to be defined to determine activity, chains of command so that the institutions functions smoothly.

According to Datta (1986: 30), the main purpose of organization is to ensure smooth and balanced work of the organization. To him, a sound organization has to answer the following questions:

- What functions must be performed to achieve, the objective of the organization?
- What is the best type of organization accomplish the purpose: Whether financial product, geographical, line and staff or combination of several?
- What should be the number of subordinates that should report directly to the executive so that he can spend ample time with each and still have sufficient time for planning conferences, out side contacts and so on.

### **2.5.2 Staffing Materials Management**

Staffing is concerned with locating prospective employees to run the tasks assigned by the organizational process. Staffing initially involves the process of recruiting potential candidates for a job, reviewing the applicants, credentials and trying to match the job demands with the candidates' ability (Bentie et al, 2004: 10).

According to Bialy (1990: 306), in the process of staffing materials management the following questions should be taken in to consideration:

- How do purchasing staff equipped in quality terms with other key functions? (Sometimes company grading systems can be helpful in this regard)
- Is the function adequately staffed in numerical terms?
- What staff development programs are in place?
- Is the level of supply market knowledge good enough?

Regarding the function of staffing Datta (1986:12), states as ". . . the staffing function consists of the recruiting and training of suitable individuals in various positions of the unit." He further

explains that management should visualize the future needs and make the necessary arrangements to meet them. For proper materials resources management proper staffing is essential.

## **2.6 Purchasing Educational Materials**

The term purchasing has been defined by different writers differently; but with similar concept. According to Sharma (1999: 425), purchasing is the activity responsible for getting the right materials to the right place at right time, in the right quantity at the right price. It embraces the flow of materials from the suppliers to the organization which has the intention of facilitating the attainment of predetermined objectives. Arnold (1998: 171), defines purchasing as "the process of buying. For an organization, purchasing is a window to the outside world (Chary, 2000: 119). Therefore, from the above mentioned definitions purchasing is the function of a business understanding which is responsible for the procurement of materials, supplies, tools and implements, machinery and services required to produce certain goods and services. Thus, the basic task of purchasing is to ensure continuous servicing of organizations production facilities with a consistent supply of materials and stores of requisite quality and variety.

The scarcity of raw materials has practically put the people in purchasing department in an important position. A purchasing department can be in a better position if the designers take a little point to consult the purchasing personnel about the technological capabilities of the vendor (Ahuja, 1993: 358).

Hence, purchasing requires skilled personnel in order to facilitate the complicated procurement activities. Accordingly, it should carefully be made and based on predetermined objectives. Moreover, today, purchasing has assumed a technical aspect and needs the service of professionals or competent buyers.

The objective of purchasing is to conduct purchasing functions so as to minimize or eliminate destruction in production resulting from lack of any materials equipment or supplies. It is also the maintenance of adequate standards of quality for items purchased; and it is the avoidance of duplication, waste and obsolescence with respect to the various items purchased.

In addition another writer Okland (1988: 459), also states that the primary objective of purchasing is to obtain the correct equipment material, supplies and services. More explicitly, Bloomberg (2003: 13), states that purchasing is expected to accomplish nine items:

1. Provide an uninterrupted flow of materials, supplies, and services required to operate the firm
  2. Minimize inventory investment and loss
  3. Maintain adequate quality standards
  4. Find or develop competent suppliers
  5. Standardize, the items bought wherever and when ever possible
  6. Purchase required items and services at the lowest ultimate price.
  7. Improve the organization's competitive position.
  8. Work harmoniously with other departments in the organization
  9. Accomplish the purchasing objectives at the lowest possible level of administrative cost.
- More precisely, according to Adam et.al. (2003: 545), the objective of purchasing can be summarized thusly: to efficiently provide fairly valued materials, supplies and services in a timely manner.

In summary, in general usage, the term "purchasing" is used to describe the process of identifying the need of materials, locating and selecting a supplier, negotiating terms and prices, buying and follow up to ensure delivery in time.

Regarding the function of purchasing, many assume as it is solely the responsibility of the purchasing department. According to Arnold (1998: 171), however, the function of purchasing is much broader and if it is carried out effectively, all departments in an organization would involve. He further has explained that on the average, manufacturing firms spend about 50% of their sales dollar in the purchase of raw materials, components, and supplies. Nevertheless, the works of purchasing to be performed by the purchasing section and, in the broader sense, their function and responsibilities include the following:

- Obtaining the right quantity and quality of materials at the right time so that production is not hampered
- seeing that the purchases are made at the most competitive price
- Nearly 50 percent of the annual expenses of an organization represents purchases
- Cost reduction is another responsibility implied in the purchase function.
- Seeing that purchases are made only against authorized purchase requisitions, and proper functions.

- Seeing if the materials indented can be manufactured in the plant by utilizing spare capacity.
- Dealing with the suppliers regarding shortages, rejections, etc reported by the stores.
- Informing stock control of any changes in the delivery time and the most economical quantities.
- Keeping the department concerned informed of the progress in case of delay in obtaining supplies against any purchase requisition
- Suggesting latest and more economic materials for use by the manufacturing department
- Seeing that supplier's invoice are promptly paid by the accounts department
- In many companies, the purchase section also handles the disposal of surplus stock and scrap, because of its better knowledge of market conditions and of the dealers (Nair, 1990: 117).

### **2.6.1 Parameters of Purchasing**

There are several well - known parameters that have been proposed to asses acquisition of materials functions of purchasing is performed well. These are expressed as the right price, right quality, right time, right, source and right quantity (Nebiyu, N.Y: 307). Nair (1990: 128), explains these parameters as follows:

- Right quality: the right quality is the suitability of an item for a given purpose. The best quality need not be the right quality.
- Right quantity. in the case of recurring items, the right quantity is the quantity that may be purchased at a time with the minimum total cost and which obviates shortage
- Right time: In the case of regularly used or recurring items, right time means the time when the stock reaches the minimum level. Any undue delay on effecting delivers or issues defeats the objective of materials management.
- Right source: The right source should posses the necessary financial resources the organization to handle the commitments including procurement of raw materials which may be difficult to obtain and the technical ability (including inspection and quality

control methods) to supply the required quantity (present and future) and quality of goods at a satisfactory price.

- Right price: The right price is the one which brings the best ultimate value. It need not be the lowest price
- Right place: This means that some of the materials should be made available at the various stores near the materials should be made available at the various stores near the machine shape, finished components in the finished part stores near the assembly line and so on. Also certain materials should be made available at work points.

### **2.6.2 Purchasing Cycle**

- Purchasing activities account for substantial portion of educational establishments budgets. Since the acquisition of educational materials depends on the size of the operation of the establishment, a formalized procedure that provide frame work needs to be laid out with general frame work in initiating purchases, selecting suppliers, placing purchasing place orders, follow up, receiving materials and so on. Generally, the procedures used in purchased system vary depending on the types, prices, volumes of materials purchased or sources as local or international

Arnold (1998: 171), identifies the purchasing cycle as it consists of the following steps:

- Receiving and analyzing purchase requisition.
- Selecting suppliers: If the item has not been purchased before or there is no acceptable supplier on file, a search must be made.
- Requiring quotations: This is a written inquiry that is sent to enough suppliers to be sure competitive and reliable quotations are received. It is not a sales order.
- Determining the right price. This is the responsibility of the purchasing department and is closely tied to the selection of suppliers.
- Issuing a purchase order; is a legal offers to purchase
- Follow up and delivery:
- Receiving and accepting goods: When the goods are received, the receiving department inspects the goods to be sure the correct ones have been sent, are in the right quantity and have not been damaged to traffic. .

- Approving supplier's invoice for payment when the supplier's invoice is received, there are three places of information that should agree: the purchase order, the receiving report, and the invoice.

### **2.6.3 Purchasing Policy**

Every organization has its own policies, whether they are put in to writing or not. An established policy eliminates the necessity of making a fresh decision every time when urgent situations arise. A written policy ensures that decisions and actions will be consistent and such an approved policy statement gives authority to purchasers (Datta, 1988: 39). Regarding policy, Sherlekar and Others (1988: 483) have identified three types of purchasing policies. These are:

- Speculative Vs conservative purchasing: under speculative buying, bulk purchases are made through large orders at a time and conservative buying are purchases made through small and frequent orders/.
- Concentrated Vs diversified purchasing: under concentrated purchasing the number of sources on which a whole seller or a retailer may depend for his supplies may be very few or limited. However, in the diversified purchases, purchases are made from a large number of sources.
- Reciprocal buying policy: This is to place an order with a seller who is your customer.

On the basis of policies, like in any organization and institutions, educational institutions particularly in schools, school principals and administrators should develop comprehensive and specific job descriptions for their purchasing personnel and/or purchasing department.

Hence, the purchasing department personnel must bear in mind that they are serving a supportive function for the activities and programs of the schools system. Other authorities such as the principal must not become so involved with the purchasing act itself lest the product becomes cumbersome.

In Ethiopia, there is a written guideline of purchasing educational materials. However, purchasing activities made in the system lack uniformity and create difficulty for the proper control and management of the resources available. More over according to the guideline the major part of purchasing made such as a bulk of purchasing and most foreign purchases were only the

responsibilities of MOE and REB. Now a day, Wereda FEDO has been given the mandate to make most of the purchases. Besides, schools are given the opportunity of small purchasing from their internal income (1981: 45).

#### **2.6.4 Steps or Procedures of Purchasing**

Procedure in the context of purchasing means the manner through which a purchase proposal is carried in to effect. Therefore, it involves the function to be performed by purchasers from inception to the conclusion of the deal. According to Datta (1988: 39), these procedures are briefly enumerated as follows:

- Ascertainment of the need and recognition of it
- Accurate statement of , specifications, character, quality and quantity requirements with full description
- Transmission of the purchase requisition
- Negotiation with the possible source of supply
- Analysis of the proposal, determination of the price, availability and delivery time
- Selection of the vendor and place of the supply order
- Expending and follow up
- Arranging for receipt, inspection, replacement of the rejected checking of invoices and bill payment
- Completion of records and files,

The procedure of procurement of educational material resources may vary according to the nature of the educational institutions. In light of this, different writers have pointed out different steps or procedures of purchasing.

For UNESCO (1992: 158-159), the effectiveness and efficiency of the education system to a great extent depends on the amount and quality of instructional materials available. These instructional materials in most cases have also been purchased by the system. Moreover, it is interesting to note how purchasing procedures help to establish strategies of securing educational materials with in the limits of policy guide lines or regulations, which may be issued by the education system. Accordingly, it has identified the following steps or procedures that one has to follow during the process of purchasing educational resource materials:

- Ascertaining or recognizing the needs for the materials
- Determining the character and quantity of materials that will be required
- Descending on priority basis what can be purchased in relation to the available funds.
- Drawing detailed specification of the required items
- Preparing and publishing tender documents
- Analyzing the tender to determine the prices of available materials
- Approving the tender that should supply materials.
- Verifying and receiving purchased materials
- Inspecting, storing and processing damaged materials discrepancies
- Recording and dispatching the materials to where they are to used.
- Monitoring the use, effectiveness and efficiency of the materials in satisfying prior set technical and pedagogical requirements.
- Evaluating the performance with the intention of getting feed backs to improve decisions on the further purchase.

## **2.7 Production of Educational Materials**

The term production quite often means the same as manufacturing. As it is stated in Ahuja (1993:1), economic definitions of production are: utility creation and the act of making some thing with the object of satisfying human wants.

This shows that production is not only confined to goods and commodities, but also includes services. Hence, the economists' definition of production is not restricted to the process of creation of physical items, but, the transportation system, banking system, library and hospital can also be considered as a production process. The current view of production is that it is a sequence of operations that transform materials from a given state to a desired state (Ahuja, 1993: 1). To him, the main objective of production is to ensure that it makes a production which can satisfy the needs of the customer by giving the right quality of the product at right place, at right time, at right price.

With regard to educational material resources, UNESCO (1992: 159), states that production of educational materials relates to the activities ranging from conception of the required item, design and contraction of a prototype, testing its operation and then producing it for use. Organizations will usually buy a finished component from an outside supplier when:

- 1) they do not have facilities to make it and there are more profitable opportunities for investing the organizations capital
- 2) existing facilities can be used more economically to make other components.
- 3) potent or other legal procedures do not allow the company to make component
- 4) there is only seasonal demand for the components.

Similarly, Nebiyu (N.Y: 297-299), has stated the reasons for controlling production as:

- 1) when suppliers consistently fail in providing the demanded items or when the quantities of the materials supplied are inadequate
- 2) if suppliers fail to meet the quality requirements set buy the establishment
- 3) When the need of educational establishment is small in some areas such as specialized reading materials for 500 students it may be economical to make it rather than buying the item.
- 4) If cost of making the item is less expensive than buying the item

To him, factors such as costs of storage, inspection activities and transportation should be given a through analysis in addressing the make or buy policy decision.

With regard to education, Thomas (1996: 24), states that an interesting development local management is the emphasis placed on the production of in -house learning materials. Consequently, some schools have taken the opportunity to bring support services together in schools in to whole school resources basis. However, the effective preparation or production of educational materials can be influenced by a number of factors, such as: training status of teachers, teacher's attitude and commitment, coordinative activities among teachers and pedagogical center heads, financial and material support etc. These can foster or hinder the effective preparation of educational materials of school level (Abraham, 2001: 8). It is also possible to produce educational materials at different levels and in different forms with in the system. UNESCO (1992: 160), states that in some African countries the education system tried to manufacture its own material by organizing small scale industries like chalk factories, printing

shops, hand tools and furniture production units, etc. In connection to this, Ethiopia can be taken as a good example. Because, in Ethiopia, most resources needed for the education sector are produced by the ministry of education Nebiyu (N.Y: 296 ),further states that the MOE established the Educational Materials Production and Distribution Agency (EMPDA) in 1976 for the purpose of meeting the rising students' demand for text books and other educational materials due to large enrolments in 1970s. Until recently, EMPDA was responsible for the preparation, production, and distribution of educational materials to primary and secondary schools in the country. Currently, decentralization in Ethiopia has shifted the role of management and developing educational infrastructure including educational materials to the regional authorities (Nebiyu, N.Y: 297). Accordingly, the legal power vested on the ministry of education has been limited to setting standards and broad policies with the consultation of the regions. Hence, at the lower level most regions have their own educational material production and distribution.

In conclusion, one of the crucial questions to be faced by the materials manager is whether to own equipment or lease it (Gopalakrishan, 2004: 337). Moreover, if the decision is to own, then the question arises as to whether to make the item in the factory's workshop facilities or buy the same from the vendors.

## **2.8 Store Keeping/ Warehousing**

Store keeping is the function of receipt of materials in to store, storage and preservation, record keeping and issue of materials to workshops or departments (Solomon, 2005: 62). In addition, Okland (1988: 416), explains that store keeping is an important aspect of materials management and for the purpose of this, the store keeper will be assumed to be responsible not only for the stores but also for the goods in wards or receiving departments.

Efficient stores and materials management involves acquisition, storage control and deposition of inputs like raw and other materials which go in to the production process directly and also capital equipment tools and accessories, spare parts and other indirect materials which are required for every day operations.

The stores and materials function must therefore, ensure supply of materials of the right quality and quantity, at the right time, price, place and source in order to ensure economic efficiency and smooth operation of an organization (Datta, 1988:1) .

Warehousing/ storekeeping can be centralized or decentralized. When all materials are delivered and stored at a central warehouse and distributed to individual branch of an organization, it is identified as centralized warehousing. On the contrary, decentralized warehousing is the process of delivery and storage of materials made to each branch of an organization. To make a choice in a particular organization, there are a number of factors to be considered. Some of these factors include the size of the organization and geographical location of its branches (Harris, 1985: 189-190). According to him, centralized warehousing demand a very large number and specialized personnel. Therefore, the number of stocking locations must strike a balance between the level of customer service and distribution costs.

### **2.8.1 Objectives of Warehousing**

As with other elements in a distribution system, the objective of a warehousing/store keeping is to minimize cost and maximize customer service (Arnold, 1998:304). To him, efficient warehousing use operations perform providing timely customer service, keeping track of items so that they can be found readily and directly, minimizing the total physical efforts and thus the cost of moving goods in to and out of the storage and providing communication likes with customer. Consequently, he (1998: 305), has identified warehouse activities as receiving, identifying, dispatching to the storage, holding, picking good and marshalling, dispatching the shipment and operating an information system. In any system, all the activities take place in every warehouse.

Basically, the function of store management is to be a custodian looking after the items and controlling their flow. This is the component of material management with which the production department concerns directly on day to day or perhaps hour to hour basis. In this custodian and controlling function, the important issue is that of having good information and record system regarding the incoming, out going and remaining items of materials. A good information system is the heart to stores management (chary, 2000: 214). Chary further states that the various operations, related to stores are receiving and inspection, issuing and dispatching, stock-recording, stores- accounting, stock - taking and checking, stores - preservation and stores arrangement.

Similarly, Solomon (2005:62), states that the important functions of store keeping are: Receipt of materials in to the store, storage and preservation, record keeping and issue of materials.

Moreover, the objectives of warehousing are listed here under by Sherlekar and others (1988: 493-498).

- It offers protection against fire, damage, deterioration, theft and losses.
- It allows easy, quick and sure receipt, storage and disbursement of materials when properly authorized.
- It provides space and storage equipment as to both side and bearing capacity for the materials to be stored.
- It is an organized store and as such it must provide means for identifying and quick locating articles and any contents.
- It should provide for the selection of the oldest material promptly
- Optimum use of storage space and labor is possible
- Minimum investment in inventories can be assured
- Ease in inventory taking and effective inventory control can be obtained.
- We have assurance of continuous flow of materials to keep and maintain production schedules intact.

In spite of these advantages, there is shortage and/or lack of proper warehousing in most Ethiopian schools. This makes difficult to protect material resources from damage and it is also difficult to manage material resources supply (Goitom 2002: 90).

## **2.9 Allocation and Distribution of Educational Materials**

### **2.9.1 Allocation of Educational Materials**

Regarding to allocation, Morrison (1986: 65), has the following to say: " In accordance with manufacturing schedules, some materials may be received on a programmed - delivery basis and kept for use only on the production line for which they are being purchased." Another type of allocation is that certain items are reserved for specific jobs or purposes to avoid the unnecessary use of materials which is expensive in a very short supply. This indicates that allocation of educational materials is one of the most important managerial functions in material management. During allocation of educational materials, one has to follow certain criteria or principles. In connection to this, UNESCO (1992:161), states the major criteria for allocation of educational

materials as: the size of the system, the amount of materials available and using measurement units such as size, total enrolment, cost per capita and teacher pupil ration.

Material resource allocation criteria guide decision making on the level of distribution to various programs and administrative sectors at the national, regional /provincial/, district or institutional level; there by discovering unnecessary imbalance likely to develop with in the programmers components or administrative sub - systems. It also helps to avoid unnecessary favoritism or mismanagement of resources. In allocation of material resources the issue of equity is the important concept taken in to consideration.

Equity is significantly concerned with treating individuals with standard of what that reflects basic and fundamental sense of fairness. Accordingly, it means, the fair distribution of educational resources.

### **2.9.2 Distribution of Educational Materials**

Distribution is concerned with getting goods from the manufacturer to consumer. It usually involves substantial expenditure for warehousing and internal materials handling. The biggest element in the process is usually "transportation" (Ahuja, 1993: 411). Ahuja, further explains that efficient handling of transportation of materials is of major importance to industry and consumers who must ultimately pay for the charges involved.

Distribution management is the function that helps in a big way to provide the time and place utility to the consumer. Thus, marketing function and distribution management are closely related to one another at the lowest cost. In fact distribution management is efficient management of materials, their movement, storage and control - outside the manufacturing plant which activity concerns the marketing objective of meeting consumer demand (Chary, 2000:227).

In addition to the above mentioned facts, Chary (2000:227), has identified the following major job elements or decisions made in distribution management.

- Optimal location and arrangement of fixed storage facilities such as warehouse, depots, or supply centers so as to provide the customer/s with the desired product/s.
- How should different customers be supplied from the different depots/ supply centers?
- Inventory control systems and policies in these depots
- Optimal management of the transport/ shipment of the product/s.

According to the Education and Training Policy of the Transitional Government of Ethiopia, due attention will be given to the supply, distribution and utilization of educational materials so as to promote the quality, relevance and expansion education (TGE, 1994:27).

In sum, UNESCO, States that the scheme of distribution of educational materials may vary according to the nature of the system; (i.e. centralized or decentralized). Each country has established its own system of distributing the educational equipment and supplies among its own schools.

## **2.10. Material Handling**

Material handling has been defined as an art and science involving the moving, packing and sorting of substance in any form. Briefly, material handling is the moving of materials from the new storage through production to ultimate consumer with the least expenditure of time and effort, so as the produce maximum productive efficiency at the lowest material handling cost (Solomon, 2005: 92).

Aderajew (2005:37) also defines material handling as the process of moving material to, from and through one place/area to the other. The method used for moving material may vary but the basic principles are the same.

The primary material handling objective in a warehouse is to sort inbound shipments according to precise customer requirements. The three handling activities are receiving, in storing and shipping.

Receiving:- Merchandise and materials typically arrive at the warehousing in a large quantities than when they depart. The first handling activity required is unloading the transportation vehicle. Storage handling consists of all movements within a warehouse facility. Following product receipt, it is necessary to transfer merchandise with in the warehouse to position it for storage or order selection. Finally, when an order is received, it is necessary to accumulate the required products and transport them to a shipping area. Shipping consists of checking and loading orders on to transportation vehicle (Donald, 2003: 418-420).

Poor material handling may result in delays leading to idling of equipment. However, through scientific material handling considerable reduction in the cost as well as in the production cycle time can be achieved (Gopalakrishna, 1998: 189).

To him, factors like plant layout, processes, nature of raw materials and products influence the material handling system. It can be said that an effective material handling system depends up on tailoring the layout and equipment to suit specific requirements. Therefore, an integrated approach will have to be taken in the case of material handling.

## **2.11. Proper Use of Material Resources**

Proper Utilization of Material resources is defined as the function responsible for the coordination of planning, sourcing, purchasing, moving, storing, inventory and controlling materials in an optimum manner so as to provide a pre-decided service to the customer at a minimum cost (Sundareson 1997: 105)

If material resource is utilized properly, it will guarantee the attachment of planned goal (UNESCO, 1984: 113). This indicates that proper use, directing and controlling of material resources are important managerial functions in material management. Datta (1986:12), states that effective management lies in the development of an awareness of the management objectives. To Alan and Audry (1987: 27), in principle, resources are scarce. Thus, no resource should be idle or underused.

Hence, in order to improve the proper use of material resources, one has to control and employ certain strategies. The major strategies are to provide the necessary information of what is made available at the school and what is expected of teachers and learners in the use and care of the materials and facilities.

### **2.11.1 Controlling Material Resources**

UNESCO (1992:132), has defined the term controlling in relation to Educational material resources as follow:

*Controlling material resources may be defined as a process of checking the operation to the initial plan or production, allocation, distribution, and use of materials to effect educational interaction. It generally deals with the determination of the effectiveness and efficiency of provision of the material and use in the attainment of educational objectives.*

Controlling involves establishing standards of performance, measuring results of work activities, deciding if they are acceptable and taking corrective measures on time if deviation are detected (Setotaw, 2001:31). Ayalew (1992:102) also indicates that controlling of material resources is a process of checking the operation of the initial plan or production, allocation, distribution and use of material to effect educational interaction. In short, it deals with the determination of the material and use in the attainment of educational objectives

Hence, controlling is checking current performance against predetermined standards contained in the plans with a view to ensure adequate progress and satisfactory performance and controlling material resources and physical facilities. A foundation where by a principal makes sure that what is intended is done.

### **2.11.2 Inventory**

Inventory is one of the managerial activities that deal with proper utilization. Sherlekar and Others (1988: 27), state that all goods between the receipt of raw materials and the dispatch of final products to consumers are termed as inventory. Everette (2003:454), states that the fundamental reason for carrying inventories is that it is physically impossible and economically in practical for each stock item to arrive exactly where it is needed and exactly when it is needed. He further states that inventory is vitally important to almost every type of business, whether product or service oriented.

The objectives of inventory management are explained also as maximum customer service, low cost, plant operation and minimum inventory investment. Inventory serves as a buffer between supply and demand, customer demand and finished goods, finished goods and component availability, requirements for an operation and the out put from the preceding operation parts and materials to begin production and the supplier of materials (Arnold, 1998: 226-228).

Chary (2000:136), on the other hand, states that, inventory is needed for the uncertainties involved in the usage or availability of the materials. Thus, it ensures that one stage of production doesn't suffer because of the non - functioning or mal -functioning of the previous stages of production over which the former is dependent.

There are many ways to classify inventories. One often, used classification is related to the flow of materials in to, through and out of manufacturing organization (Arnold, 1998:224). According

to Nair (1990: 101), the inventory particularly of manufacturing plant is generally divided as: raw materials, finished parts (purchased); finished parts (manufactured, work-in progress; these are materials in various stages of manufacturing in machine shop, sub - assembly and final assembly); finished goods (the final products, which are ready for sale); tools (which are considered as consumable, and general stores also called consumable stores, or operating stores).

Inventory constitutes one of the most important elements of any system dealing with the supplying, manufacturing and distribution of good and services. In the Ethiopian education system, inventory is made on educational material resources produced or purchased for various purposes once a year (MOE 79:14).

The basic purpose of inventory is therefore; holding stocks in material flow system is to develop successive stages of system.

## **2.12 Efficiency and Effectiveness of Resource Management**

Acquisition of resources, unless supported by some proper use, it will lead to in- efficient utilization of institutional resources. To minimize this problem, the principal together with the teaching and non teaching staff, should create a guideline to serve a mechanism for the effectively and efficiently to accomplish the objectives. In this connection, UNESCO (1984:14), states that the function intended to assure the efficient use of scarce resources, measures effectiveness in achieving the objectives and confirm the continuing relevance of scarce resources of changing circumstances.

In education, the concept of resources can not be explained without mentioning the idea of efficiency and effectiveness. Thus, educational inputs and out puts can only been explained using these two important concepts. According to Alan and Audry (1987:29), the term efficiency has been defined as about doing things essentially. Similarly levacic (1995:20), defines efficiency shortly as "doing things right." On the other hand, effectiveness to him (1995:20) is the matter of how well a program or activity is achieving its established goals or other intended effects. Accordingly, effectiveness, in short means "doing the right things."

## **2.13 Standards in Educational Materials**

Standard is defined as a model or general agreement of rules established by authority consensus or custom created and used by various levels of interest (Sundareson and Gopalakrishnan,

1977:42). Chary (2000: 210), also states that standardization consists of reducing the variety of items stocked in the inventory to a workable minimum by fixing sizes, shapes, dimensions and other quality characteristics of the item. A standardization program consists of examining the items stocked critically for the use or uses to which the items are put in the organization (i.e. the need of the organization), and the performance characteristics and the use characteristics.

By combining the materials into standard groups, it will no more be necessary to keep as high a level of inventory of items as was necessary when there were a variety of items in the inventory (Chary, 2000: 210). Therefore, with fewer inventories the purchase cost will be lower, less stocks need to be maintained for current consumption as well as for safety stock and the amount of paper work is reduced etc.

Standardization of educational materials and facilities in our education system was not given due concern. Harris (1985: 178), states that specifications provide the foundation for standards of quality concerning service, supplies and equipment. To him, standardization of supplies, equipment and services, directs itself in to the economy and efficiency services. Economy is gained through the funneling process of adjusting the need of particular types of goods or services to fit the needs of several operating units.

Knezevich and Fowlekes (1960: 68), state that many large school systems prepare a standard list of supplies and equipment. To them, without some degree of standardization of such items as paper, the purchasing and inventory problems are greatly compounded.

## **2.14 Disposition**

Despite the considerable efforts have been made to improve the management of materials in any organizations, some redundant materials have to be disposed of. Thus, managers are concerned with the effective, efficient and profitable disposal of obsolete, surplus and scrap materials generated with in the firm. In recent years, disposal problems have become more complex and important as companies have become larger, more diversified in product lines and more decentralized in management (Solomon, 2005: 81).

The same thing can be laid of scrap or waste and frequently the task of disposal is vested in the purchasing department (Baily, 1990: 311). One important point to consider is why the redundant or scrap materials have arisen. Some waste is inevitable, but careful consideration of the arsons

behind the surplus can have a profound effect on the economies of an operation. On the other hand, Nair (1990:188), indicates that there are also items which are out of date; mostly superseded by a later design and are known as obsolete items.

In education, the most challenging activity in materials management is disposition of obsolete and surplus materials.

#### **2.14.1 Managing Disposal**

The disposal of all kinds of scrap and surplus materials should always be handled to reduce the net loss to the lowest possible figure or if possible achieve the highest potential gain. Space does not permit full treatment of this subject for the variety of types of materials which need to be disposed of. However, according to Baily (1990: 311), there are some useful points to apply in many cases and which should be noted. Regarding educational materials, Goitom (2002:48), states that obsolescence of school materials may be caused in many ways. To him, some of the major factors for obsolescence are technological changes, supplies or materials received but not longer needed, no longer being used at the rate anticipated and change in curriculum that may result in making text book and other instructional materials out of use. These conditions forced educational materials to be disposed. On the other hand he has stated that the ideal way of disposing of excess materials is to transfer them to another school or institution where the materials are not accessible. Donation or selling is also the most cost effective approach of disposition. Finally, dumping, burning, or otherwise destroying is the last alternative of disposition.

#### **2.15 Responsibility and Authority in Material Resources Management**

For effective and efficient utilization of materials different groups of people are responsible. According to UNESCO (1992: 162), educational managers are charged with the responsibility of ensuring maximum use of available materials and maintenance as well as replenishment of these materials when the need arises. In connection to this, Purkey and Smiths in Bush and West Burnham (1994: 3), has stated that the staff of each school is given a considerable amount of responsibility and authority in determining the exact means by which they address the problem of increasing academic performance. This includes giving staffs more authority over circular decisions and allocation of material resources.

In order to attain proper material resources management, having a clear responsibility and authority are essential elements. In order to exercise the responsibility and authority fully, administrative machinery must often be established. Responsibility and authority for Candoli and others (1984: 44), are explained in two forms. These are state and local policies.

Moreover, they put the following points regarding policies:

1. Policy: - It expresses the philosophy of the board education and answers the question "why?"
2. By Laws: It expresses the local law with in the frame work prescribed by the state law and other mandates answer the question "why?"
3. Rules and regulations: - deal with the methods by which policies and by laws is to be carried out. They answer the question "how?"
4. Procedures: - it expresses the operational details for carrying on the program.

Therefore, the board of education must first establish its philosophy (policy). Next, it must determine what services are to be provided for (by laws). It then becomes the duty of the chief school administrator and his/ her staff to work out the administrative details, rules and regulations. Thus, educational managers must have an adequate understanding of policy; in his/her school system. S/he has to be aware of the relationship between these several of decision-making including the state policy.

## CHAPTER THREE

### 3. PRESENTATION AND ANALYSIS OF THE FINDINGS

This part of the thesis deals with two major parts. The first part comprises the major characteristics of the sample population of the study. Thus, the characteristics of teachers, principals and ETBMs are analyzed.

The second part of this chapter comprises analysis of the findings of the study. Hence, the findings on the following major variables are analyzed based on the reactions obtained from respondents.

1. To what extent are the managerial functions of planning, procurement, allocation, distribution, and utilization, etc. of material resource effective?
2. Are there guidelines for material resources management in the preparatory schools? If there are, to what extent do they help in managing material resources?
3. To what extent do professionals and administrative personnel participate in the effective management of material resources?
4. Do the educational qualification of school principals, administrators and the school personnel have significant importance in the management of material resources in the preparatory schools?
5. To what extent are schools capable enough to facilitate the teaching-learning process with educational material resources available to them?
6. What are the major factors that influence the management of material resources in the preparatory schools of Arsi zone?
7. Is there any difference among teachers, principals and ETBM in their perception and opinion about the management of material resources?

To analyze the findings of the study, the data collected have been organized in tabular forms and in terms of percentage of frequencies and responses reacted by the different groups of respondents to items of the questionnaire.

The information gathered through interview and document analysis is also qualitatively described in order to supplement those answers obtained for the questions set in this study.

Since the main purpose of this study was to identify whether there has been effective management of material resources and to identify the perception of three groups of respondents in the managerial functions of the system. Only findings pertaining to perceptions of the study groups were subjected to the hypothesis tests. Therefore, Null hypothesis ( $H_0$ ) and Alternative hypothesis ( $H_1$ ) were stated.

To test perceptual difference among teachers, principals and ETBMs in material resources related problems, chi square ( $\chi^2$ ) test of significance has been adopted. The formula for ( $\chi^2$ )=  $\sum \frac{(o - E)^2}{E}$ , where  $o$  = observed frequencies, and  $E$  = expected values. Rejected level ( $\alpha$ ) = 0.05, Rejected region = ( $\chi^2$ )<sub>cal</sub> >  $\chi^2_t$  for a given degree of freedom.

With regard to the instrument of data gathering, primary data has been collected through questionnaire prepared for three groups of respondents. Structured Interview has been conducted with zonal administrative and finance department officers, Wereda education officers and school store keepers. Besides, information has been gathered through document analysis.

## **Part One: Characteristics of the Study Population**

The questionnaire was distributed to 105 teachers, 5 principals and 30 education and training board members. Out of the total number of questionnaire distributed among the three study groups, 92.4 per cent from teachers, 100 per cent from principals and 90 per cent from ETB members were filled in and returned. Moreover, a total of 10 Wereda education officers, 2 zone education officers and 5 store keepers were interviewed.

**Table I: Characteristics of The Population**

Characteristics	T		ETBM		P		Total	
	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%
Sex								
Male	90	92.8	25	92.6	5	100	120	93
Female	7	7.2	2	7.4	-	-	9	7.0
Total	97	100	27	100	5	100	129	100
Age								
21-30	19	19.6	9	33.3	1	20	19	22.5
31-40	45	46.4	10	37	1	20	56	43.4
41-50	33	34	8	29.6	3	60	44	34.1
51 and above	-	-	-	-	-	-	-	-
Total	97	100	100	100	5	100	129	100
Years of work experience								
1-5 years	7	7.2	-	-	-	-	7	6.9
6-10 years	2	2.1	-	-	1	20	3	2.9
11-15 years	10	10.2	-	-	1	20	11	10.8
16-20 years	20	20.6	-	-	-	-	20	19.6
21-25 years	40	41.2	-	-	3	60	43	42.2
26 and above	18	18.6	-	-	-	-	18	17.7
Total	97	100	-	-	5	100	102	100
Education qualification								
MA/MSc	1	1.0	-	-	-	-	1	1.0
BA/BSc	70	72.2	-	-	4	80	74	72.6
College Diploma	25	25.8	-	-	1	20	26	24.5
TTI	1	1.0	-	-	-	-	1	0.1
Total	97	100	-	-	5	100	102	100

T = Teachers, P = Principals, ETBM = Education and Training Board Members

As depicted in table 1, Female teachers and education training board members involved in this study accounted for 7.2 per cent and 7.4 per cent respectively. As there were no female principals in the sample schools no response from female has been included in this study. This reveals that female respondents in all cases are very low. Therefore, it could be concluded that, there was Gender inequality in the managerial area of the system.

As regards age, 80.4 per cent of the teachers 66.7 per cent of the ETBMs and 100 per cent of the principals were in the age ranges, of 31 and 50 years. This leads to conclude that there would be no barrier that age difference might have caused against the respondents to freely discuss managerial problems such as material resources management.

Concerning years of work experience, the majority of the respondents, 72.2 per cent of the teachers and 80 per cent of the principals had 11 to 25 years of work experience. The rest 6.9 percent had 1-5 years and 17.7 percent had 26 and above years of work experience. It would be therefore, possible to generalize from these data that such a relatively longer years of work

experience in the system might help principals and teachers to possess rich experience and better understanding about the various issues and problems of material resources management in preparatory schools.

It has been shown in table 1, Item IV, that 72.5 per cent of the respondents in the preparatory schools were first degree holders. Respondents having college diploma and below accounted for 25.4 per cent. Hence, as the majority of the respondents were first degree holders, there may be no great difference among the respondents regarding their professional qualification. Therefore, it seems safe to say that there was a tendency of preferring degree holders in staffing administrative positions of preparatory schools. However, the heterogeneity has helped the study to accommodate different opinions from different groups of different educational level.

**Table II: Teachers' and Principals' Teaching Load per Week**

Item	T		P		Total	
	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%
15-19 periods	25	25.8	2	40	27	26.5
20-24 periods	30	30.9	-	-	30	29.4
25-29 periods	42	43.3	-	-	42	41.2
30 and above	-	-	-	-	-	-
No response	-	-	3	60	3	2.9
Total	97	100	5	100	102	100

Note: T= teachers

P = Principals

As indicated in table 2 Item I the majority of the teachers, 70 per cent thought 20 to 29 periods per week. This high period allotment may have a direct influence on proper material resources management in that it might result in shortage of time. Hence, teachers seldom participated in material resources management due to heavy load in teaching.

**Table III. In School Responsibilities of Teachers and Principals**

Item	T		P		Total	
	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%
Department head	19	19.6	-	-	19	18.6
Unit leader	5	2.2	-	-	5	4.9
PTU member	10	10.3	-	-	10	9.8
ETB member	7	7.2	5	100-	12	11.8
CCA coordinator	8	8.2	-	-	8	7.9
Other	16	16.5	-	-	16	15.7
No response	32	33.0	-	-	32	31.4
Total	97	100	5	100	102	100

PTU= Parent Teacher Union, ETB = Education and Training Board

CCA = Co-Curricular Activities.

Besides, the respondents were asked about other in school responsibilities; the activities that they perform in the school compound. With regard to this point, the majority of the teachers confirmed that they were either department heads, or members and coordinators of co-curricular activities, or unit leaders, or PTU members, or ETB members, etc. In addition, they replied that being school supervisor, coordinator of pedagogical center and school accountant were some of the in school responsibilities performed by some teachers. Therefore, the impact of the work load in different activities was high on material resources management.

### **Part Two: Analysis and Interpretation of the Study**

This part of the chapter deals with the analysis of the findings of the study. The study has made an attempt to investigate the perception and opinion of respondents about the managerial functions to manage material resources guidelines used to manage material resources, effective uses of the guidelines, the importance of qualification of personnel for MRM, the extent to which concerned bodies participate in MRM, the effective use of available material resources in schools and related problems.

**Table IV Policy Guideline of Material Resources Management**

	Item									Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETB		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not policy guideline exists to manage material resources											
	Certainly	55	56.7	20	74.1	4	80	79	61.2	6	12.592	36.039
	Absolutely not	22	22.7	-	-	-	-	22	17.1			
	I do not know	19	19.6	-	-	1	20	20	15.5			
	No response	1	1.0	7	25.9	-	-	8	6.2			
	Total	97	100	27	100	5	100	129	100			
2	The extent to which the guide line is effectively used guide line											
	High	12	12.4	7	25.9	3	60	22	17.1	6	12.592	10.470
	Moderate	50	51.6	14	51.9	1	20	65	50.4			
	Low	30	30.9	5	18.5	1	20	36	27.9			
	Not totally applicable	5	5.2	1	3.7	-	-	6	4.7			
	Total	97	100	27	100	5	100	129	100			

T = Teachers, P = Principals

Teachers, ETB members and principals were asked about the existence and effective use of the established policy guideline used for material resources management.

With regard to the existence of policy guideline 56.7 per cent of the teachers responded that there was policy guideline used for MRM. 22.7 percent of the teachers confirmed the non - existence of the policy guideline and 19.5 percent of them responded as they do not know whether or not policy guideline exists. On the other hand, except one of the principal, all others replied positively. Hence, it is possible to say that principals may use these documents in their daily managerial activities and put them out of the reach of teachers. The majority of the ETB members, that is, 74.1 per cent confirmed that there was policy guideline where as 25.9 per cent didn't give their opinion.

The chi square test of significance, for 6 degrees of freedom at the 0.05 level of significance the critical value of  $\chi^2 = 12.6$ ; and the calculated value of  $\chi^2 = 36$ . Thus, the null hypothesis is rejected. Therefore, it is safe to say that there is statistically significant difference among the groups of respondents in their awareness whether or not policy guide line was available in their schools.

Generally, it is possible to conclude that there was an organized policy guideline to manage material resources in the preparatory schools of the system. This eliminates the necessity of making a fresh decision when urgent situation arises. Therefore, it seems proper to say that, the existence of policy guideline ensures that decisions and actions made in the system were consistent. However, it was not properly disseminated to the users.

Item 2 of table V, deals with the effective use of the policy guideline that exists in the system. Accordingly, the majority of teachers and education and training board members 51.6 per cent and 51.9 per cent respectively revealed that the policy guideline is being used moderately 30.9 per cent of the teachers and 18.5 per cent of the ETBMs replied as the effective use of the policy guideline was low. On the other hand, the majority of the principals, 60 per cent confirmed that as the policy guideline is highly applicable.

The chi square test of significance for 6 degrees of freedom at the 0.05 level of significance, the critical value of  $\chi^2 = 12.6$ ; and the calculated value of  $\chi^2 = 10.3$ . Thus, the null hypothesis accepted. Therefore, it is possible to conclude that there is no significant difference among the respondents in their opinion about the effective use of policy guideline to manage material resources. Thus, it is also possible to conclude that even though there was policy guideline, in what ever conditions, may be it was not effectively used. Therefore, material resources were managed randomly and on traditional manner.

**Table V: Organization of Material Resources Management**

	Item									Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not organized department to manage material resources exist											
	Certainly	65	67	27	100	5	100	97	75.2	4	9.488	14.04
	Never	20	20.6	-	-	-	-	20	15.5			
	No response	12	12.4	-	-	-	-	12	9.3			
	Total	97	100	27	100	5	100	129	100			
2	Whether or not adequate personnel are assigned											
	Yes	55	56.7	27	100	5	100	87	65.9	6	12.592	20.56
	No	15	15.5	-	-	-	-	15	11.6			
	I do not know	15	15.5	-	-	-	-	15	11.6			
	No response	12	12.4	-	-	-	-	12	9.3			
	Total	97	100	27	100	5	100	129	100			
3	Whether or not skilled and knowledgeable personnel are available											
	Surly	5	5.2	9	33.3	3	60	17	13.2	6	12.592	32.632
	Surly not	65	67	12	44.4	1	20	78	60.3			
	Difficult to decide	10	10.3	6	22.2	1	20	17	13.2			
	No response	17	17.5	-	-	-	-	17	13.2			
	Total	97	100	27	100	5	100	129	100			

T = Teacher, P = principals,

As shown in table V, the majority, 67 per cent of the teachers and all of the principals and ETBMs agreed to the existence of the organized body responsible for managing material resources in preparatory schools.

On the other hand, 20.6 per cent of the teachers reported the nonexistence of responsible body for managing material resources. Hence, it is possible to conclude that there has been an organized body to manage material resources at every level of the system. This indicates that, there is an opportunity to insure smooth and balanced work of the system.

With regard to either the required personnel designated or positioned to the already set organized body to manage material resources, 56.7 per cent of the teachers, 100 per cent of the ETB

members and 100 per cent of the principals responded positively. On the other hand, 15.5 per cent of the teachers responded negatively; while 15.5 per cent of them revealed as they did not know. The rest 12.4 per cent didn't give their opinion. The actual observation and interview made by the researcher confirmed that there were designated personnel to manage material resources. Thus, the required personnel in all the preparatory schools have been positioned. Therefore, it is possible to say that, there was a good attempt in locating prospective employees to run the task of MRM.

As Item IV of the same Table, 67 per cent of the teachers, 44.5 per cent of the ETB members and 20 per cent of the principals feel that the existing responsible body does not have the necessary ability, skill and knowledge to manage material resources properly. On the other hand 60 per cent of the principal respondents reacted a bit different from other respondents. That is they replied that the assigned person has the necessary skill, knowledge and ability.

Besides, a significant number of the ETB members 33.3 per cent have replied the same as majority of the principals have done. Thus, majority of the principals and some of the ETB members seem to keep the reality confidential.

The chi square test of significance for 5 degree of freedom at 0.05 level of significance the critical value of  $\chi^2 = 12.592$ ; and the calculated value of  $\chi^2 = 32.632$ . Hence, the null ( $H_0$ ) hypothesis is rejected. Therefore, there is statistically significant difference among the three groups of respondents regarding whether the store keepers have the necessary skill and knowledge.

The actual observation, document analysis and interview made by the researcher revealed that no store keeper in the system attended a long range or short term training program in material resources management. Most of them were promoted to store keeper from guardianship and other related activities. Hence, the only sources of their knowledge and skill are reading, past experience and information from other individuals. So, it is unsafe to say that there was the necessary skill and knowledge in the system. Therefore, it is possible to conclude that, proper staffing has been ignored in the system with related to MRMs.

**Table: VI Planning of Material Resources Management**

	Item	Respondents								Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not schools design plans for the material resources											
	Yes	57	58.8	20	74	3	60	80	62	4	9.488	2.634
	No	18	18.6	2	7.4	1	20	21	16.3			
	I do not know	22	22.7	5	18.5	1	20	28	21.8			
	Total	97	100	27	100	5	100	129	100			
2	Responsible body to plan MRM in schools											
	The principal	15	15.5	3	11.1	1	20	19	14.7	8	15.507	71.753
	ETB members	-	-	11	40.7	-	-	11	53			
	PTU	-	-	5	18.5	-	-	5	3.9			
	teaching and administrative staff	57	58.8	8	29.6	3	60	68	52.8			
	No response	25	25.8	-	-	1	20	26	20.15			
	Total	97	100	27	100	5	100	129	100			
3	The extent to which effective use of planning exists											
	Highly	-	-	8	29.6	-	-	8	6.2	8	15.507	50.594
	Moderately	56	57.7	12	44.4	4	80	72	55.8			
	Minimally	25	25.8	-	-	-	-	25	19.4			
	Not at all	10	10.3	-	-	-	-	10	7.8			
	No response	6	6.2	7	25.9	1	20	14	10.9			
	Total	97	100	27	100	5	100	129	100			
4	The extent to which coordination was to plan											
	Highly	10	10.	8	29.6	1	20	19	14.7	6	12.592	11.528
	Moderately	55	3	15	55.6	2	40	72	55.8			
	Minimally	20	56.7	-	-	1	20	21	16.3			
	No response	12	20.6	4	14.8	1	20	17	13.2			
	Total	97	100	27	100	5	100	129	100			

T = Teacher, P = Principals,

As it is shown in Item 1 of table VI, 58.8 per cent, of the teachers, 74.1 per cent of ETBMs and 60 per cent of the principals agreed that the school had exercised planning of material resources. 21.7 per cent of the total respondents had no any information. On the other hand, 16.3 per cent of the total respondents responded negatively.

The actual observation and document analysis made by the researcher showed that there was an exercise of planning material resource management. However, it was not properly and skillfully

prepared. Hence one can safely say that planning activities were being exercised without trained educational planners in the system. Therefore, it is possible to conclude that planning was not given due attention for the best use of material resources. Teachers, education and training board members and principals were asked about the responsible body to plan material resources in their respective schools. With regard to this issue, the majority of the teachers and principals 58.8 per cent and 60 per cent respectively and some of the education and training board members 29.6 per cent responded that plans were prepared by the joint work of teaching and administrative staff. What was different to this point is majority of the education and training board members, 51.9 per cent replied that plans were mad only by principals and ETB members. This variation may indicate that ETB members tended to have different perception and experience about planning issue. Based on the majority of the respondents revealed, it is possible to conclude that, planning made in school was participatory.

The chi - square test of significance for 8 degree of freedom at 0.05 level of significance the critical value of  $\chi^2 = 15.508$ ; and the calculated value of  $\chi^2 = 71.753$ . Hence, the null (Ho) hypothesis is rejected. Therefore, it is possible to conclude that there is statistically significant difference among the respondents in their perception about the responsible body for planning of material resources management.

As it is indicated in Item 3 of table VI, the majority of the respondents 57.7 per cent of the teachers, 44.4 per cent of the ETB members and 80 per cent of the principals agreed that the planning made to manage material resources was moderately used. 25.8 per cent of the teacher respondents replied that it was minimally used. Thus, it is safe to say that the planning made to manage material resources was not effectively used. This implies that it could be conclude that the already existed scarce material resources often misused by the system. Planning designed to manage material resources was left on paper. Therefore,

Using the chi square test of significance, the result showed that for 8 degree of freedom at the 0.05 level of significance the critical value of  $\chi^2 = 15.5$ ; and the calculated value of  $\chi^2 = 50.6$ . Hence, the null hypothesis (Ho) is rejected. Thus, it would be concluded that there is statistically significant difference among the respondents

Planning has to be made in coordination with the concerned bodies. As indicated in Item 4, 56.7 per cent of the teachers, 55.6 per cent of the education and training board members and 40 per cent of the principals confirmed that there was moderate coordination among the concerned bodies when planning material resources. 20.6 per cent of the teachers and 20 per cent of the principals revealed that it was minimally coordinated. Only 14.7 per cent of the total respondents agreed that there was high degree of coordination. From the result obtained and interview made by the researcher it would be concluded that there was weak coordination in planning material resources management among the concerned bodies. Thus, it could also be concluded that every one in the system planned his or her own material resources management independently or a material resources planning exercise was left to the overall planning document.

**Table: VII Purchasing Material Resources**

	Item	Respondents								Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not purchasing guideline are available											
	Absolutely	61	62.9	18	66.7	5	100	84	65.1	4	9.488	3.771
	Absolutely not	14	14.4	2	7.4	-	-	16	12.4			
	I do not know	22	22.7	7	25.9	-	-	29	22.5			
	Total	97	100	27	100	5	100	129	100			
2	The extent to which the guidelines are applicable											
	Highly	16	16.5	7	25.9	2	40	25	19.4	6	12.592	4.458
	Moderately	50	51.6	11	40.7	1	20	62	48.1			
	Minimally	20	20.6	7	25.9	1	20	28	21.7			
	No response	11	11.3	2	7.4	1	20	14	10.9			
	Total	97	100	27	100	5	100	129	100			
3	The level at which purchasing is made											
	MOE	3	3.1	2	7.4	-	-	5	3.9	10	18.307	23.83
	REB	6	6.2	-	-	1	20	7	5.4			
	ZED	2	2.1	7	25.9	1	20	10	7.8			
	Wereda (WEO)	48	49.5	13	48.2	2	40	63	48.8			
	School level	36	37.1	5	18.5	1	20	42	32.6			
	No response	2	2.1	-	-	-	-	2	1.6			
	Total	97	100	27	100	5	100	129	100			
4	Whether or not purchasing made was appropriate											
	Yes	23	23.7	7	25.9	3	60	33	25.6	6	12.592	4.743
	No	15	15.5	2	7.4	1	20	18	14			
	Sometimes	57	58.8	18	66.7	1	20	76	58.9			
	No response	2	2.1	-	-	-	-	2	1.6			
	Total	97	100	27	100	5	100	129	100			

T = Teacher

P = Principal

The first Item of table VII deals with the Policy guideline of purchasing material resources. With regard to this issue, the majority of the respondents, 62.9 per cent, 66.7 per cent and 100 per cent of the teachers, ETB members and principals respectively confirmed that there was policy guideline for purchasing. A small number of respondents, that is, 12.4 per cent of the total respondents replied that there was no guideline for purchasing. The rest 22.9 per cent of the total number of respondents revealed that they did not know whether or not policy guideline exists.

Observation, interview and document analysis made by the researcher asserted that the written document used as a guideline to purchase material resources was found at the respective Wereda, financial and economic development offices. This revealed that most practices of purchasing were made by WFED office. Besides, schools had the right to exercises purchasing from their internal income; and the duty to follow the same rules of purchasing with their respective WFEDO. As a result, the purchasing activities made in the system had uniformity and this implies that there was favorable condition for the proper control and management of the material resources available. However, there was no chain of control of the available materials.

With respect to the II Item of Table VII, out of the total respondents 51.6 per cent of the teachers, 40.7 per cent of the ETB members and 20 per cent of the principals revealed that the existing guideline was not fully applicable, but moderate. 20.62 per cent of the teachers, 25.9 per cent of the ETB members and 40 per cent of the principals agreed that it was highly used. Hence, as the majority of the respondents revealed, it is safe to conclude that the existing guideline of purchasing was not totally applicable. Therefore, it could be concluded that purchasing was made arbitrarily. This intern leads to the improper use of material resources. Based on this one could conclude that there was wastage and misuse of material resources in the system.

The chi square test of significance for 6 degree of freedom at 0.05 level of significance the critical value of  $\chi^2 = 12.6$ ; and the calculated value of  $\chi^2 = 4.5$ ; thus, the null hypothesis (Ho) is accepted. Therefore, it would be concluded that there is no statistically significant difference among teachers, ETB members and principals in their opinion about the effective use of purchasing guidelines.

With regard to the level at which purchasing was made in the system, 49.5 per cent of the teachers, 48.2 per cent of the ETB members and 40 per cent of the principals agreed that purchasing was made at Wereda level. A significant number 37.1 per cent) of teachers, 18.5 per

cent of ETB members and 20 per cent of principals responded that purchasing was made at the school level.

From what the researcher observed and the results of the interview reached at, the major parts of purchasing made, such as bulk purchasing, were the responsibilities of the Wereda Financial and Economic Development Office (FEDO). Besides in all sample schools, small purchasing such as stationeries was made by the management body of the school. However, the only purchasing activities made at the schools were done by drawing money from their internal income. Thus, it is possible to conclude that purchasing was made at Wereda level at large and at school level in a small proportion. This implies that, there was an opportunity to work harmoniously with schools in identifying the needs for the materials. However, it was so difficult to solve problems related to material resources though the level of purchasing was closer to the schools.

Concerning the appropriateness of purchasing to the needs and interests of the teaching and learning activities, the majority of teachers and ETB members 58.8 per cent and 66.7 per cent respectively indicated that purchasing activities made at different levels were sometimes appropriate to the needs of the education. Here, what was a bit different from others was the fact that the principals' response was highly positive; that is, 60 per cent agreed that purchasing exercised in the system was appropriate to the needs of teaching and learning activities. This seems that the principals need to keep the existing problem confidential. Generally, when the total number of the respondents is given due consideration, it is possible to say that purchasing made in the system was more or less appropriate to the needs and interests of the learning and teaching process. Therefore, it is possible to say that, the system lost its proper management of material resources with regard to its appropriateness. As material resources are very important to the whole activities in the system due attention should be given to its appropriateness.

**Table VIII: Production of Material Resources**

	Item	Respondents								Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not schools engaged in production activities											
	Sometimes	44	45.4	13	48.2	1	20	58	45	6	12.592	40.891
	Always	3	3.1	12	44.4	1	20	16	12.4			
	To tally not	43	44.3	2	7.4	3	60	48	37.2			
	No response	7	7.2	-	-	-	-	7	5.4			
	Total	97	100	27	100	5	100	129	100			
2	Objectives of production activities											
	Fundraising	2	2.1	4	14.8	1	20	7	5.4	8	15.507	24.287
	school consumption	25	25.8	10	37	-	-	35	27.1			
	skill development	20	20.6	11	40.7	1	20	32	24.2			
	for exhibition	-	-	-	-	-	-	-	-			
	no response	50	51.6	2	7.4	3	60	55	42.6			
	Total	97	100	27	100	5	100	129	100			

T= Teachers                      P = Principals

As can be shown in Item 1 of table VIII, most of the sample schools were sometimes engaged in material resources production activities. This was true that the majority of the respondents 45.4 per cent, 48.2 per cent and 20 per cent of the teachers, ETB members and principals respectively assured the above idea. On the other hand, a significant number of respondents, that is, 44.3 per cent of the teachers, 7.4 per cent of the ETB members and 60 per cent of the principals replied that the schools were not engaged in production of material resources.

The actual observation and interview made by the researcher revealed that there was no any production activity of material resources in the preparatory schools. Instead, they use either the already prepared materials or plasma television as a teaching aid. This indicates that the positive response of the respondents was based on the former trends of the production activities. From the findings obtained, it is possible to conclude that most resources needed for the education sector were produced by higher level (REB).

By computing the chi square test of significance, the result of the test showed that with 6 degree of freedom at 0.05 level of significance the table value of  $\chi^2 = 12.6$ ; and the calculated value of  $\chi^2 = 40.9$ . Hence, the null hypothesis is not accepted. Therefore, it would be concluded that there is statistically significant difference among teachers, ETB members and principals in their perception regarding production of material resources.

**Table IX Storage of Material Resources**

	Item	Respondents								Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not schools have storage											
	Yes	74	76.3	27	100	5	100	106	82.2	6	12.592	9.234
	No	4	4.1	-	-	-	-	4	3.1			
	Difficult to decide	13	13.4	-	-	-	-	13	10.1			
	No response	6	6.2	-	-	-	-	6	4.6			
	Total	97	100	27	100	5	100	129	100			
2	Whether or not educational materials are properly arranged and recorded											
	Certainly	10	10.3	13	48.2	4	80	27	20.9	6	12.592	31.361
	Actually not	30	30.9	3	11.1	-	-	33	25.6			
	No satisfactorily	50	51.6	11	40.5	1	20	62	48.1			
	No response	7	7.2	-	-	-	-	7	5.4			
	Total	97	100	27	100	5	100	129	100			
3	Methods to register the in and out properties											
	Legal models	87	89.	26	96.3	5	100	118	91.5	8	15.507	3.149
	Locally made formats	2	7	1	3.7	-	-	3	2.3			
	I do not know	5	2.1	-	-	-	-	5	3.9			
	No record at all	1	5.2	-	-	-	-	1	0.8			
	No response	2	1.0	-	-	-	-	2	1.6			
	Total	97	100	27	100	5	100	129	100			

T=Teachers      P = principals

In Item 1 of table IX, the majority of the teachers 76.3 per cent, all of the ETB members, that is, 100 per cent and all of the principals 100 per cent asserted the existence of storage in the preparatory schools. Thus, it could be concluded that there was storage in all the preparatory schools of Arsi Zone. Therefore, it would be proper to say that material resources in the schools were more or less protected from damage, theft and losses.

With respect to Item 2 of table IX, the majority of the principals 80 per cent and significant number of the ETB members 48.1 replied that there was proper recording and arranging of material resources. Besides, 10.3 per cent of the teacher respondents agreed to the effective exercises of recording material resources. On the other hand, 51.6 per cent of the teacher respondents revealed that the record and arrangement of material resources was not satisfactory. The actual observation made by the researcher asserted that arranging and recording practices in all the sample schools were not satisfactory. This indicates that ETB members and principals tend to observe things from the local system of recording and, they did not consider scientific method of arranging, recording and coding of material resources. On the other hand, they seem to keep these all limitations confidential. The interviewed store men asserted that it was difficult to identify, record, arrange and code all material resources due to shortage of manpower, time and lack of space. In this case, the researcher agreed that there was problem of time and space. In many cases material resources in the schools and Wereda office were not identified, arranged, recorded and coded properly. In general, the problems of skilled manpower, storage guideline, and lack of training in this area of activities were some of the problems identified by the researcher. In addition, the store rooms were messy; there was lack of space poor quality of storage was also observed by the researcher. Thus, it would be concluded that the record and arrangement of material resources was not given due attention. This implies that store keeping, identifying, arranging and recording of material resources as managerial functions were neglected.

Using the chi square test of significance, the result showed that for 6 degrees of freedom at the 0.05 level of significance the critical value of  $\chi^2 = 12.59$ ; and the calculated value of  $\chi^2 = 31.36$ . Hence, the null hypothesis ( $H_0$ ) is not accepted. Therefore it would be concluded that there is statistically significant difference between teachers and other groups of respondents in their perception of the arrangement and record of material resources.

With regard to registration of the in and out of material resources, the majority of respondents, 89.7 per cent of the teachers, 96.3 per cent of the ETB members and 100 per cent of the principals responded that legal models were in use to register the in and out of material resources. The actual observation and document analysis made by the researcher also asserted that there was legal model to register the materials. Thus, it would be concluded that there was legal method of registering the in and out of material resources.

Therefore, it is possible to say that the schools had good information and record system regarding the incoming, out going and remaining items of materials;

**Table X Allocation and Distribution of Material resources**

	Item	Respondents								Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not guideline to allocate and distribute material resources are available											
	certainly	62	63.9	23	85.2	4	80	89	69	4	9.48	8.035
	Never	21	21.7	-	-	1	20	22	17.1			
	I do not know	14	14.4	4	14.8	-	-	18	14			
	Total	97	100	27	100	5	100	129	100			
2	The extent which the guide line is workable											
	Highly	8	8.3	2	7.4	2	40	12	9.3	6	12.592	10.932
	Moderately	60	61.9	19	70.3	1	20	80	62			
	Minimally	15	15.46	2	7.4	2	40	19	14.7			
	No response	14	.4	4	14.8	-	-	18	14			
	Total	97	100	27	100	5	100	129	100			
3	Responsible body to allocate and distribute material resources											
	Administrative and finance section	29	29.9	9	33.3	-	-	38	29.5	8	15.507	9.20
	General service section	7	7.2	5	18.5	1	20	13	10.1			
	Distribution and allocation section	53	54.6	13	48.2	3	60	69	53.5			
	Store keeper	6	6.18	-	-	1	20	7	5.4			
	I do not know	2	2.1	-	-	-	-	2	1.6			
	Total	97	100	27	100	5	100	129	100			
4	The extent to which the allocation and distribution is fair											
	Highly	20	20.6	12	44.4	3	60	35	27.1	4	12.592	9.997
	Moderately	65	67	13	48.1	2	40	80	62			
	Minimally	10	10.3	1	3.7	-	-	11	8.5			
	No response	2	2.1	1	3.7	-	-	3	2.3			
	Total	97	100	27	100	5	100	129	100			
5	Whether or not the allocation and distribution section work jointly											
	Yes	52	53.6	22	81.5	4	80	78	60.5	4	9.48	8.012
	Never	15	15.5	1	3.7	-	-	16	12.4			
	I do not know	30	30.9	4	14.8	1	20	35	27.1			
	Total	97	100	27	100	5	100	129	100			

T = Teachers

P= Principals

With regard to the guideline for proper material resources management particularly its allocation and distribution, 63.9 per cent, 85.2 per cent and 80 per cent of the teachers, ETB members and principals respectively responded the existence of guideline.

— The actual observation and document analysis made by the researcher revealed that the guidelines in most schools were not centrally prepared and distributed to the grassroots level. What the respondents considered as a guideline was, written letters and simple documents from their respective Wereda education offices. Thus, it is possible to conclude that there were no centrally prepared and organized guidelines available in schools to distribute and allocate material resources thus; schools use their experiences and letters written from their respective Wereda education offices.

— Generally, the already gathered data and document analysis confirmed that there was no any organized material resources allocation system provided to preparatory schools in the zone. In practice, some strategies were used in the system. The common strategy exercised was based on the preceded students' enrollment.

Thus, the major criteria for allocation and distribution of educational materials as: the size of the system, the amount of materials available and using measurement units such as size, cost per capita and teacher population, were ignored (UNESCO, 1992: 161).

In Item I of the above table, it is indicated that there was no centrally made and distributed guideline. However, it was mentioned that there were written letters used as a guideline. With regard to Item II of Table X, the majority of the teachers and ETB members 61.9 per cent and 70.1 per cent respectively confirmed that the effective use of these documents was medium. On the other hand, 40 per cent of the principals responded as it was highly effective. Principals tend to be reluctant to admit the limitations regarding the effective use of the documents. In one way or another, there was no effective use of the documents. Hence, it would be concluded that there was no fair allocation and distribution of material resources to the needed purpose in the system. This implies that things were done arbitrarily.

The chi square test of significance for 6 degree of freedom at 0.05 level of significance the critical value of  $\chi^2 = 12.592$ , and the calculated value of  $\chi^2 = 10.932$ . Hence, the null hypothesis

is accepted. Therefore, it is safe to conclude that there is no statistically significant difference between principals and other groups of respondents.

In connection with the responsible body to allocate and distribute material resources, the majority of the respondents 54.6 per cent of the teachers, 48.2 per cent of the ETB members and 60 per cent of the principals agreed that the distribution and allocation section organized for this purpose had the responsibility. A significant number of the respondents, 29.5 per cent of the total number of respondents, responded that the administrative and finance section was responsible to allocate and distribute material resources. What was actually observed and asserted from the interview made was both allocation and distribution was practiced by administrative and finance section at school level. While, the separately organized body of allocation and distribution was responsible at Wereda level in the system. Thus, it would be concluded that, the allocation and distribution practice had lack of uniformity. This in turn calls for changing the manner of performance. As a result, it was difficult to have effective material allocation and distribution system. Hence, it is safe to conclude that the system lost the proper way of allocation and distribution of material resources.

In Item 5 of table X, the majority of the respondents 53.6 per cent of the teachers, 81.5 per cent of the ETB members and 80 per cent of the principals stated the assertion that responsible bodies to allocate and distribute material resources had well and organized coordination system with the other concerned bodies in the system. 27.1 percent of the total number of respondents revealed that they had no any information about the joint work of the section with other concerned bodies. On the other hand, 12.4 per cent of the total number of respondents responded that there was no coordination between the allocation and distribution section and other bodies. The actual observation and interview made by the researcher showed that the section had a good and smooth relationship and coordination with the concerned bodies. The only problem was the absence of guideline how to allocate and distribute material resources to the concerned bodies. Thus, it could be concluded that there was coordination and integration in allocating and distributing material resources in the system. Therefore, one could safely say that faire distribution of material resources were available.

**Table: XI Standards of Material Resources**

	Item	Respondents								of	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not concerned body in defining and determining the type and quality of material resources exist											
	Yes	52	53.6	19	70.4	4	80	75	58.1	6	12.592	18.727
	No	19	19.6	2	7.4	-	-	21	16.3			
	I do not know	26	26.8	4	14.8	-	-	30	23.3			
	No response	-	-	2	7.4	1	20	3	2.3			
	Total	97	100	27	100	5	100	129	100			
2	The level at which standards of material resources are determined											
	Higher (MOE)	5	5.2	2	7.4	-	-	7	5.4	8	15.507	6.529
	Middle (REB)	11	11.3	5	18.5	-	-	16	12.4			
	Lower (ZEO and WEO)	45	46.4	14	51.9	3	60	62	48.1			
	School level	10	10.3	4	14.8	1	20	15	11.6			
	No response	26	26.8	2	7.4	1	20	29	22.5			
	Total	97	100	27	100	5	100	129	100			
3	The extent to which established standards exist for material resource											
	High	16	16.5	5	18.5	1	20	22	17.1	8	15.507	26.051
	Moderate	36	37.1	15	55.6	3	60	54	41.9			
	Low	30	30.9	3	11.1	-	-	33	25.6			
	Have no standard	15	15.5	-	-	1	20	16	12.4			
	No response	-	-	4	14.8	-	-	4	3.11			
	Total	97	100	27	100	5	100	129	100			
4	Appropriateness of the standardized materials to the needs of Teaching – Learning process											
	Highly	10	10.3	6	22.2	2	40	18	14	8	15.507	34.218
	Moderately	17	17.5	15	55.6	3	60	35	27.1			
	Minimally	35	36.1	-	-	-	-	35	27.1			
	Not at all	15	15.5	-	-	-	-	15	11.6			
	No response	20	20.6	6	22.2	-	-	26	20.2			
	Total	97	100	27	100	5	100	129	100			

T = Teachers,

P = Principals

As can be seen in Item 1 of table XI, the majority of the respondents 53.6 per cent of the teachers, 70.4 per cent of the ETB members and 80 per cent of the principals confirmed that there was responsible body that defines and determines the type and quality of material resources in the

system. On the other hand, 19.6 per cent and 7.4 per cent of the teachers and ETB members respectively believed that there was no responsible body to define and determine the standard of material resources.

The interview made by the researcher asserted that there was responsible body to define and determine the types and qualities of material resources in the system. Therefore, based on the response obtained from the majority of the respondents and interviews made, it would be concluded that there was responsible and concerned body to define and determine the standards of material resources in the system. This indicates that due attention was given to designate responsible body in determining standards of material resources.

With respect to the second Item in table XI, 46.4 per cent of the teachers, 51.9 per cent of the ETB members and 60 per cent of the principals replied that the standards of material resources were defined and determined at Wereda level. 12.4 per cent of the total respondents agreed that REB determines the standard. 11.6 per cent of the total respondents confirmed that the level of standard was at the school level. Still others 5.4 per cent said MOE determines the standard. On the other hand, significant number of respondents was ignorant about the level at which standards of material resources was made. The interview made by the researcher showed that it was the woreda education office in coordination with the Wereda finance and economic development office that determines the type, quality and quantity of the material resources. Thus, it is safe to conclude that the standard of material resources was made at Wereda level. It is also possible to say that there was good chance to see the interests and needs of the schools for material resources; as the level at which the standard of material resources made was closer to the schools.

By computing the chi square test of significance the result of the test showed that with 8 degree of freedom at 0.05 level of significance the table value of  $\chi^2 = 15.5$ ; and the calculated value of  $\chi^2 = 6.5$ . Thus, the null hypothesis ( $H_0$ ) is accepted. It is possible to conclude that there is no statistically significant difference among the respondents.

Presented in Item 3 of table XI, is the degree of standards of the available material resources. The majority of the respondents 37.12 per cent of the teachers 55.6 per cent of the ETB members and 60 per cent of the principals responded that the standard of the available materials was medium.

While a significant number of the respondents 30.9 per cent of the teachers and 11.1 per cent of the ETB members revealed that the standard made to the available material resources was low.

From the information provided by the respondents, and actual observation made by the researcher, there was no written guideline regarding the standard of material resources. From this what one can conclude is the standard for the available material was done at different levels without the sufficient knowledge. This resulted in lack of information for many people about the standard of material resources in the system. Thus, to achieve a good result, the higher body has to set standard of material resources and provide the best way of management. However, the system fails to maintain minimum quality of standards.

Regarding the appropriateness of the available material resources to the needs of educational objectives, the respondents perceive differently. That means, the majority of the teachers 36.1 Per cent revealed that the available materials were minimally appropriate. On the other hand, majority of the ETB members and principals 55.6 per cent and 60 per cent respectively replied as it was moderately appropriate. Still 40 per cent of the principals, 10.3 per cent of the teachers and 22.2 per cent of the ETB members said that there was high degree of appropriateness.

Besides, the interview and actual observation made by the researcher showed that it was difficult to decide the degree of appropriateness of the available material resources in the system. Hence it would be concluded that the available materials in the system were not highly appropriate, rather they had low or medium degree of appropriateness. Therefore, it is safe to say that much attention was not given to the qualities of available materials. This intern lowered down the quality of education.

Using the chi square test of significance for 8 degree of freedom at 0.05 level of significance the table value of  $\chi^2 = 15.507$  and the calculated value of  $\chi^2 = 34.218$ . Thus, the null hypothesis ( $H_0$ ) is not accepted. Therefore, it is possible to conclude that there is statistically significant difference among teachers and ETB members and principals in their perception about the appropriateness of the available material resources.

**Table XII Availability and Utilization of Material Resources**

	Item	Respondents								Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not material resources are available in schools											
	Yes	65	67.1	22	81.5	4	80	91	70.5	6	12.592	6.60
	No	23	23.7	5	18.5	-	-	28	21.7			
	I do not know	3	3.1	-	-	-	-	3	2.3			
	No response	6	6.2	-	-	1	20	7	5.4			
	Total	97	100	27	100	5	100	129	100			
2	Material resources are provided by schools											
	Strongly agree	10	10.3	6	22.2	3	60	19	14.7	8	15.507	13.85
	Agree	15	15.5	6	22.2	1	20	22	17.1			
	Disagree	56	57.7	13	48.2	1	20	70	54.3			
	Strongly disagree	11	11.3	2	7.4	-	-	13	10.1			
	No. response	5	5.2	-	-	-	-	5	3.87			
	Total	97	100	27	100	5	100	129	100			
3	Impact of unavailable materials on the learning and teaching process											
	High	45	46.4	4	14.8	1	20	50	38.8	6	12.592	17.831
	Moderate	20	20.6	4	14.8	-	-	24	18.6			
	Minimum	2	2.1	-	-	-	-	2	1.6			
	Not response	30	30.9	19	70.4	4	80	53	41.1			
	Total	97	100	27	100	5	100	129	100			
4	Whether or not available materials coincide with the expected standards?											
	Certainly	15	15.5	6	22.2	1	20	22	17.1	4	9.88	8.606
	Not actually	20	20.6	-	-	2	40	22	17.1			
	Partially	62	63.9	21	77.8	2	40	85	65.9			
	Total	97	100	27	100	5	100	129	100			
5	Whether or not utilization Guideline exists.											
	Yes	29	29.9	15	55.6	3	60	47	36.4	6	12.592	11.748
	No	40	41.2	11	40.7	2	40	53	41.1			
	I don't know	26	26.8	1	3.7	-	-	27	20.9			
	No response	2	2.1	-	-	-	-	2	1.6			
	Total	97	100	27	100	5	100	129	100			
6	Effective use of the guideline											
	High	9	9.3	2	7.4	1	20	12	9.3	6	12.592	10.576
	Moderate	15	15.5	10	37	1	20	26	20.2			
	Minimum	5	5.2	3	11.1	1	20	9	6.9			
	No response	68	70.1	12	44.4	2	40	82	63.6			
	Total	97	100	27	100	5	100	129	100			
7	Whether or not available materials are effectively used?											
	Highly	5	5.2	7	25.9	1	20	13	10.1	6	12.592	17.771
	Moderately	40	41.2	15	55.8	2	40	57	44.2			
	Minimally	20	20.6	-	-	1	20	21	16.3			
	No response	32	33	5	18.5	1	20	38	29.5			
	Total	97	100	27	100	5	100	129	100			

T = Teachers

P= Principals

As can be seen in Item 1 of table XII, 67.1 per cent of the teachers, 81.5 per cent of the ETB members and 80 per cent of the principals replied that there were available material resources in their respective schools. On the other hand, 21.7 per cent of the teachers denied the availability of material resources.

As the observation and interviews made by the researcher indicated, the schools were filled with material resources. But, most of them were redundant and obsolete materials, and they were not appropriate to the currently needed educational objectives. In this case, most of the respondents responded positively based only on the size of the existing materials. However, shortage of educational materials in the whole system was the major problem.

Thus, the available resources didn't bring the expected out come in the system because they were not appropriate to the needs of the teaching-learning activities.

Regards the adequate type and amount of the available material resources in the schools, 57.7 per cent of the teachers, 48.15 per cent of the ETB members and 20 per cent of the principals disagreed to the adequacy of educational materials. On the other hand, 17.1 per cent and 14.7 per cent of the total respondents agreed and strongly agreed to the adequacy of the available materials provided by their respective schools in their daily work. What a bit difference observed was the majority of the principals, 60 per cent responded that they strongly agreed with the adequacy of provided material resources. This indicates that principals tend to be reluctant to admit limitations regarding the inadequacy of material resources provided to the teaching learning activities. However, this doesn't mean that there was adequate material resources provided to teachers in their daily teaching activities. Base on this, one can conclude that the already available material resources were not properly used for the learning and teaching activities. Therefore, it would be concluded that improper use of the available material resources led to inefficient utilization of other institutional resources.

The chi square test of significance for 8 degree of freedom at 0.05 level of significance, the table value of  $\chi^2 = 15.5$ ; and the calculated value of  $\chi^2 = 13.8$ . Hence, the null hypothesis is accepted. Therefore, it would be concluded that there is no statistically significant difference between principals and other groups of respondents in their opinion about the provision of adequate amount and type of the available material resources.

In Item 3 of table XII, 38.8 per cent of the total respondents responded that the education system as a whole was highly affected by inadequate type and amount of material resources. 10.6 per cent of the total respondents said that the teaching – learning process was affected moderately.

Insignificant number of the respondents, 1.6 per cent responded as it was minimally affected. On the other hand, the majority of principals and ETB members 80 per cent and 70.4 per cent respectively did not give their opinion. This seems to have arisen from the difference in perception among the groups of principals, ETB members and teachers about the effect of material resources on the objectives of education.

Therefore, from the respondents' responses and observation made, it is possible to conclude that inadequacy of material resources in the system lowered the quality of education.

As it can be noted from table XII Item IV, the majority of the respondents, 63.9 per cent of the teachers, 77.8 per cent of the ETB members and 40 per cent of the principals confirmed that the available material resources found in the schools were partially coincided with the predetermined standards of the material resources in the system. 17.1 per cent of the total number of respondents reacted that the available materials were certainly coincided with the standard. On the other hand, 17.1 per cent of the total respondents denied the coinciding of available material resources to the predetermined standard. In conclusion, materials available to schools were partially coincided to the pre determined standards. This was asserted by the observation and interview made. Hence, it is safe to say that material resources in the system sometimes coincided with the predetermined standard.

However, due attention was not given to available material resources regarding their appropriateness to the already predetermined standard.

Therefore, it could be concluded that material resources were brought to the schools without the necessary and careful selection.

As it is indicated in Item 5 of table XII, the majority of teachers and some of the ETB members and principals, 41.2 per cent, 40.7 per cent and 40 percent respectively revealed that there was no formally established guideline for proper utilization of material resources. On the other hand, some of the teachers and most of the ETB members and principals, 29.9 percent, 55.6 per cent and 60 per cent respectively confirmed that there was guideline for proper utilization.

This variation seems to be seen from the difference in perception about the guideline or the guideline was put far from the reach of teachers. The observation and interview made by the researcher asserted that there was guideline for proper utilization of material resources. However, the guideline was prepared for general purpose, but not specific to preparatory schools. Besides, the existing general purpose guideline was published in 1986 E.C that it didn't consider the recently established preparatory schools. Therefore, it is possible to conclude that much attention was not given to material resources utilization in preparatory schools.

For Item 6 of table XII, the majority of teachers, 70.1 per cent, ETB members -44.4 per cent and principals; 40 per cent didn't give their opinion. This is because of their reluctance the existence of the guideline in Item five of the same Table. On the other hand, 20.2 per cent of the total respondents responded that the existing general purpose guideline published in 1986 E.C by MOE was moderately effective 9.3 percent of the total respondents confirmed that the guideline was highly effective. The observation and interview made by the researcher assured that the existing guideline was not used effectively. Therefore, from the results obtained, one can conclude that the guideline was left on paper and material resources were improperly used. Thus, the responsible and concerned body should give especial attention to the proper utilization of material resources so as to conduct effective teaching – learning process.

In table XII Item 7, the majority, 41.2 per cent of the teachers, 55.6 per cent of the ETB members and 40 per cent of the principals asserted that utilization of material resources was moderately effective. A significant number of teacher respondents also revealed the minimum utilization of material resources. 29.5 per cent and 10.1 per cent of the total respondents either support high degree of effectiveness or didn't give their response respectively.

The actual observation and interview made by the researcher match with the response given by the majority of the respondents. Therefore, one can conclude that utilization of material resources in the preparatory schools of Arsi zone was unwise.

Computing the chi square test of significance for 6 degree of freedom at 0.05 level of significance the table value of  $\chi^2 = 12.6$ ; and the calculated value of  $\chi^2 = 17.7$ . Hence, the null hypothesis ( $H_0$ ) is not accepted. Therefore, it would be concluded that there is statistically significant difference among teachers, ETB members and principals in their Perception about the effective utilization of material resources.

In general, the available material resources were not effectively used or utilized for the predetermined objective i.e. for the teaching - learning process. Therefore, it is possible to conclude that there was wastage of the available material resources.

**Table XIII Control and Inventory System of Material Resources**

	Item	Respondents								Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not responsible body to control material resources exists.											
	Yes	54	60.8	22	81.5	5	100	86	66.7	6	12.592	7.648
	No	9	2.1	1	3.7	-	-	3	2.3			
	Difficult to decide	2	36.1	4	14.8	-	-	39	30.2			
	No response	35	1.1	-	-	-	-	1	0.8			
	Total	97	100	27	100	5	100	129	100			
2	Responsible body to control material resources at different level?											
	Head of the respective system (level)	26	26.8	6	22.22	-	-	32	24.81	8	15.507	9.166
	Administration and finance section	12	12.4	2	7.4	-	-	14	10.9			
	Store keeper	43	44.3	15	55.6	5	100	63	48.9			
	Others	9	9.3	4	14.8	-	-	13	10.9			
	No response	7	7.3	-	-	-	-	7	5.4			
	Total	97	100	27	100	5	100	129	100			
3	How often inventory is made in schools?											
	Once a year	81	83.5	27	100	5	100	113	87.6	4	9.488	6.025
	I do not know	15	15.5	-	-	-	-	15	11.6			
	No response	1	1	-	-	-	-	1	0.8			
	Total	97	100	27	100	5	100	129	100			

T = Teachers

P = Principals

School administrators and teachers have to deal with some functions of material resources management. Control and inventory are among the major activities in material resources management.

For Item 1 of table XIII, 66.7 per cent of the respondents replied that there was responsible body to control material resources. The interview made by the researcher also assured the existence of responsible body. Thus, it is possible to conclude that there was responsible body assigned to control material resources. This implies that there was a good start to manage material resources.

Regarding the responsible body to control material resources at different levels in the system, 44.3 per cent of the teachers 55.6 per cent of the ETB members and 100 per cent of the principals indicated that the store keeper took the responsibility.

Others, 26.8 per cent of the teachers and 22.2 per cent of the ETB members responded that the head of the respective level in the system controls material resources.

As can be seen from the findings, it would be concluded that the controlling responsibility of material resources was left to the store keeper.

The actual observation and interview made by the researcher confirmed that controlling activities were totally ignored. The only responsible body, as indicated above was the store keeper. The only difference, which was observed, was at Wereda and zone education offices. At these levels, administrative and finance section shared the responsibility.

Hence, it could be concluded that, unless the available material resources are controlled and wisely used it is difficult to reach at the objectives of education. Thus, all concerned bodies should be active participants at each level of the system in controlling material resources.

The last Item of table XIII deals with inventory. As indicated in the table, the majority of the respondents, 83.5 per cent of the teachers, 100 per cent of the ETB members and 100 per cent of the principals replied that inventory was made once a year.

According to the observation, document analysis and interview made by the researcher, it was true that inventories in most schools were carried out once a year. In one of the schools it was extended even beyond a year.

This implies that it was difficult to manage inventory activities more than once a year due to lack of manpower, space and time. Therefore, it would be concluded that proper utilization of material resources was ignored .Because inventory is termed as all goods between the reception and dispatch of material resources from the source to the consumer.

**Table XIV Disposal of Material Resources**

	Item	Respondents								Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	Whether or not idle resources exist											
	Yes	65	67	22	81.9	3	60	90	69.8	6	12.592	22.005
	No	2	2.1	2	7.4	2	40	6	4.6			
	Difficult to decide	23	23.7	1	3.7	-	-	24	18.6			
	No response	7	7.2	2	7.4	-	-	9	6.8			
	Total	97	100	27	100	5	100	129	100			
2	Whether or not guideline for disposal exists											
	Yes	60	61.9	20	74.1	3	60	83	64.3	4	4.988	11.88
	No	7	7.2	-	-	2	40	9	7.0			
	I do not know	30	30.9	7	25.9	-	-	37	28.7			
	Total	97	100	27	100	5	100	129	100			
3	The extent to which the guideline is effectively used											
	Highly	6	6.2	-	-	2	40	8	6.2	6	12.592	14.57
	Moderately	18	18.6	8	29.6	-	-	26	20.2			
	Minimally	36	37.1	12	44.4	1	20	49	37.9			
	No response	37	38.2	7	25.9	2	40	46	37.9			
	Total	97	100	27	100	5	100	129	100			
4	Responsible body to dispose											
	Principal storekeeper	10	10.3	-	-	-	-	10	7.8	8	15.507	24.249
	Disposal committee	20	20.6	-	-	-	-	20	15.5			
	I do not know	61	62.9	23	85.2	5	100	89	69			
	No response	5	5.2	-	-	-	-	5	3.9			
	Total	1	1	4	14.9	-	-	5	3.9			
	Total	97	100	27	100	5	100	129	100			
5	The extent to which the responsible body is skill-full?											
	Highly	15	15.5	2	7.4	-	-	17	13.2	8	15.507	3.923
	Moderately	46	47.4	15	55.	4	80	65	50.4			
	Minimally	34	35.1	10	6	1	20	45	34.9			
	Not at all	1	1	-	37	-	-	1	0.8			
	No response	1	1	-	-	-	-	1	0.8			
	Total	97	100	27	100	5	100	129	100			

T = Teachers

P = Principals

In Item 1 of table XIV, 69.8 of the total respondents revealed that there were idle or underused material resources in their respective schools. On the other hand, 18.6 per cent of the total respondents confirmed that there were no idle resources.. The actual observation and interview

made by the researcher asserted that there were idle or under- used material resources in the preparatory schools as well as in Wereda education stores.

This indicates that problem of space arose from the accumulated idle or underused material resources in the schools. This in turn affects activities, such as inventory.

With regard to the guideline to dispose idle material resources, majority of the respondents, 61.7 per cent of the teachers, 74.1 per cent of the ETB members and 60 per cent of the principals responded that there was formally established disposal guideline. Only 7 per cent of the total respondents denied the existence of disposal guideline. While others 28.7 per cent of the total respondents revealed that, they had no any information regarding the existence of disposal guideline. Based on the observation made, it is confirmed that there was a written guideline for disposal of material resources. This implies that there was possible condition to dispose surplus and obsolete materials.

Concerning the effective use of the existing guideline respondents have reacted as follows. 37.1 per cent of the teachers, 44.44 per cent of the ETB members and 20 per cent of the principals confirmed that the guideline was minimally effective; and 18.6 percent of the teacher and 29.4 per cent of the ETB members revealed that it was moderately effective. In general, one can conclude that the guideline for disposal of material resources was not effectively used. Therefore, it is possible to say that, the ineffective use of disposal guideline led to the problem of space in MRM.

Computing the chi square test of significance for 6 degree of freedom at 0.05 level of significance, the table value of  $\chi^2 = 12.592$ ; and the calculated value of  $\chi^2 = 14.577$ . Thus, the null hypothesis ( $H_0$ ) is not accepted. Therefore, it is possible to conclude that there is a statistically significant difference among the groups of respondents in their opinion about the effective use of the disposal guideline.

Concerning the responsible body to dispose idle material resources, in Item IV of the same Table, 62.9 per cent of the teachers, 85.2 per cent of the ETB members and 100 per cent of the principals responded that purposely organized committee was responsible to dispose idle or underused material resources. 7.8 per cent of the total number of respondents replied as principals were responsible. Still other 15.5 per cent responded as the store keeper disposed idle materials.

This leads to say there was lack of awareness with some respondents regarding disposal activities.

With regard to the Last Item of table XIV, 47.5 per cent of the teachers, 55.6 per cent of the ETB members and 80 per cent of the principals responded that the responsible body to dispose idle material resources was moderately skilled. What the researcher observed from the interview and document analysis made was completely different from the majority of the respondents; that is, unskilled and ad-hoc committee was the responsible body to dispose idle and under used material resources. This indicates that there was lack of emphasis to the skill and knowledge of responsible body to dispose material resources.

**Table XV Skill, Knowledge and Participation of Concerned Bodies**

	Item	Respondents								Df	Table value of $\chi^2$	Calculated value of $\chi^2$
		T		ETBM		P		Total				
		N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%	N <sup>o</sup>	%			
1	If the respondents were trained on MRM											
	Yes	11	11.3	1	3.7	3	60	15	11.6	2	5.99	13.054
	No	86	88.7	26	96.3	2	40	114	88.4			
	Total	97	100	27	100	5	100	129	100			
2	Types of the training program											
	Seminar	2	2.1	-	-	-	-	2	1.6	6	12.592	13.732
	Workshop	12	12.4	1	3.70	3	60	16	12.4			
	Conference	2	20.7	-	-	-	-	2	1.6			
	No response	81	83.5	26	96.30	2	40	109	84.5			
	Total	97	100	27	100	5	100	129	100			
3	Whether or not the training was sufficient to manage material resources?											
	Surly	3	3.1	1	3.7	-	-	4	3.1	6	12.592	15.658
	Partially	11	11.3	-	-	3	60	14	10.9			
	Not actually sure	2	2.1	-	-	-	-	2	1.6			
	No response	81	38.5	26	96.3	2	40	109	84.5			
	Total	97	100	27	100	5	100	129	100			
4	The extent to which the skill, knowledge and educational qualification shave any contribution to material resources											
	Highly	89	91.8	22	81.5	4	80	12	89.2	4	9.488	9.733
	Moderately	6	6.2	1	3.7	1	20	8	6.2			
	Minimally	2	2.1	4	14.8	-	-	6	4.7			
	Total	97	100	27	100	5	100	129	100			
5	The extent to which professionals and administrative personnel participate in the overall MRM											
	Highly	14	14.4	7	25.9	1	20	22	17.1	6	12.592	13.822
	Moderately	25	25.8	7	25.9	3	60	35	27.2			
	Minimally	58	59.9	11	40.7	1	20	70	54.3			
	Not at all	-	-	2	7.4	-	-	2	1.6			
	Total	97	100	27	100	5	100	129	100			

T = Teachers

P = Principals

With regard to training on the management of material resources, the majority of the respondents, 88.7per cent of the teachers, 96.3 per cent of the ETB members and 40 per cent of the principals

assured that they didn't attend in any training activity. It was only 11.6 per cent of the total number of respondents that attended the training activity. Thus, one can clearly conclude that almost all members of the preparatory schools had no skill and knowledge obtained through training. Hence, management of material resources was done on the bases of experience.

The importance of skill, knowledge and qualification of concerned personnel is treated in Item IV of the same Table .As it is indicated in the table, 91.8 per cent of the teachers, 81.5 per cent of the ETB members and 80 per cent of the principals asserted that skill, knowledge and qualification of the concerned personnel to manage material resources was highly needed. Only 10.9 per cent of the total respondents confirmed that it was moderately or minimally important. The interview made by the researcher assured that there was a great need for training. Therefore, from the respondents' responses and interviews made, it is possible to conclude that inadequacy of training and lack of skill, knowledge and low qualification could affect the teaching- learning activities. Thus, attention has to be given for training and qualification of the responsible bodies.

The last Item of table XV deals with the participation of different groups in material resources management. With regard to this issue, the majority of the respondents, 59.9 per cent of the teachers, 40.7 per cent of the ETB members and 20 per cent of the principals revealed that professionals and administrative staffs participate minimally. 27.1 per cent of the total respondents responded as there was medium participation of teaching and administrative staffs in material resources management. On the other hand, 60 per cent of the principals replied that the participation of different groups was not minimal but moderate.

The chi square test of significance for 6 degree of freedom at 0.05 level of significance, the table value of  $\chi^2 = 12.6$ ; and the calculated value of  $\chi^2 = 13.8$ . Hence, the null hypothesis ( $H_0$ ) is not accepted. Thus, it is possible to conclude that there is statistically significant difference between principals and other groups of respondents in their perception about the participation of different groups to manage material resources.

From the interview made the researcher observed that different groups in the system seldom participate in material resources management. In conclusion, all the information obtained revealed that the attention given to material resources management was low. For the reason, that there was no enough manpower assigned to manage the material resources. Though, financial and administrative personnel seldom participated, the only accountable person for MRM in the school

system was the store keeper. A bit attention was given at Wereda and zone education offices. And there were two or three individuals in the system. Thus, it is possible to say that the responsibility was left to the unconcerned body. Therefore, participation of all concerned bodies in management material resources has to be given due attention.

## CHAPTER FOUR

### 4. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 4.1 Summary

The principal aim in undertaking this study was to assess the current situation of material resources management in preparatory schools of Arsi zone of Oromia Regional State. To this effect, basic questions addressing issues related to the effectiveness of managerial functions in material resources management, the extent to which schools facilitate the teaching - learning process using the available educational material resources and the extent to which the issue of policy facilitate the management of material resources and the participation of professionals in material resources management were raised.

In this study, descriptive survey method was employed. To address the raised research questions, the researcher reviewed relevant literature and prepared questionnaires, interview guides and observation check list on the basis of the reviewed literature to collect data from the subjects at sampled preparatory schools. These questionnaires were designed for teachers, ETB members and principals. These questionnaires after having been evaluated and checked by the thesis advisor, they were pilot tested in order to avoid irrelevant and ambiguous question items. Based on the comments secured, necessary corrections and modifications were made before distribution.

#### **PART ONE: Respondents' Characteristics**

The subjects for this study were chosen using purposive sampling, available sampling, Quota sampling and simple random sampling procedures.

The study was conducted in 5 preparatory schools selected on the purposive sampling method. The subjects of the study were 105 teachers, 30 ETB members, 5 principals, 10 Wereda education officers, 5 store men and 2 zone education officers.

In the selected schools 140 were expected to fill the questionnaires from the three different groups of respondents. Out of the total number of questionnaires dispatched, 92.4 percent of the teachers, 90 per cent of the ETB members and 100 per cent of the principals filled in the questionnaire.

After analyzing and discussing the data obtained from the different sources of this research, the following summary, conclusions, and recommendations are given on the basis of the objectives of the study.

## **PART TWO: Results of the Study**

1. It has been observed that there was an organized policy guideline to manage material resources in the system. But it was not disseminated to the users. Therefore, it is possible to say that the policy guideline in general was not used properly to manage material resources in the school and offices understudy. This leads to the misuse of educational resources and this might lower down the quality of education.
2. The study revealed that, majority of the respondents agreed that there was an organized department to manage material resources at every level of the system. And the required personnel in all the preparatory schools were positioned. On the other hand the section was not provided with any help from other concerned bodies. Besides, there was no enough man power designated to manage the material resources. A bit attention was given at Wereda and zone education offices. As a result, there were two or three individuals in the system. In the schools understudy, the storekeeper was the only responsible body to run the activities in managements or material resources. Thus, the responsibility was left to the unconcerned body. Therefore, it is safe to say that the attention given to material resources management in the system was low.

The other information obtained from the majority of the respondents revealed that no store keeper in the system attended a long or short term training program in material resources management. As indicated in the response obtained from the interview, the only source of their knowledge and skill were from reading, past experiences and information from other individuals. This means, the necessary knowledge and skill of material resources management has not yet been developed. Therefore, the management of material resources in the system has tremendously lost its power of proper performance.

3. The findings of the study indicated that, the overall planning activities were being exercised in the preparatory schools understudy. It was also identified that the overall planning activities were done by the joint work of teaching and administrative staff. On

the other hand, majority of the respondents confirmed that, there was weak coordination activity in planning material resources management among the concerned bodies. Every one in the system planed its own material resources management independently or a material resource planning exercise was left to put in the overall planning activities. Moreover, the overall planning was not effectively implemented.

4. As the findings of the study disclosed, purchasing guideline was found at the respective Wereda financial and economic development office. This revealed that most practices of purchasing were made by WFED office. Hence, it is possible to say that the purchasing activities made in the system had uniformity and creates favorable condition for the proper control and management of the material resources available. However, the result of the study showed that, there was no chain of control of the available materials. Moreover, most of the respondents reported that, the existing guideline of purchasing was not properly used. As it is mentioned above, the major part of purchasing made at the Wereda Financial and economic development office. Besides, in all sample schools small purchasing was made by the management body of the schools. In other words, purchasing was made at Wereda level at large and at school level in a small proportion.

Regarding the appropriateness of the purchasing system to the teaching and learning process, majority of the respondents confirmed that purchasing made in the system was minimally appropriate to the needs and interests of the teaching and learning process. So, the appropriateness of the purchasing system, as it was identified by the study, was not satisfactory. Therefore, from the trend observed up to know and responses obtained from the respondents, it would be concluded that the system lost its proper management of material resources with regard to appropriateness.

5. Some of the respondents 37.2 per cent asserted that, there was no any production activity of material resources in the preparatory schools of Arsi zone. Instead, they use either the already prepared or bought materials or plasma Television as a teaching material for some subjects.
6. The result of the study showed that, there was storage in the entire preparatory schools understudy. As majority of the respondents responded, arranging and recording practice of material resources in all the sample schools was in efficient; and it was not given due

attention. The interview made by the researcher showed that, identifying, recording, arranging and coding all material resources due to shortage of manpower, time and lack of space was difficult. Therefore, it would be concluded that, educational materials in the schools and Wereda education offices were not identified, arranged, recorded and coded properly. Related to these activities, the problems of skilled manpower, storage guideline, and lack of training in this area were some of the problems identified. In addition dirty store rooms lack of space and poor quality of storage was observed. The only strong activity was the use of legal model to register the in and out of material resources.

7. Majority of the respondents, 69 per cent revealed that there was guideline to allocate and distribute material resources. However, from the actual observation and document analysis made, the guidelines in most schools were not centrally prepared and dispatched to the users. Schools used their experience and letters written from their respective Wereda offices. In practices, the preceded students' enrollment was used as one strategy to allocate and distribute material resources. This results to the unfair allocation and distribution of material resources to the needed purpose in the system. In short, things were done randomly. Most of the respondents reported that, allocation and distribution was practiced by the distribution and allocation section at Wereda level; and Administrative and finance section at school level. Hence, the practice lacks uniformity. However, this section has a good and smooth relationship and coordination with the concerned bodies.
8. The majority of the respondents, 58.1 per cent asserted that there was responsible and concerned body to define and determine the standards of material resources in the system. The study also disclosed that, the standards of material resources was made at Wereda level by the Wereda education offices in coordination with the respective Wereda financial and economic development office. However, there was no guideline to determine the standards of material resources. This intern resulted in ignorance of many people about standards of material resources in the system. Moreover, it was pointed out by the result of the study that the available materials in the system were not highly appropriate; but they have low or medium degree of appropriateness.

9. The findings of the study indicated that, the schools were filled with material resources which were either redundant or out date. Moreover, there was no adequate material resources provided to teachers. Thus, the inadequacy of material resources affected the teaching learning process. The result of the study also showed that, material resources in the system sometimes coincided with the predetermined standard. It was identified that, there was guide line for proper utilization of material resources. However, the guide line was prepared for all school levels. Moreover, the guideline was left on paper and material resources were improperly used. Therefore, it is safe to conclude that there was unwise utilization of material resources on the schools understudy.
- ✓ 10. Most of the respondents, 66.7 per cent asserted that there was responsible body to control material resources in all schools understudy i.e. The store keeper of the respective schools. This indicates that the controlling responsibility of materials was left to the store keepers. Hence, it is possible to conclude that controlling activities at school level were totally ignored. The only difference that the study disclosed was at Wereda and zonal education offices. At these levels, administrative and financial section shared the responsibility. In addition most of the respondents assured that inventory in most schools carried out once a year.
- Although inventory was carried out in the sample schools, its implementation was found to be haphazard and un- programmed.
- ✓ 11. The study disclosed that, there were idle material resources in schools. Regarding disposal guideline, most of the respondents supported the existing guideline used inefficiently. This inefficient use of the disposal guideline led to the problem of space. In connection with the responsible body to dispose idle or underused material resources, there was timely organized committee. The main problem in disposal of materials was lack of confidence and fear for disposal. In addition, Lack of necessary skill of how to dispose was another bottleneck for the activity not to be implemented properly.
12. It was found out by this study that, majority of the respondents had no skill and knowledge obtained through training. Thus, material resources management was done on the basis of their experience. On the other hand insignificant number of the respondents confirmed that they attended work shops in connection with material resources

management. However, the training was not sufficient to implement proper management of material resources.

13. The majority of the respondents, 89.2 per cent confirmed that, skill, knowledge and qualification of the concerned bodies were highly needed. This indicates that, there was high need of training for proper management of material resources. Because in adequacy of training and lack of skill, knowledge and low qualification could affect the teaching learning activities and lower down the education quality. Thus, attention has to be given to training and qualification of the responsible bodies.

The other observed pressing problem was, different groups in the system seldom participate in material resources management.

14. Generally, the major problems that hinder the effective and efficient management of material resources include: problem of skilled man power, storage guideline lack of training, lack of space, absence of commitment from concerned bodies, etc.

## **4.2 Conclusions**

This paper may not be definitive study of the status of material resources management in the preparatory schools; and surely not all of its findings are new. However, as a result of the findings, the following conclusions have been drawn.

Things were done on the base of experience that led to misuse of education resources. This intern might lower down the quality of education. Thus, the management of material resources has lost its power of performance. Moreover, material resources were utilized as needs arise.

On the other hand, material resources were more or less protected from theft due to the presence of storage. The protected from the ft due to the presence of storage. The absence of guideline resulted for the ignorance of many people about the standards, appropriateness and wise use of material resources. In addition controlling activities at school level were ignored.

Finally, misuse of material resources and irresponsibility for material resources were observed as a result of lack of commitment on the part of professional and other concerned bodies.

### 4.3 Recommendations

On the basis of the findings and conclusions drawn, the following recommendations are made:

1. The managerial functions of principals and administrative staff should be strengthened and management on controlling of material resources should be given by REB. This is possible through the improvement of proper performance of management functions such as; planning, standardizing, purchasing, distributing, allocating, warehousing, disposing, and controlling etc. Material resources management could be improved to a certain extent by providing the necessary skill and knowledge of the existing concerned bodies in the preparatory schools understudy. Thus, the REB and WEO must promote actions at all levels, starting with planning material resources to eradicate the negative practice and misuse of resources.
2. For proper administration proper and feasible guidelines and proper responsible bodies should also be made clear to all the concerned individuals and it should be distributed to all branches of the system. That means, it is appropriate for school to have the necessary guide lines, rules and regulations used for the management of material resources.
  - ◆ The guidelines, rules and regulations should be open and accessible for teachers, students and parents. Understanding these documents may contribute for efficient resources management in those schools.
  - ◆ Formal and informal inspection by REB and WEO should be carried out to justify and monitor the application of the guide lines, rules and regulations. Otherwise, the existence of the rules, regulation and guidelines will not benefit the school.
  - ◆ Finally, proper follow - up, change and improvement of the activities can improve the situations.
3. The schools should closely work with teachers, students, parents and community to secure effective and efficient resources management.

School community participation in the management of resources should be encouraged. Thus, teachers and students will be motivated to contribute their maximum efforts for the proper management and utilization of school resources. Otherwise, any attempt in further

development of schools with out improving the existing condition will deteriorate the quality of education. Therefore, increasing community participation by orienting and creating awareness for successful management is highly needed.

4. It is fundamental for schools to have regularly assigned personnel who exclusively deal with material resources management duties. That means adequate number of personnel should be assigned to the preparatory schools. In this case, certain efforts should be made by the REB. Therefore:

- ◆ The REB has to make an effort for the availability of adequate number of staff members for better and improved teaching learning process.
- ◆ The REB and WEO have to recruit those who have proper educational background.
- ◆ To develop the necessary skill and knowledge proper training in the form of workshops, Seminars and practical exercises should be prepared by REB and WEO to improve the experiences and develop the potentials of the personnel.
- ◆ To up to date teachers' skill and knowledge, continuous training and experience sharing should be conducted by REB.
- ◆ Finally, the REB and WEO should give due attention for selection of personnel with the proper skill and knowledge.
- ◆ Create and develop every opportunity to appoint principals deputy principals and other administrative staff members among teachers with professional training in educational planning and management, pedagogical science and other related areas.

5. Schools should devise efficient and effective systems which enable them to monitor and control the management of available material resources. Therefore:

- ◆ The REB and WEO should be devised to assist performance of principals and the administrative staff in order to ensure efficient resources management function in schools and make intervention when ever necessary.

- ◆ Restrict the use of school material resources only for educational programs.
- ◆ Employ necessary measures to obtain optimum use of resources made available for educational programs; all available resources should be mobilized to this end.
- ◆ Methods and techniques for proper utilization and redistribution of educational materials should be introduced in the system. Moreover, continuous evaluation and supervision have to be carried on by REB and WEO mutually with the school members in order to alleviate all the problems related to material resources.

Generally, to improve the situation of material resources management, more comprehensive and relatively detailed research study should be conducted. Such a detailed and deep research might be able to bring more viable solutions.

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## APPENDIX - 1

*Addis Ababa University*  
*College of Education*  
*Department of Educational Planning and Management*

A questionnaire to be completed by teachers, Education and training board members and principals

### **Dear Respondent** ✉

- A. The main purpose of this questionnaire is to gather necessary information about material resource management in your school. You have been selected as respondent, and it is believed that you could give all the necessary information. Your cooperation in providing reliable information will be valuable. Hence, you are kindly requested to fill out the questionnaire frankly and honestly.
- B. Please you are not required to write your name
- C. Your responses will be kept strictly confidential

Thank you in advance for your genuine cooperation

## General Instruction

Please give your responses to the following questions by putting an "X" mark in the boxes provided and give short answers where you are required to do so.

### **PART ONE: A. General Information**

**Please write**

1. The name of your school (where you are working) \_\_\_\_\_  
\_\_\_\_\_

2. The location of your school (where you are working)

Region \_\_\_\_\_

Zone \_\_\_\_\_

Woreda \_\_\_\_\_

### **B. Personal Data**

Please complete this part of the questionnaire by putting an "X" mark in the box that corresponds to your response.

3. Age (in years)

21- 25

26- 30

31-35

36-40

41-45

46 or above

4. Sex

Male

Female

5. Years of work experience

1-5

6-10

11-15

16-20

21-25

26 or above

6. Current educational qualification

M.A/MSc

B.A/B.S.C

College Diploma

Others (Please specify if any) \_\_\_\_\_

7. The number of periods you are teaching weekly (teaching load per week) /for teachers/

15-20

21-25

26-30

31 or above

8. Other school responsibilities

Department head

Unit leader

Please specify if any \_\_\_\_\_

### **PART TWO: Policy Guideline for Material Resources Management**

1. Are there formally established rules and regulations regarding material resources management in your school?

A. Yes

B. No

C. I do not know

2. To what extent is the existing policy guide line effective to run the system

- A. Highly       B. Moderately       C. Minimally

**PART THREE: Organization of Material resources management**

3. Is there any organized responsible body to manage material resources in your school?

- A. Certainly       B. Never       C. I do not know

"If Your ANSWER TO QUESTION ITEM NUMBER 3 is "certainly", PLEASE RESPOND TO QUESTIONS 4-7

4. Is there the required personnel designated for the management of material resources?

- A. Yes       B. No       C. I do not know

5. To what extent is the organized body or a department supported by necessary man power?

- A. Highly       B. Moderately       C. Minimally

6. Do you believe that the assigned responsible bodies have the necessary skill and knowledge to manage material resources?

- A. Yes       B. No       C. Difficult to decide

7. If your answer to question item 6 is "surly" to what extent are they able to manage material resources properly?

- A. Highly       B. Moderately       C. Minimally

**PART FOUR: Planning of Material Resource Management**

8. Does your school system plan about material resources?

- A. Yes       B. No       C. I do not know

IF YOUR ANSWER TO QUESTION ITEM 8 IS "Yes", PLEASE RESPOND TO QUESTIONS 9-11.

9. Who is the responsible body to plan material resources management in your school?

- A. School principal   
B. School training and education board   
C. School parent teacher union   
D. Teaching and administrative staff jointly

10. To what extent is the planning of material resources effective?

- A. Highly       B. Moderately   
C. Minimally       D. Not totally effective

11. What is the degree of integration and coordination of planning among the concerned bodies?  
A. high  B moderate  C. Low

**PART FIVE: Purchasing of Material Resources**

12. In your school system are there any purchasing rules or regulations for proper purchasing of material resources?  
A. Absolutely  B. Absolutely not  C. I do not know
13. If your answer to question item 12 is "Yes" to what extent do you think is the existing purchasing rules are applicable.  
A. Highly  B. Moderately  C Minimally  D. Not applicable
14. Purchasing of material resources in your system is made at:  
A. Central/ Federal/ level  B. Regional level   
C. Zonal level  D. Woreda level  E. School level
15. Do you think that purchasing made by your system is appropriate to the needs ad interest of the teaching and learning process?  
A. Yes  B. No  C. Sometimes

**PART SIX: Production of Material Resources**

16. Does your school engage in production of material resources activities?  
A. Sometimes  B. Always  C. totally not
17. If it is engaged in production activities what is the main objective of its production activities?  
A. For fund raising (income purpose)   
B. For school's consumption   
C. For skills development purpose   
D. For exhibition   
E. Please, if any specify \_\_\_\_\_

**PART SEVEN: storage of Material resources**

18. In your school system is there any storage?  
A Yes  B. No  C. Difficult to decide
19. In the warehousing/ storage, are educational materials properly arranged and recorded?  
A. Certainly  B. Actually not  C. Not satisfactorily

20. What methods is your system use to register the in and out properties including the newly purchased?

- A. Legal models       B. Locally made formats   
C. I do not know       D. There is no any recording practice

**PART EIGHT: allocation and distribution of material resources**

21. Is there any guideline for proper material resources allocation and distribution?

- A. Certainly       B. Never       C. I do not know

22. To what extent is the existing guideline workable?

- A. Highly       B. Moderately       C. Minimally

23. Who is responsible body in material resources allocation and distribution at various levels of your system?

- A. Administrative and finance section       B. General service section   
C. Distribution and allocation section       D. Please if any specify

24. To what extent are the responsible bodies effectively distributed and delivered material resources to the concerned body?

- A. Highly       B. Moderately       C. Minimally

25. Do you believe that material resources allocation body on one hand and material resources distribution body on the other hand jointly work to achieve the attained educational objective.

- A. Yes       B. Never       C. I do not know

**PART NINE: Standards of Material resources**

26. In your over all education system is there any concerned body in defining and determining the type and quality of materials?

- A. Yes       B. No       C. I do not know

IF YOUR ANSWER TO QUESTION ITEM 26 IS "Yes" PLEASE RESPOND TO QUESTIONS 27-29

27. At what level do you think standards of materials such as type, quantity and quality/standardization/ determined on your school system?

- A. At higher level (MOE)   
B. At middle level (REB)   
C. At lower level (ZED and WEO)   
D. At school level

28. To what extent are material resources used have established standards?

- A. High  B. Moderate  C. Low  D. Have no standard

29. To what extent do you think that the determined and defined type and quality of materials available in your system is appropriate to the needs of the teaching and learning process?

- A. Highly  B. Moderately  C. Minimally  D. Not at all

**PART TEN: Availability and Utilization of Material resources**

30. Are there available material resources that can help the teaching - learning your school?

- A. Yes  B. No  C. I do not know

31. Your school provide you with adequate type and amount of material resources needed to teach your lesson properly (for teachers)

- A. Strongly agree  B. Agree  C. Disagree   
D. Strongly disagree

32. If your answer to question item 31 is "disagree or strongly disagree" to what extent is the teaching and learning process negatively affected?

- A. Highly  B. Moderately  C. Minimally  D. Not at all

33. The available materials in your school are coincided with the pre- determined standards in your system

- A. Certainly  B. Not actually  C. Partially

34. Does your school have any guideline for proper utilization of material resources?

- A. Yes  B. No  C. I do not know

IF YOUR ANSWER TO QUESTION ITEM 35 IS "Yes" PLEASE RESPOND TO QUESTIONS 36 AND 37

35. To what extent is the guideline effective?

- A. Highly  B. Moderately  C. Minimally   
D. Not totally applicable

36. To what extent do you think that the available materials in the school system are effectively used?

- A. Highly  B. Moderately  C. Minimally

**PART ELEVEN: Control and inventory system of material resources**

37. Is there any controlling mechanism for proper utilization of available material resources in your school?  
A. Yes  B. No  C. I do not know
38. In your school is there any responsible body to control material resources?  
A. Yes  B. No  C. Difficult to decide
39. By whom do you think that the major part of control activities were performed at different levels of the system?  
A. Head of the respective system   
B. General Service   
C. Store keeper   
D. If any please specify \_\_\_\_\_
40. How often is inventory takes place in your school?  
A. Once a year  D. Twice in a quarter   
B. Twice a year  E. If any please specify \_\_\_\_\_  
C. Once in a quarter

**PART TWELVE: Disposal of Material Resources**

41. In your system are there any idle or under used material resources.  
A. Yes  B. No  C. I have not seen
42. In your system is there any guideline to dispose unused educational materials?  
A. Certainly  B. Not actually  C. I do not know
43. If your answer to question item 43 is "Yes" to what extent is the guideline effective?  
A. Highly  B. Moderately  C. Minimally  D. Not at all
44. Who is responsible to dispose not used educational material resources?  
A. school principal  B. Store keeper   
C. Purposely organized committee  D. If any please specify \_\_\_\_\_
45. To what extent do you think is the responsible body skillful in disposing material resources?  
A. Highly  B. Moderately  C. Minimally

**PART THIRTEEN: General**

46. Did you have any training involving skills of material resources management?  
A. Yes  B. No

47. If your answer to question Item 47 is "Yes" how was the training program conducted?
- A. Seminar                       B. Workshop                       C. Conference
- D. If any please specify \_\_\_\_\_
48. Do you think that the training was sufficient to manage material resources properly?
- A. Surly                       B. Partially                       C. Not actually sure
49. To what extent do you believe that the skill, knowledge and educational qualification have significant importance in the management of material resources?
- A. Highly                       B. Moderately                       C. Minimally
50. To what extent do professionals and administrative personnel participate in the effective management of material resources?
- A. Highly     B. Moderately     C. Minimally     D. Not at all
51. What major problems do you observe in your school regarding management of material resources? Please specify \_\_\_\_\_
52. What measures /solutions/ do you suggest to resolve the over all problems in material resources management?

**Thank you again!**

*m. A. Vance*

## APPENDIX - 2

### *Univarsiitii Addiis Ababaa*

#### *Koollejjii Barnootaa*

#### *Kuta karoora fi Bulchiinsa Barnootaa*

Gafannoo bulchiinsa qbeenya meeshaalee manneen barnoota qophaa'inaa Zoonii Arsii irratti qophaa'e kan barsiistoota, miseensota boordii barnootaa fi Leenjii fi dura taa'ota manneen barnootaatiin guuttamu.

#### **Jaalatamtoota Debistootaa**

- A. Kaayyoon ijoo gaafannoo kanaa bulchiinsa qabeenya meeshaalee manneen barnoota qophaa'inaa ilaalchisee odeeffannoo barbaachisu funaanudhaa fi. isin imoo kanaaf filatamtanii jirtu. Odeeffannoon isin kennitanis gatii guddaa qaba. Kanaafuu odeeffannoo dhugaa fi guutuu ta'e akka kennitan kabajaan ni gaafatamtu.
- B. Maqaa keessan waraqaa kana irratti barreessun hinbarbaachisu.
- C. Odeeffannoon kennitan iccitin ni qabama.

Baay'ee galatoomaa!

## Ajeja Waliigalaa

Gaafilee armaan gadiitiif sanduuqa qophaa'e keessatti mallattoo "X" galchuun deebii kennaa, bakka barbaachisaa ta'eetti immoo deebii gabaabaa kennaa.

Kataa Toko: A. odeeffannoo Waliigalaa

### ◆ Barreeffaman deebisa

1. Maqaa mana barnoota amma keessatti hajachaa jirtan \_\_\_\_\_

2. Teessoo mana barnoota keessanii (kan amma keessa hojjattan)

Naannoo \_\_\_\_\_

Godina \_\_\_\_\_

Aanaa \_\_\_\_\_

### B. Odeeffannoo duunfiaa

- Mallattoo "X" galchuun deebisaa

3. Umrii Keessan

21-25

26-30

31-35

36-40

41-45

46 fi ol

4 Saala Keessan

Dhiira

Dubartii

5. Muuxannoo hajjii Ministeera barnootaa keessatti

1-5

6-10

11-15

16-20

21-25

26 fi ol

6. Sadarkkaa barnootaa keessan (kan ammaa)

M.A/M.S.C

B.A/B.S.C

Diploomaa

Dh. L. B

12/10 fi gadi

7. Baay'ina wayitii tor banii (barsiisota qofaaf)

15-20

21-25

26-30

31 fi ol

8. Hojii dabalataa (mana barnootaa keessatti)

Mummee kutaa barnootaa  Qindeessaa kohoo

Kan biroo yoo jiraate ibisaa \_\_\_\_\_

Kutaa Lama: Qajeelfama bulchiinsa qabeenya meeshaalee

1. Qajeelfamni bulchiinsa qabeenya meeshaalee seeraan tumame mana barumsa keessanitti argamaa?

A. Eeyyeen  B. Lakki  Ani hinbeeku

2. Qajeelfamni jira taanaan hangama bu'aa qaba?

A. Baay'ee  B. Jiddugaleessa  C. gad - aanaa

Kutaa Sadii : Bulchiinsa qabeenya meeshaalee kurfeessuu

3. Qamni Ittigaafatamummaa bulchiinsa qabeenya meeshaalee qabu jira?

A. Sirriitti  B. Sirumaa hinjiru  C. Ani hinbeku

Deebiin gaafii lakk 3'f kennitan "sirriitti" Yoota'e Gaafilee 4-7 Deebisaa.

4. Namni hojii kanaaf ramadame jiraa?

A. Eeyyeen  B. Lakki  C. Hinbeeku

5. Iddoon hojii kun qabeenya humna namaatiin hangam gargaarama /deeggarama/?

A. Olaanaa  B. Jiddu- gala  C. Gad-aanaa

6. Namni iddo kanatti ramadame beekkumsaa fi dandeettii bulchiinsa qabeenya meeshaalee qaba jettanii yaaddu?

A. Dhugaatti  B. Dhugaa mit  C. Murteessun nadhibaa

7. You' deebiin lakk 6 " dhugaatti" jettan hangama bulchuu danda'a?

A. Olaanaa  B. Jiddu - gala  C. gad - aanaa

Kutaa Afur: Karoora bulchiinsa qabeenya meeshaalee.

8. Manni barnoota keessan karoora bulchiinsa qabeenya meeshaalee qopheessa?

A. Eeyyeen  B. Lakki  C. Hinbeeku

DEEBIIN LAKK 8 " EEEYEEEN" YOOTA'E GAAFILEE 9-11 DEEBISA

9. Karoora kana kan qopheessu eenyu dha?

A. Dura ta'aa

B. Boordii barnootaa fi leenjii

C. Gamtaamaatii fi barsiistootaa

D. Miseensonni mana barumsichaa gamtaan

10. Karoorri qophaa'u hangam hojii irra oola?

- A. Olaanaa  B. Jiddu galeessa   
C. gadaanaa  D. Sirumaa hojii irra hinoolu

11. Karoorri yoomuu qophaa'u qindoominni qaamolee adda addaa hangami?

- A. Olaanaa  B. Jiddu galeessa   
C. gadaanaa

Kutaa Shan: Bittaa Qabeenya meeshaalee

12. Mana barumsa keessanitti Qajeelfamni bittaa meeshaa jira?

- A. Sirriitti  B. Hinjiru  C. Ani hinbeeku

13. Jira kan jettan yoo ta'e hangam ittin hojjetama?

- A. Olaanaa  B. gartokkeen   
C. gadaanaa  D. Hin hojjetamun

14. Caasaa keessan keessatti bittaaan meeshaalee kan raawwatamu sadarkkaa:

- A. Biyyoolesatti  B. Naannootti  C. Godinnatti   
D. Aanaatti  E. Mana barumsaatti

15. Bittaaan meeshaalee feedhii kaayyoo barnootaa guuta jettanii amantuu?

- A. Eeyyeen  B. Lakki  C. dabre dabre

Kutaa Jaha: Omisha meeshaalee

16. Manni barumsa keessan meeshaalee Omishaa?

- A. dabre dabre  B. yeroo hunda  C. Hinomishu

17. Kan OMishu taanaan Kaayyoo maaliitiif Omish?

- A. Galii ittin argachuuf  C. Gabbisa dandeettiif   
B. Ittin fayyadamuuf  D. Agarsiisaaf   
E. Kan biroo (ibsaa) \_\_\_\_\_

Kutaa Torba: Kuusaa qabeenya meeshaalee

18. Mana barumsa keessanitti manni kuusaa meeshaa jira?

- A. Eeyyeen  B. Lakki  C. Murteessun nama dhiba

19. Jira taanaan meeshaleen seeraan galmaa'anii kaa'amu?

- A. Sirriitti  B. Miti  C. quubsaa miti

20. Meeshaalee galii fi bahii ta'an galmeessuf manni barumsaa malli ittin fayyadamu maali dha.

- A. Modeelota seerawaa  C. Sirumaa hingalmeessu   
B. Gucoota ofiin qopheessun  D. ani hinbeeku

Kutaa saddeet: Ramaddii fi raabsaa Meesnaalee

21. Qajeelfamni meeshaalee ittin ramadaniif fi raabsan jiraa?

- A. Sirriitti  B. Hinjiru  C. Ani hinbeeku

22. Jira taanaan hangam ittin hojjatama?

- A. Olaana  B. Jiddu galeessa  C. gadaanaa

23. Qaamni meeshaalee raabsu eenyu dha? /Kami/

- A. Kutaa bulchiinsaa fi faayinaansii

- B. Tajaajila waliigalaa

- C. Kutaa ramaddii fi raabsaa

- D. Kan biraa yoota'e ibsaa \_\_\_\_\_

24. Qaamni ramadu fi raabsu kun hangam sirriitti seeraan hojjata?

- A. Olaanaa  B. Jiddu galeessa  C. gad aanaa

25. Qaamoleen ramadaniifi raabsan qindoominaan nihojjatu jettanii yaaddu?

- A. Eeyyeen  B. Lakki  C. Ani hinbeeku

Kutaa sagal: sadarkkaa meeshaalee

26. Caasaa barnootaa keessatti Qaamni sadarkkaa meeshaalee murteessu jira?

- A. Eeyyeen  B. Lakki  C. ani hinbeeku

27. Sadarkkaan ni murtaa'a taanaan eessatti murtaa'a?

- A. Sadarkkaa biyyoolessaatti

- B. Sadarkkaa Naannootti

- C. Sadarkkaa Godinaatti

- D. Sadarkkaa anaatti

- E. Sadarkkaa mana barumsaatti

28. Meeshaaleen amma hojjirra jiran hangam sadarkkaa qabu

- A. Olaanaa  B. Jiddugaleessa

- C. gadaanaa  D. Sadarkkaadha hinqaban

29. Meeshaaleen sadarkkaadhaan dhiyaatan hangama fedhii fi kaayyoo barnootaa guutu?

- A. Olaanaa  B. Jiddu galeessa   
C. gad - aanaa  D. hinguutan

Kutaa Kudhan: Diyeessuu fi Ittin fayyadama meeshaalee

30. Meeshaaleen fedhii barnootaa guutan haalaan dhiyaatu?

- A. Eeyyeen  B. Lakki  C. ani hinbeeku

31. Qabeeyee barnootaa barsiistaniif kan isin gargaaran meeshaalee hunda M/B ni dhiyeessa.

- A. Baay'een irratti waliigala  B. Irratti Waliigalo   
C. Waliingalu  D. baay'ee wal- hingalu

32. Kan irratti wal-hingalle taanaan hojii barnootaa hangam miidha?

- A. Baay'ee  B. Jiddu galeessa   
C. Xinnoo  D. hinmiidhu

33. Meeshaaleen yeroo yeroon dhiyaatan sadarkkaa murtaa'ef waliin wal- simu?

- A. Sirriittii  B. hinta'u  C. gartokkeen

34. manni barnoota keessan qajeelfama haala ittin fayyadama qabeenya meeshaalee qaba?

- A. Eeyyeen  B. Lakki  C. ani hinbeeku

35. Qaba taanaan hangama hojii irra oola?

- A. Baay'ee  B. gar-tokeen   
C. gad-aanaa  D. Hinhajjatumun

36. Meeshaaleen barnootaaf dhiyaatan hangam hajii irra Oolu?

- A. Baay'ee  B. Jiddu- galeessa  C. gad- aanaa

Kutaa kudha Tokko: Lakkoofsa fi To'annaa meeshaalee

37. Manni barnoota keessan mala meeshaalee ittin to 'atu qaba?

- A. Eeyyeen  B. Lakki  C. Murteessun nama dhiba

38. Qaamni qabeenya meeshaalee kallattiidhaan hordofufi to'atu jira?

- A. Eeyyeen  B. Lakki  C. Ani hinbeeku

39. Gaffii 39'f "Eeyyeen" yoo jettan Qaama kamtu to'ata jettanii yaadu?

- A. Ittigaafatama   
B. Kutaa Tajaajila walii galaa

- C. Mana kuusaa meeshaa
- D. Kan biraa yoo jiraate ibsaa
40. Lakkaa wwiin qabeenya meeshaalee mana barumsa keessanitti Yeroo hagamiin gaggeeffama?
- A. Waggaatti al- tokko  C. Kurmaanatti al- tokko
- B. waggaatti al- Lama  D. Kan biroo jiraan obsi \_\_\_\_\_

Kutaa kudha Lama: Sokisiisa qabeenya meeshaalee

41. Meeshaaleen hojii orra hin oolle mana barumsa keessan keessa jiru
- A. Eeyyeen  B. Lakki  C. Hinagarre
42. Mana barumsa keessanitti qajeelfamni meeshaalee ittin sokisiisan jira?
- A. Sirriitti  B. hinjiru  C. ai hinbeeku
43. Qajeelfamni jira taanaan hangam ittin jorjorata?
- A. olaanaa  B. J/G
- C. gad-aanaa  D. hinhojjatamun
44. Meeshaalee sokisiisuf eenyutu ittigaafatamumma qaba?
- A. Durataa'a
- B. Ittigaafatamaa mana kuusaa meeshaa
- C. Koree kanumaaf ijaarramu
- D. Kan birootaanaan ibsaa \_\_\_\_\_
45. Qaamni ittigaafatamummaa fudhatu kun hangam beekkumsa fi dandeettii sokiisiisuu qaba?
- A. olaanaa  B. J/G  C. gad-aanaa

Kutaa-kudha sadii: Waliigala

46. Leenjii waa'ee bulchiinsa qabeenya meeshaalee irratti hirmaatanii beektu?
- A. Eeyyeen  B. Lakki
47. Hirmaattan taanaan leenjiin haala kamiin kennamature?
- A. Seeminaara  B. workshooppi  C. Koonfiransiin
- D. Kan biroo taanaan ibsaa \_\_\_\_\_

48. Leenjiin argattan qabeenya meeshaalee bulchuu gahaa ture?  
A. Sirriitti  B. garrtokkeen  C. Lakki
49. Beekumsi,, dandeettii fi sadarkkaan barnoota bulchiinsa meeshaaleedhaaf hangama fayyada?  
A. Baay'ee  B. J/G   
C. Xinnoo  D. hinfayyadu
50. Hayyuun, Hojjattoonni fi miseensonni mana barumsichaa hangama bulchiinsa qabeenya barnootaa irratti hirmaatu?  
A. Baay'ee  B. J/G   
C. gad-aanao  D. hinhirmaatan
51. Rakkoolee gama bulchiinsa qabeenya meeshaaleetiin jiran jettanii yaaddan tarreessaa \_\_\_\_\_
52. Rakkoolee kanniinif waanfala ta'a jettanii yaaddanlafa kaa'a \_\_\_\_\_

Galatooma!

## APPENDIX - 3

*Addis Ababa University*  
*College of Education*  
*Department of Educational Planning and Management*

Oromia regional state of Arisi zone, an interview guideline prepared to preparatory school directors and storekeepers, woreda education officers and zonal education Desk experts.

### **Part I General/ Background information**

1. Woreda/ zone \_\_\_\_\_
2. Name of the school \_\_\_\_\_
3. Sex of the interviewee \_\_\_\_\_
4. Age of the interviewee \_\_\_\_\_
5. Education level of the interviewee \_\_\_\_\_
6. Present career position (Post) \_\_\_\_\_
7. Training \_\_\_\_\_
  - 7.1. Formal \_\_\_\_\_
  - 7.2. Special \_\_\_\_\_
  - 7.3. Both \_\_\_\_\_
8. Service (in years) \_\_\_\_\_

### **Part II Question items**

1. Is there any policy guide line for material resource management in your system
2. Is there any responsible body to manage material resources?
3. Is your system exercise any planning activates in material resources? \_\_\_\_\_
4. Is there any guideline for purchasing of educational materials and to what extent does it is workable? \_\_\_\_\_
5. Is there available store in your system? \_\_\_\_\_
6. To what extent do you think that the existing materials are properly allocated to the concerned body? \_\_\_\_\_
7. Is there any guideline for disposal of material resources? \_\_\_\_\_
8. Form where do you think the major source of in puts came to your system? \_\_\_\_\_
9. What major problems do you observe in the overall material resources management? \_\_\_\_\_
10. What do you suggest to improve material resources management in the education system? \_\_\_\_\_

## APPENDIX - 4

### *Yunivarsiitii Addiis Ababaa*

### *Kollejjii Barnootaa*

### *Damee Karooraa fi Bulchiinsa Barnootaa*

Naannoo Oromiyaatti, Godina Arsii tti gaafannoo Durataa'ota manneen barnoota qophaa'inaa, Itti gaafatam-toota mana kuusaa meeshaa, Itti gaafatamtoota aanaalee fi deskii barnootaatiif bulchiinsa qabeenya meeshaalee ilaalchisee dhiyaate.

Kutaa Tokko: Odeeffannoo waliigalaa

1. Aanaa \_\_\_\_\_
2. Maqaa mana barumsaa \_\_\_\_\_
3. Saala \_\_\_\_\_
4. Umrii \_\_\_\_\_
5. Sadarkkaa barnootaa \_\_\_\_\_
6. Ittigaafatamummaa \_\_\_\_\_
7. Leenjii
  - 8.1 Leenjii idilee \_\_\_\_\_
  - 8.2 leenjii addaa \_\_\_\_\_
  - 8.3 Lamaaninuu \_\_\_\_\_
8. Tajaajila qaban (waggaa) \_\_\_\_\_

## **Kutaa - Lama: Gaafannoo**

1. Caasaa barnootaa keessan kessatti qajeelfamni bulchiinsa qabeenya meeshaalee jira?
2. Qaamni bulchiinsa meeshaaleetiif hogganame jiraa?
3. Karoorri bulchainsa qabeenya meeshaalee qophaa'a?
4. Qajeelfamni bittaa meeshaa jiraa?
5. Manni Kuusaa meeshaa sad. hundattuu jiraa?
6. Ramaddiin meeshaalee qaama barbaachisuuf godhamu hangam gahumsa qabu jettanii yaadu?
7. Qajeelfamni meeshaalee ittin sokisiifamu jiraa?
8. Maddi meeshaalee manneen /mana/ barnoota keessanii Eessayi?
9. Rakkooleen ijoo gama bulchiinsa qabeenya meeshaaleetin jiran maal fa'i?
10. Falli rakkoolee kanniinif ta'an jettanii yaaddan maal fa'i?

Galatoomaa!

## Appendix - 5

### Observation Check List on Material Resources and Guidelines

#### Available in Preparatory Schools of Arsi Zone

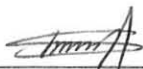
To what extent are the schools have adequate material resources, Guidelines and facilities that help to facilitate the over all teaching learning process?

Item	Adequately exist	Scarcely exist	Not exist at all	No idea
Material resources management plane				
Guidelines of: - Purchasing - Storage - disposal etc				
classroom building				
water supply				
Play ground				
Administration offices				
Toilet				
Teachers chair and table				
staff room				
Black board				
Science kit				
Library and its equipments				
Pupils desk				
Pedagogical center				
Text book				
Teachers guide				
Reference materials				
stationary materials				
Store				
Agricultural area				
If other (Please specify)				

## DECLARATION

I, the undersigned, declare that this thesis is my original work, has not been presented for degree in any other university and that all sources of materials used for the thesis have been duly acknowledged.

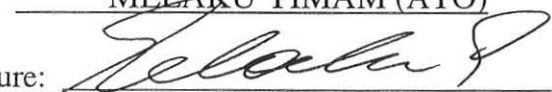
Name TAFESSE ASSEFA

Signature:  \_\_\_\_\_

Date of Approval: 01/03/07

This thesis has been submitted for examination with my approval as university advisor

Name MELAKU YIMAM (ATO)

Signature:  \_\_\_\_\_

Date of Approval: 01/03/07