

CHAPTER ONE

1 Introduction

This chapter has seven subtopics. The subtopics are: background of the study, statement of the problem, general and specific objectives of the study, significance of the study, delimitation and limitations of the study, definition of operational terms and organization of the study.

1.1. Background of the study

Education is broadly recognized as the base of development in most countries especially in the developing ones. For this reason the government of Ethiopia being cognizant about education and put the issue of education in different legal documents. Concerning this, UNESCO (2006/7) stated that the main principles, objectives and goals of education in Ethiopia are enunciated in the proclamation of the constitution of the Federal Democratic Republic of Ethiopia of 1995, the Education and Training Policy (ETP) 1994 and the Education Sectors Strategy of 1994, and Education Sector Development Programs. In all these documents education is viewed as an excellent instrument to bring up good citizens. Educational institutions are also considered as the formal agency of education where the future citizens are shaped and developed in accordance with the needs and interest of the beneficiaries through the process of teaching and learning.

In addition, many countries of our world establish a system for the management and utilization of educational materials because of the role of education in their development. For instance, USA, Sweden and Denmark have a decentralized system of educational materials management in line with their decentralized type of administration in their countries. In these three countries, at national level it is the research activity and some financial supports are provided. Otherwise, the administrative activities like planning, purchasing, handling, distribution and control of utilization are conducted at the local level authorities and schools level (UNESCO, 1984:89).

In Ethiopia the management of educational materials got attention during the early years of the Ethiopian revolution with the establishment of a department under MOE which was the inception of EMPDA. It was established in July 1984, as an independent agency for educational materials production and distributions. The main responsibility of the department was handling the production, procurement and distribution of educational materials (MOE, 1989). Since then, EMPDA has done a lot to solve the problem in the provision of educational materials in Ethiopia.

Today, in line with the decentralization of educational managements in the country, the responsibility of EMPDA is restricted to national issues like producing, manufacturing, maintenance and repairing of educational materials and providing technical assistance to regions with regard to foreign purchase when it is required (EMPDA, 1991). As a result, the management function of educational materials i.e., planning, purchasing, receiving and handling, distribution and control for primary, secondary and regional colleges is shifted to the regions. In most of the regions, the management of educational materials is a shared responsibility of Administration and Finance Service, Planning and Program, Service and Education Service Department (Nebiyu, 2001). The overall organization of the educational materials management functions and personnel assigned in the area differ from region to region. This situation entails various responsibilities with regard to the management of educational materials, provision and setting of regional policies and guideline (MOE, 1989).

Besides establishing this system in Ethiopia, emphasis is given to the importance of educational materials for the improvement of educational quality. As underlined by the Ministry of Education, quality improvement in education is unthinkable without an extensive improvement of school facilities and provision of better instructional materials (MOE, 1994). The quality of education delivered by teachers and academic achievement of pupils of any school is dependent on several factors of which school facilities is paramount Asiyai (2012).

School facilities are material resources that enhance teaching and learning thereby making the process meaningful and purposeful. As to Adeboyeje (2000) and Emetarom (2004), school facilities are the physical and spatial enablers of teaching and learning which will increase the production of results. School facilities serve as pillars of support for effective teaching and learning. Akinsolu (2004) asserted that educational curriculum cannot be sound and well operated with poor and badly managed school facilities. He further indicted that school facilities can be defined as the entire materials which school administrators, teachers and students harness, allocate and utilize for the smooth and efficient management of any educational institution, for the main objective of bringing about effective and purposeful teaching and learning experience. If good quality and standard of school depend largely on the provision, adequacy, management and utilization of educational materials, the responsible bodies in each level must play their role in each function and practices.

The need to conduct a research on this area also comes from the need for better management and utilization of educational materials since the provision of quality education partly depend on the quality and standards of these materials. Further, the complaints heard from school community and the observation of the researcher in Jimma town's secondary schools in conducting some project works as a post graduate student show that some materials are managed and utilized in a poor way. This encourages the researcher to focus on this topic.

1.2. Statement of the problem

The major reason for building and handling a school is to implement an educational program. A smooth implementation of such educational program can only occur and the chances of actualizing its goals enhanced if the school plant or physical facilities and instructional materials possess some desirable qualities or standards. To better facilitate the implementation of the educational program, such qualities are necessary for the all-round development of children and youth and the well-being of the school staff. This intern helps to improve the quality of teaching and learning (Asiabaka, 2008).

To achieve the objectives of education, the school principals must bring all their abilities, physical, mental and emotional to the job. They need to be well equipped with the necessary skills and knowledge to managing well the educational materials. Effective management involves ensuring efficiency and effectiveness in the use of the available materials together with the ability to combat any constraints. They also need to adopt modern methods of facilities management where continuous technological changes are observed in all aspects. But, as clearly indicated in ESDP IV program action plan, many principals and offices do not yet have the required capacity to exercise their responsibilities effectively.

As raised by different scholars in the field of education, the most fundamental problem in educational materials and facilities management is lack of clear policy guidelines for educational material management in schools. In some schools, there are inadequate classrooms, staff offices, laboratories and workshops, libraries, study areas while in some, these facilities are adequately provide, and others have none, and where they exist, such facilities are poorly operational zed. This situation arises because the federal, state and local governments have failed to establish clear-cut police directives on minimum standards in relation to school facilities.

Furthermore, according to MOE report, notwithstanding major investments made by Federal and Regional states in improving the availability of secondary school material resources, student achievement has not sufficiently improved (MOE, 2010). The gains in access are of little meaning if they are not accompanied by improved student learning. If students do not acquire significant knowledge and skills, Ethiopia will not be able to compete within a global economy. It is necessary therefore to shift attention to quality concerns in general and to those inputs (such as materials and facilities among others) and their utilization which translate more directly into improved student learning and which help change the school into a genuine learning environment.

However, from the researcher practical experience, personal observations of Jimma Town Secondary schools in the Development Team Training Program and complaints heard from school community, there are cases in which some educational materials have been wrongly utilized. In such a situation, it would be logical to expect some gaps in the management and utilization of educational materials. For instance, the researcher can informally observe broken chairs at the back of classrooms, unmaintained old classrooms, dusty libraries and the like besides the various challenges that were raised by school principals to manage the educational materials. All these experiences encourage the researcher to focus on this topic.

Therefore, the current study focused on assessing the practice of educational material management and utilization in Secondary Schools of Jimma Town. In order to achieve this purpose the following basic research questions were raised:

1. To what extent do the secondary schools practice need assessment, planning, purchasing, controlling, moving and storing of educational materials?
2. To what extent educational materials are available in Jimma Town secondary schools?
3. How often are the practice of material resource utilization is performed in the teaching learning in secondary schools of Jimma Town?
4. How adequate are the maintenance activities carried out on the educational materials in the secondary schools of Jimma Town to sustain their life of span?
5. What major factors affect educational materials management and utilization in the Jimma Town Secondary schools?

1.3. Objective of the study

1.3.1. General objective

The General Objective of this study was to investigate the practice of educational materials Management and to determine the major challenges that affect the effective utilization of educational materials in Jimma town government secondary schools.

1.3.2. Specific objective

1. To assess the extent to which the secondary schools practice need assessment, planning, purchasing, controlling, moving and storing of educational materials through the participation of responsible bodies
2. To identify the availability of educational materials in Jimma Town secondary schools
3. To assess how often secondary schools of Jimma Town perform educational material utilization in teaching learning
4. To illustrate the adequacy of the maintenance activities carried out on the educational materials in the secondary schools of Jimma Town to sustain their life of service
5. To identify the major factors that affect educational materials management and utilization in secondary schools of Jimma town.

1.4. Significance of the study

This study has the following contributions:

- 1 First, it provide information to Regional and Jimma Town Education Officers on the current educational materials utilization and management practices and various factors that affect these practices and help them to do their best in improving the school management and staff capacity through the provision of skill training, orientation and supportive guideline with adequate strategies which can improve the current practices.
- 2 It also encourages the secondary school principals, teachers, store keepers, lab technicians and librarian to better see the current management and utilization of educational materials and various factors or problems faced in the process; so that they can take corrective measures in improving the practices and in alleviating the various factors through discharging their responsibilities on this area.
- 3 The study can also provide insights for other researchers to make further investigation on material resource managements and utilization activities of secondary schools.

1.5. Delimitations of the study

In order to make the study more manageable and feasible within the given time, it is geographically delimited to government secondary schools (9-12) of Jimma Town. These are Jiren, Sato semaro, Ababuna and Jimma preparatory schools. The town is selected for this topic from the ignorance by many researchers to study its material resource management and utilization when serving many students, the problems and differences observed in the school plant and instructional materials management besides shortage of budget/time. In addition, conceptually educational materials refer to all the school plants and instructional materials.

However, this study is delimited to some very basic educational materials. Such as: school classrooms, classroom furniture like students and teachers' desks and chairs, ceilings, roofs, doors, windows, playing ground, electrical services, toilet, water service ,textbooks, reference books, laboratory equipment, plasma TVs and teaching aid materials. In addition, out of the many aspects and components to be considered in the practice of educational materials management and utilization, the variables that will be addressed in this study are the practices of planning, purchasing, maintenance, inventory control and storing of educational materials and factors that affect the practice of educational materials management and utilization in secondary schools of Jimma town.

1.6 Limitations of the Study

It is clear that research work cannot be free from constraints. For that matter, limitations were observed in this study. Lack of participating or including all the study population was the first limitation of this study because generalizing and applying results from few samples to the entire population cannot be assumed without a problem. The other limitation was lack of current local researches and reference materials even to compare results of the study. Despite the above problems, the researcher has exerted utmost effort and was able to overcome this problem by holding prolonged dialogue and discussion with the respondents.

1.7 Operational Definition of keyTerms

In order to keep uniformity throughout the study, the following terms need a definition:

- **Assessment:** the systematic process of investigating on the management and utilization of educational materials in secondary schools.
- **Educational Materials:** are any materials used as input or resources that can facilitate the overall teaching and learning process in school system. In this study school plant (physical facilities) and instructional materials are used as educational materials.
- **Materials Management:** it is concerned with the way physical materials and instructional materials are managed particularly in secondary schools.
- **Materials Utilization:** the practices of applying physical materials and instructional materials in the approved manner to minimize unnecessary problems that can affect teaching learning process in schools.

1.8 Organization of the Study

This study comprises five chapters. The first chapter is the introduction which includes the background of the study, statement of the problem, objectives of the study, significance of the study and delimitation and limitation. The second chapter presents literature review related to the area of educational material resource management and utilization while the third chapter discusses the research methodology employed in the study. Analysis and interpretation of the research findings will be presented in the fourth chapter. Finally, summary, conclusion and recommendations will be presented in chapter five.

CHAPTER TWO

Review of Related Literature

2. Introduction

The study focused on “the practice of educational materials management and utilization in selected secondary schools of Jimma town” so; the review of related literature attempted to show the definition and history of educational material management, the objectives of purchasing in concern to store management, the goal and objectives of material management, efficient utilization and distribution of material resources and maintenance of materials according to the basic question and objectives of the research using published and unpublished materials.

2.1. Definition of Educational Materials

According to Ballot (1971:309), materials management is defined as the function of taking responsibility for the coordination of planning, purchasing, moving, storing and controlling materials in an optimum manner so as to providing a pre – decided service to the customer at a minimum cost. Therefore, before defining about educational materials there are some related terms that need to be clear. Hence, the similarities and differences of educational materials, instructional materials, teaching aids and instructional technologies presented.

Educational materials, as mentioned by Mbamba (1992:253), refer to “any object or unit area that designed and organized deliberately to support and used teaching and learning processes”. He further listed educational materials such as laboratories, workshops, libraries and recreational spaces that serve to house instructional activities, furniture, learning and teaching materials which act as source or channel from which learners draw knowledge and acquire skill.

On the other hand, educational materials, as to Prakasha Gurage (1998:122), also encompass all three- dimensional equipment as well as all graphic and written materials used in schools. Some of these materials, as mentioned by the authors, include toys and games, educational aids, basic classroom equipment and furniture, laboratory equipment, playgrounds and textbooks.

Moreover, educational materials are a broad range of materials that are found in schools which support and are used for instructional purposes. Instructional materials, as mentioned by Good (1973:367), refer to “ devices with instructional content or function that are used for teaching purposes”. On the other hand, Shores (1960:3) define instructional materials as the whole range of media through which teachers and pupils communicate. This includes books audio visual aids, flat pictures, maps, real objects, community resources, etc.

From these, one can understand that the term instructional material refers to various materials that are used for educational purposes and, in this case, both educational materials and instructional materials have some similarities for they are referring to any devices used in the process of teaching and learning. From this point of view, educational materials become an inclusive term that refers to both physical facilities and other instructional materials.

Teaching aids are instructional materials that are used in the instructional processes. They are defined by Good (1973:24) as auxiliary instructional devices that are used to facilitate teaching and learning processes. They are not referring to those core teaching materials that are taken as main ingredients of the teaching learning processes. So, when instructional materials are used to support the teaching learning processes, they are taken as teaching aids. Hence, teaching aids are referring to those instructional materials that are used as supportive materials by teachers in the teaching learning process.

The other term that worth clarifying is instructional technology. Instructional technology, as defined by Good (1973:592), refers to the comprehensive organization of principles, resources, personnel and logistics that combine to produce gains in learning. Wittch and Shuller (1979:6) also define it as the combination of human and non-human resources employed in a systematic way in the design, implementation and evaluation of the total process of teaching and learning.

As can be seen from aforementioned definitions, instructional technology is a broad term that refers to human resources that are involved in instructional design and curriculum and non – human materials in the teaching learning.

2.2. The History of Materials Resource Management

The scarcity of materials which was felt during World War I in USA to a very large extent and it has become difficult for production managers to supply the war goods (Sadiwale, 2007). This has created it necessary to organize the materials management department for managing large inventories in stores and to analyze the problems arising to control and economize inventory cost problems and shortage elimination. The materials management was included as an important function of management.

With the development of principles of scientific management by F.W. Taylor in 20th century, the economic use of materials in all organization was critically felt to reduce the cost of production. The early years of developments in the field of materials purchase and supply systematically begins from 1850. According to (Sadiwale, cited in Charles baggage's book on the economics of machinery and manufacturing published in (1832), refers to knows "Materials Man."

The concept of materials management was widely spread during WW II. Professor Howard T. Lewis of the Harvard Business School made the extensive studies in industrial purchasing practices. Reward had contributed largely to purchasing and materials management in procuring, receiving, inventory control and supply. WW II introduced a new period in purchasing history. The emphasis on obtaining required and scarce materials influenced a growth in purchasing interest (Magad and Amos, 1999).

The post-war period saw the development of the value analysis technique, pioneered by General Electric Company in 1948 on the evaluation of which materials or changes in the specification and design would reduce overall product cost. From 1947 to 1960 were 13 years on further development in materials management. Firms initiated dramatic growth of the materials management during 1960-1970. The Vietnam War resulted in upward price and materials availability pressure. During the 1970, firms experienced widespread material problems related to "oil shortage and embargoes." Widespread agreement between countries taken place with the overall objective to solve materials problems including materials planning, quality control, stores control, materials movement and surplus disposal. The purchasing strategies and behaviors that evaded over in 1980 gave rise to foreign global competition.

The global era of trading in between 1970 and 1999 for materials management increased. Purchasing approaches 2000 reflects a changing emphasis toward the improvement of quality of materials, supplier relationship, more co-operative approach, long term strategies of cost management and data base materials management systems for materials planning and utilization in industries to bring about overall improvement in production system, in cost reduction through economy and increase sales. In order to serve the corporate goals and perform material activities efficiently, a functional organization of the materials management must be established to fulfill the objectives of program, elimination of material wastages and duplication of effort to do so in every organization (Sadiwale, 2007).

2.3.Types of Educational Materials

2.3.1 Instructional Materials

These are materials that are specifically meant for direct teaching and learning. It includes classrooms, classroom seats, laboratories, libraries, experimental equipment, chalkboard, audio-visual learning equipment, zoological gardens and experimental agricultural farms. These materials bear directly on the teaching – learning process and are therefore considered of prime priority among other school materials (Lawanson, 2011).

2.3.2 Recreational Materials

These are spaces, lawns, fields, pitches and equipment for sports, games and general recreation. Games and Sports apart from developing specific skills also develop a good learning socio-psychological as well as mental environment through relaxation. The importance and level of resources committed to the development and provision of recreational materials must not exceed their values in facilitating the overall goal of the educational institution (Lawanson, 2011).

2.3.3 Residential Materials

These include hostels and hostel materials, refectory and refectory materials, staff quarters and other associated materials meant to provide residential convenience for staff and students (Lawanson, 2011).

2.3.4 General – Purpose Materials

These are materials that can easily be converted to uses other than those for which they are being used. Such materials in most cases are made of space materials. There are basically two types of

open space materials namely: The developed and the undeveloped spaces. Developed Open Space is used as sporting pitches, fields, lawn, school farms, access roads, parking lots and so on. Their uses can easily be modified as occasion demands. The Undeveloped Open Spaces are all the land area within the legal authority of the institution which is yet to be developed into specific uses (Lawanson, 20011).

2.4. Availability of Educational Materials

Our schools can only be what we want them to be if only proper steps are taken in the provision of all that will make teaching and learning effective. Learning cannot take place where materials are not provided. Therefore the provision of materials such as building, equipment etc. is of utmost importance.

Conducive environment is important to note that students and indeed their teachers need to be able to teach and learn adequately and effectively. The school materials therefore, must meet the needs of the school community. Each building in the school should be having ceiled to reduce the intensity of heat. They must also be constructed with a design that makes for cross ventilation. Good sanitary facilities must be provided. Classrooms must not be over crowded and must be spacious enough for free movement. Jacobson et al in Abraham (2003).

The school farm is another important ground of the school; it is an integral part of the school materials. It is a part of the school compound which many people tend to ignore. Other important materials are standard and well-equipped library and laboratory, games materials, equipment etc. Our school can only be what we want them to be only if proper steps are taken to plan the buildings, the grounds and in fact the general layout of schools.

2.5. Effective Management of Educational materials

Effective educational materials management is the function, which aims at integrating the management of materials in an organization undertaking. Its main objective is cost reduction and efficient handling of materials at all stages and in all sections of the undertaking (Kumar and Suresh, 1998:52). Effective materials management function also includes several important aspects with materials such as purchasing, storage, inventory control, materials handling and standardization in short period of time with minimum cost.

Deferent authorities define effective materials resources management in different ways. A great attention is given to the field that, materials resources heavily influencing many aspects of the training process. Materials management is defined as the function responsible for the coordination of planning, sourcing, purchasing, moving, storing and controlling materials in an optimum manner so as to provide a peer-decided service to the customer at a minimum cost and appropriate time. From the definition it is clear that the scope of materials management is vast (Kumar and Suresh 1998:53).

2.6. Educational Material Resource Utilization

Acquisition of material resources without some procedures will create ineffective utilization of school resources (Negessie, 2007). Thus, school principals together with his teaching and non-teaching personnel create a guideline to serve as a mechanism for the effective utilization of resources. The determination is accompanied by mechanisms that can be applied for proper usage. For example rules and regulations of handling and managing resources would determine the store house where they are carefully placed and they were by ascertaining the responsibility of the teaching, non-teaching for effective utilization of school resources. All these precautions have taken ahead of time to ensure the effective teaching learning by effective use resources.

The teaching materials such as textbooks, references, maps, globs, laboratory equipment and other materials are requested by the school principals. To request and procure the materials ahead of time determines the awareness and the efficiency of the school principals. In other words, the principal determines its kind and amount.

2.7. The Role of Educational Materials in Students Learning

Education contributes to children's perceptual growth and understanding of their environment. To this effect, students learning environment should be designed in a way that can provide them greater opportunity to observe and work with various materials that play an important role in their understanding of man and his environment. In such a case, educational materials are important input components of the schools programs. Lockheed (1991:48) mentions that learning materials are useful components of school inputs to enhance students' achievement. Moreover, studies from developed and developing countries have indicated that the availability of educational materials

like textbooks, supplementary reading materials, radio and other instructional media are contributing positively to students achievement and quality of education (Fuller,1986:19).

As mentioned by UNESCO (1984:23), some education systems view educational materials as teaching aids and some others view as a means for innovation. Hence, in the earlier case, educational materials except, for technical and vocational training, are considered as a tool or an aid which support or extend the act of teaching in which its uses depend on teachers will or initiative whereas, in the later case, seen as a means for innovation, are considered as a powerful means of renewing the education system. They can also be seen as indispensable in facilitating the introduction of innovation and promoting changes in the improvement or quality of teaching.

In Ethiopia, issues regarding educational materials are discussed in the education and training policy document (1994:14-15) under the topic of education support. However, as mentioned by Amare (1999:61), educational materials are not taken as key elements for learning rather as teaching aids. In addition the study made on “Teachers perceptions of educational problems in Ethiopia” shows that the absence or shortage of educational materials is one of the major educational problems in the country, Amare (1999:289).

2.8.The Functions of Educational Materials Management

The functions of educational materials management is expressed differently by different writers. For example, Gopalakrishnan (2005:175) discussed that educational materials management includes planning, purchasing, allocating, storing and controlling. According to UNESCO (1984:30) educational materials management functions include planning, distribution and control of the utilization of materials. In both cases, there is no overlooked function but they differ only in the way they treat each of the functions.

2.8.1. Planning for Educational Materials Management

Planning of educational materials is based on need identification of the required educational materials and budget allocated for the purpose. According to Dobler (1971:85), the budget for educational materials can be prepared once the requirements are worked out. Thus, one can see that the purchase budget takes into account the inventory on one hand and orders on the other hand. Besides, the budget itself may be formulated to attain certain targeted inventory levels. It is the usual practice to formulate budgets both in terms of quantity and money.

In identifying the need for educational materials, there are two ways in which the decision as to the need for educational materials can be reached. One of the ways is to base the need on accurate information of the departments, sections or subsystems that request the materials. Requisition is a formal written request from schools, person or departments of the education system to initiate purchase of educational materials. The other way is determining the need from the supply side. This can be done using such available data as the available number of educational materials obtained from an inventory control, utilization standard of educational materials per pupil or per group of pupils and service year of the educational materials in the schools (Dobler, 1971:85).

In which of the two ways discussed above the need for educational materials is decided is a matter of operational procedures or policy decision. In this regard, there should be policy or guideline that explains about the how and when the requisition is filled and submitted to immediate superior and by whom it should be approved (Knezerich & Fowlkes, 1960:64).

Usually, obtaining accurate needs requisition from schools, Woredas or Zones is difficult. This may be due to the reason that schools do not conduct inventory control or the school management may not have the necessary skill in processing the existing data to reach into actual needs. There is also a trend of asking more than required to get at least what they actually want. This is a problem that emanates from their past experience because it is not the requested amount that the schools, Woredas or zones are distributing. Consequently this condition communicates the wrong idea to the requesting body.

As mentioned by UNESCO (1984:34), in the process of planning, in addition to the data for quantitative requirements of educational materials, the presence of qualitative information, standards of educational materials with respect to the education objectives of a country is essential. In this respect, many countries adapted a standard list of materials depending on their prevailing situation, chosen priorities and available options which countries may use as a basis for allocation of educational materials or simply use as a reference. Planning of educational materials should also be based on the budget allocated to the sector. However, this budget is dependent on the total budget allocated to education and the emphasis that educational materials attained in the system. In line with this, Wood hall (1985:189) points out that the minimum

expenditure of a country for teaching material is 10% of the total educational budget. However, most developing countries are allocating below this level.

In Ethiopia, as Amare (1999:62) argues, educational materials did not get enough attention in the planning process by both planners and implementers in their action plans due to the problem of conceptualization. As evidence, he mentions the budget allocated by the country in the five years Education Sector Development Program (ESDP) plan. This is 6.8 percent out of the total budget of 12.2 billion birr. Therefore, availability and accessibility of data, priority or emphasis given to educational materials among other issue in education, availability of finance or total allocated budget for education are some of the factors that may affect educational materials planning.

2.8.2. Purchasing of Education Materials

Mbamba (1992:198) indicated that, the major function of purchasing embraces the flow of materials from the supplies to an organization which has the intention of facilitating the attainment of predetermined objectives. In a narrow sense, the term ‘purchasing’ simply describes the process of buying; however in a broader sense, the term involves determining the need, selecting the supplier, arriving at a proper price terms and condition, issuing he contract or order, and following up to ensure proper delivery (Alijian, 1973:1).

2.8.2.1. Purchasing Procedure

Dereje (2006:30) indicated that, the purchasing processes may vary according to the rules and regulations a country follows. Its basic aim is to ensure that what is needed is made available when it is required. The materials to be bought should conform to the established standards and more of instructions. But the procedure for procurement of educational materials may vary according to the nature of education; the essential steps are as follows:

- ✓ Recognizing the need for the material by using check-up of the available stock.
- ✓ Determining the quality of materials which will be required, regarding to the level of available funds.
- ✓ Deciding on priority basis in relation to the available funds.
- ✓ Drawing detailed specifications of the required items.
- ✓ Preparing and publishing tender documents.
- ✓ Analyzing the tenders to determine the prices, availability of materials etc.

- ✓ Based on the present proposal on the quality, quantity of items, prices, delivery date, ability of supplier, etc. approving the tenders who should supply the materials.
- ✓ Awarding the contract for the supply of materials.

2.8.2.2. Time for Purchasing

Timely purchasing is one of the major activities of the purchasing function. According to Gopalakrishnan (2005:174), for determining the right time, the purchaser should have lead time information for all products and analyses its components. Obviously, lead time covers the entire duration of the materials cycle that consists of manufacturing, transporting and inspection.

If educational materials are not provided by the time they are required, it affects the teaching learning situation and quality of education negatively. To make timely purchasing the purchaser should be conscious about the total time that the material requires from the point of need identification to the time they arrive to the users. It is not always the delay that creates a problem to a system. Sometimes early purchasing is also a problem in that it creates a problem of storage places, for instance Right time purchasing is essential and advantageous for smoothing the function of an institution or organization (Harris, 1985:183). For this reason, the purchase requisition time of educational materials should be determined beforehand and be communicated to departments, sections or units of the system.

2.8.2.3. Determining the Right Price

As mentioned by Candoli (1984), in identifying the optimum price of purchased materials, there are three types of discounts which concern the purchaser. The first is trade discount which is set by vendors on the basis of their classification of customers. Thus, the purchaser's responsibility is making his organization in the most favorable classification of customers. The second is bulk purchasing which offers lower unit prices. Here, the buyer's responsibility is to adjust ordering practice to the most advantageous quantity price break. The third is negotiating which is striving in making agreements that help the organization in saving money like seeing that proper cash discount terms are incorporated in the order, securing invoices promptly from vendors, processing invoices promptly and getting them to the proper paying agent and securing extended discount privileges when unavoidable delays are encountered. These are some of the ways purchasers try to reach the right price.

Therefore, purchasing personnel or department is essential in an organization not only for acquisition of the right quality and quantity of material but also to have it in an economic condition. To this effect, identifying materials with possible low cost is usually one of the responsibilities of purchasing department or personnel.

2.8.2.4. Identifying the Right Source

The concept of right source deals with selection of the right supplier or manufacturers of materials required. Concerning this, Harris (1985:185) has mentioned some points with which vendors can be evaluated. These include financial status, reference from other customers, punctuality in delivery, guaranteed service or products, discount programs and procedures, past bidding record and service offerings. On the basis of these points, vendors can be evaluated and a sort of vendor's directory, which classifies their level of dependability, can be developed. This directory will help the purchaser in identifying the right source. Similarly preparing catalogues that contains list of possible suppliers of educational materials can also help in providing information to the requisite initiating departments as well as to the purchaser.

As mentioned by Curley (1968:382), reputed suppliers are intangible assets to any organization. For they are not only suppliers of materials but are also extremely important sources of information with regard to market conditions, price trends and the general industrial climate. It is, therefore, natural that many organizations have accepted source selection as a corporate policy. This helps in bringing about a fair competition among the suppliers and supply failures are kept at a minimum. Source development is also important for import substitution, cost reduction and quality improvement. It should be, however, be remembered that source selection, development and presentation is a continuing activity.

Therefore, the selection of right supplier provides great importance to the educational establishments. For instance, it contributes to the success of the objectives of the establishment. The major concern in relation to the right source is the dependability and capability of suppliers in providing the required items. In order to be sure that the source of our purchase is right, it would be necessary to evaluate suppliers in terms of technical efficiency and organizational capacity in providing the required material.

2.8.2.5. The Right Quality for Educational Materials

Right quality implies the quality should be available, measurable and understandable as well as practicable. In order to determine the quality of a product, sampling schemes on incoming materials inspection would be useful. The quality particulars are normally obtained from the indents and experience indicates that a substantial portion of the indents prepared by the user departments are invariably incomplete. Such incomplete indents often cause unnecessary delays in procurement as the indenter has to be referred to and, if not referred results in heavy rejection. If the suppliers consistently fail to meet the quality requirements, then the firm may decide to make the item to find out whether such exacting quality requirements are necessary at all. It may mean specialized procedures, tooling, skilled labor and inspection standards.

Another important aspect is whether the buyer is able to make the item to such quality standards when established vendors are unable to do so (Gopalakrishnan, 2005:175).

According to Datta (1986:20), quality is the sum total of characteristics or attributes of a certain material, product or part that makes it acceptable by the people. The quality that is acceptable by the users, beyond achieving the objective it is required to, has significance in improving the morale and efficiency of the workers. At this time numerous manufacturers are engaged in producing educational materials of the same kind but of different qualities. Therefore, there should be a certain criteria to judge quality of educational materials during purchasing. To this effect, specification plays a key role. The specification for an item to be purchased describes in clear and concise terms the characteristics of what is to be purchased and the condition under which the purchase is to be made.

The purpose of specification is for quality control. However, in describing specifications, non-essential quality restrictions that do not add input to utility should be excluded for they may add cost Candoli (1984:209). Quality should not only emphasize the technical specification but also balance the technical requirements with the economic condition. This balance may be maintained at least by setting minimum standards which could be considered during purchasing. However, this situation may lead to selection of minimum standards which may not be accepted by users. In this regard, Datta (1986:124) warns that even though there is a need to balance technically required materials with the economic condition it should not lead to the change of required material without the consultation of the users.

Though decision regarding specific quality and brand are made in cooperation with purchasing agent especially for instructional materials like textbooks, supplementary reading materials, charts, model or tools, the decision has to be made by some instructional officials or committee of teachers or educational personnel. Moco (1961:338)

This is the case, in a condition where the education system is more decentralized, this becomes sometimes heavy for there may not be sufficient data at their disposal and lack the required adequate training to do so. Hence, in a decentralized system of management, lists of educational materials that fit to the educational objectives of the country should be prepared centrally or regionally where there are capable personnel and access to information with regard to recent educational material that are on the market.

2.8.3. Educational Resource Allocation

Allocation of educational resources refers to transporting, sending or giving out the resources from available resources to where they are needed and in turn allocated to smaller groups such as teachers and students for use in classes.

The allocation includes both far and nearer areas. The allocation includes both resources allocated to users are not to be kept in the store, but are to be handed out for the teachers and the students, to effect good teaching and learning interaction. In allocating educational resources at school level, School principals to formulate allocation mechanism.

Once distributed teachers too, are accountable for the loose and mishandling of textbooks and other instructional resources. This is realized by making each student sign against the books received. It is also equally important to inform parents and guardians of students through a duplicate copy of the signed papers. The signed paper or document shows the kind of instructional materials will help them to check and to continue checking the conditions of the materials, this double-checking system of the school and parents will increase the span of life of the material. Otto (1954:607)

2.9. Receiving and Handling of Educational Materials

Receiving is one of the important activities of educational materials management that helps in inspecting the incoming materials against the initial purchase order in quantity as well as quality.

Inspecting the incoming materials keeps an organization from receiving damaged, wrong and in appropriate quantity of materials. It saves time that can be wasted by sending back wrong and damaged materials that can be received in the absence of good inspection. For this reason, assigning capable personnel for the receiving function is an important task in the management of educational materials (Knezerich & Fowlkes, 1960: 75)).

The inspection of incoming materials can be done one by one or by taking samples depending on the type of materials received. The physical verification can also be done by measuring devices like weight, yardstick, liter, etc. Once the educational materials are checked through inspection on reception, the next function would be handling of these educational materials. At the end of the receipt and inspection stage stocking follows. This is the most under – rated function in stores management. Stocking involves routine activities like sorting out materials coming at the end of inspection process and storing them in their locations. Stocking is very important for easy location, proper identification and speedy issue to the consuming department. This process is very crucial in warehouses where thousands of parts are stocked for meeting consumer needs (Compton, 1970:160).

Materials handling can be defined as the function dealing with the preparation, placing and positioning of materials to facilitate their movement or storage. It covers activities that are performed in warehouse where materials and equipment are picked up and moved. In storing educational materials, planning is important. The reserve place or space available for received materials has to be prepared. This requires considering the weight, type, volume occupancy and the rate of flow of materials from receiving through distribution. Therefore, in order to store received educational materials safely, the warehouse manager has to have all this information beforehand (Datta, 1986:240).

Educational materials can be stored in either centralized or decentralized storage system. Centralized storage system serves the main unit subsystems by distributing the materials to subunit warehouses. In a centralized warehouse system, since the central warehouse personnel receives, inspects, processes and controls the stored educational materials, there can be better efficiency and control over the stored materials. According to Harris (1985:190), some of the positive features of a centralized warehouse are that it allows better control of received items and better warehouse management through computerization, greater efficiency in space management

and better management of inventory procedures and records and allows more elasticity in distribution to schools. However, unless it is well planned, though it gives elasticity for distribution, there may be problem to serve the branches by distributing from the center due to distance and being over burdened by serving all at a time.

In decentralized storage system, subunits can serve themselves by receiving and controlling the materials. Furthermore, it facilitates immediate distribution and reduces delivery costs. Subunits are free from tight control of the central warehouse. However, a decentralized storage system may cause to subunit level administrator additional problems and the security of stored materials may be endangering due to less facilities and shortage of personnel in skill as well as in number. Whatever type of the storage system selected, educational materials management requires a proper warehouse in which materials can be kept safely and properly. For the proper and safe handling of educational materials, a warehouse must be dry (Harris, 1985:192).

According to Gopalakrishnan (2005:177), in stores lay out, the governing criteria are easy movement of materials, good housekeeping, sufficient space for men and material handling equipments optimum utilization of storage space, judicious use of storage equipments such as shelves, racks, pallets and proper preservation from rain, light and other such elements.

Other important factors governing the location are the number of end users and their location, the volume as well as variety of goods to be handled, the location of the central receiving section and accessibility to modes of transportation. Though Harris has mentioned these requirements of a warehouse, in most cases, it is difficult to get these requirements being fulfilled. Not much attention is given to the construction of a warehouse in schools where some educational materials are being kept for the time. Providing adequate storage for instructional supplies and equipment is a problem in many new school buildings because of the scarcity of more class room space and shortage of funds for construction, many schools provides a bare minimum of storage in new school plant facilities Kimbrough (1968:326).

This condition clearly shows how the educational materials handling is very difficult in schools. Even at regional, zonal and woreda levels, the condition of constructing the above facilities is very poor and many educational materials are exposed to damage. Hence, the absence of good storage shortens the life span of educational materials due to damage. This in turn, would affect the proper utilization of these materials in costing a large sum of money.

The other activity that should be done in materials handling is codification. Codification is a process of identifying the stored educational materials systematically. As mentioned by Mitchell (1973:79), numbers or a combination of numbers and English letters can be used to codify the items of educational materials. Different educational materials may have different names by users. However, if they are coded, during the request, the store man can easily identify the materials by their codes. It helps in avoiding duplication of items and results in the minimization of the number of items, leading to accurate records. Codification enables easy recognition of an item in stores, thereby reducing clerical efforts to the minimum. It also makes the retrieval task very easy. Moreover, in order to make the retrieval process very easy, shelve listing and identifying materials by their types on shelve would be helpful.

Gopalakrishnan (2005:57) also defines codification as a process of representing each item by a number, the digits of which indicate the group, the subgroup, the type and the dimension of the item. As a result of rationalized codification, many firms have reduced the number of items. It enables systematic grouping of similar items and avoids confusion caused by long description of the items. Since standardization of names is achieved through codification, it serves as the starting point of simplification and standardization.

Materials handling also require an inventory control. Inventory control provides storekeepers with information about educational materials that are in use or in storage. Hence, in the absence of careful inventory control, there could be inefficient use of the materials and wastage of financial resource by making unnecessary purchase. Some of the advantages of inventory control are; expedite educational planning throughout the system, promotes buying economics by determining needs scientifically, prevent duplication in ordering, facilitate the exchange of materials and equipment throughout the system, reduce losses from mishandling and theft, serves cost accounting and the development of a program budgeting system and provide data for continuous inventories.

Therefore, there are two types of inventories: open inventory and closed inventory. Open inventory is a condition of continuous inventory, which is done when the warehouse is functioning whereas closed inventory is done usually and the stores give up providing services and there is no delivery or receiving of goods or materials (Candoli, 1984:221).

Generally, educational materials which have already taken a large sum of money, are stored in the warehouse, organizing the activities of warehousing requires proper guidance and regulation to facilitate retrieval and proper storage of the educational materials at different levels.

2.10. Distribution of Educational Materials

Educational materials distribution involves the movement of educational materials from the warehouse facility to the requesting unit or department (Harris, 1985:193). Educational materials, once received and processed in the storage, should be distributed to their destination. The main purpose of distribution is to help the education system in obtaining the required amount of materials on time with proper care and safety. However, the distribution function may face some problems due to shortage of transport, financial constraints and insufficient amount of educational materials that corresponds to the number of users. Some of these problems may emanate from failure in doing the required managerial functions properly.

Nebiyu (2000:26) taking the Ethiopian education system experience has mentioned some of the reasons that contribute to delay and imbalanced distribution of educational materials. These include inaccurate need requisition as a result of inaccurate data, failure to submit the requisition timely, lack of knowledge of the correct needs requisition, absence of personnel in the planning activity of educational materials, absence of adequate storage so that the warehouse personnel is obliged to free the space. In such a case, unnecessary distribution that does not consider time and need may occur.

For that reason, it is clear that, for effective and efficient distribution in which the required amount of educational materials are distributed timely with optimum costs, good planning, appropriate warehousing and trained personnel are essential.

2.11. Control of the Utilization of Educational Materials

The concern of educational materials management is not only the provision of educational materials. It also concerns their optimum utilization. However, in most cases, this is the neglected part of the management. Educational materials that reach to the schools do nothing unless properly utilized to bring the assumed quality of education. It is not unusual to find some educational materials idle or not sufficiently utilized by teachers. There could be many reasons

for this kind of problem. Some of this can be lack of information and training by teachers and lack of attitude towards using the available educational materials (UNESCO, 1984:64).

As mentioned by Jenson (1967:277), some ways in which teachers can be well acquainted with educational materials is to use them effectively. Some other ways are attending educational meetings where exhibits of supplies and equipment are on display, observing demonstration of the use of certain supplies and equipment by individual firms, visiting other schools where certain materials and equipment are being used and experimenting with some particular supply item or equipment on the recommendation of the principal or a teacher. It is not only lack of information or training that hinders the proper utilization of educational materials.

As mentioned by Wood hall (1985:222), the problems of maintenance, repair and replacement of parts or all of the educational materials are the major problems in utilization of educational materials in developing countries. The proper utilization of educational materials can also be hampered by other problems like failure in technical suitability or quality of the procured educational materials. But evaluating the effectiveness of the educational materials, in relation to their use in the teaching learning process and their quality in performing the expected activities properly, may be far from the concerned educational experts. However, the educational material experts could design a mechanism in which relevant information about the effectiveness of the materials and their quality in performing the intended functions can be properly obtained.

As explained by Gopalakrishnan (2005), organizing a feedback mechanism which can be filled by teachers, periodic survey of the existing materials by the educational experts about their effectiveness and volume of use, requesting supervisors to note data relative to the educational materials and their use during the visit to educational institution are some of the ways in which the educational experts can obtain information and evaluate the effectiveness.

Unfortunately, as can be observed from experience, most of the supervision reports in the study area say nothing about the utilization status of educational materials. Rather, the reports are dealing with the presence or absence of educational materials. Furthermore, it is also rare that schools' report mention about the problem of educational materials utilization. Of course, this may be due to the reason that educational materials are absent in their schools. However, even for those existing ones like textbooks, the reports say nothing about utilization. Therefore, this

condition shows how the control of educational materials utilization is a neglected function among other functions of the materials management

2.12. Store Management

‘Store’ is a general term describing goods, which are held in store house and stock yards. The word ‘store’ is also used in most organizations to designate an area in which all kinds of materials needed for production, distribution, maintenance, packing etc...which are stored received and issued (EMI, 2001).

Dobler (1977:343) defined, store management as process of setting and achieving goal through store management functions that utilize human, financial and material resources. Store management is responsible for each type of storage materials through proper identification of material, efficient physical handling, and protection of materials against spoilage in the warehouse; in addition, the store manager also controls the activity of materials during receiving, issuing and controlling materials recorded in the ledger in a systematic manual. Even though, receiving and store department seems unrelated, they are very important in materials management chain, according to Dobler and Burt (1990:545) “receiving and store operation provide both service and control function” when the receiving department is responsible for proper receiving of materials from supplies, the store’s department is also responsible for storing materials in appropriate place in storeroom.

2.13. Maintenance of Materials and Equipment

Teaching materials and equipment of Schools served for many people’s at large throughout the year by the Teachers and students. Due to this and other reasons teaching materials need continuous maintenance and follow-up.

Ray, 238) et.al (2001: stress the point that maintenance enables the provisions of services without stoppage and in addition Elmo (1963), defines maintenance as continues process of repair and replacement of pieces of property whether grounds building or equipment as nearly as possible to the original condition of completeness. It also goes further and includes good care and wise use of materials and equipment in a proper way. According to Harries (1988:209) maintenance function is seen as a layman’s job and managers usually undermine its importance. It helps in protecting further damage of the resources and lays a good ground for reuse, which

offer wise, demand or force to buy the newer one, that is of course costly for the organization. It refers to “the logical service involved with a school plant, an auxiliary structure, or an item of equipment in a series of systematized function”. Technical and Vocational Education and Training Institutions facility operates and maintenance quality learning. The major business responsibility is to ensure that through the provision of quality maintenance service that the student has an environment which is safe, health and environmentally friendly (MOE, 2005:3)

2.13.1.Types of Maintenance

Harris (1985:213) categorizes maintenance function into four:

1. **Preventive Maintenance Program:** this type of maintenance primarily deals with both equipment and facilities. The primary goal of preventive maintenance to provide that care, which is needed to maintain operation or to preserve the object for a longer duration without costly repairs or lost person hours. It also reduces the amount of time that the equipment or materials is out of use.
2. **System Maintenance:** maintenance carried out in this category involves detailed planning. Replacement, rebuilding, repairing or servicing will take place at a certain specified time. Maintenance of this type features programmed tasks which to greatly reduce overall time loss, financial loss, labor inactivity and production down time.
3. **Setup maintenance:** in this case are some organizations that have a separate department or section which is responsible for repair and replacement. The setup person immediately goes into action if break down or stoppage occurs. He also gives assistance on the operation of some machines and equipment for those who are unable to do so.
4. **Crisis Maintenance:** as the name indicates, such maintenance takes place after the equipment or the material has been damaged.

CHAPTER THREE

Research Design and Methodology

3.1. Research Design

A research design is an important part of the methodology that provides a framework for data collection and analysis. Accordingly, in this study descriptive survey research design was employed due to the nature of the problem. This allows the researchers to collect data through different instruments since it is a common characteristic in educational research (Best & Khan, 2001; Bums, 2000; Verma & Mallick, 1999), “Survey research uses instruments like questionnaires and interviews to gather information from groups of subjects” (Ary, Jacobs, Razavieh, & Sorensen, 2006, p. 31). In survey study, researchers ask questions about people’s beliefs, opinions, characteristics, and behavior (Creswell, 2003).

There are different types of survey designs like longitudinal and cross-sectional, in this study however the use of cross-sectional survey design was employed. The design is considered appropriate for this study since it involves collecting data at one point in time regarding people opinions and beliefs (Babbie, 2005; Creswell, 2003). It also enables the researcher to obtain current information about the problems encountered in the schools and the actual practices they perform and their commitment regarding efficient utilization of physical facilities and educational teaching materials management.

3.2. Research Method

Research methodology is the general principle which will guide a research. As to Dowson (2007) research methodology is the overall approach to studying your topic and includes issues you need to think about such as the constraints, dilemmas and ethical choices within your research.

In this study, the quantitative research approach was used by supplementing with qualitative data to better answer the basic research questions. Scholars in the field suggest that the choice of the approaches should base on the purpose that the approach provides for the research than only saying this approach is better than the other. Dowson (2007:25) says “Neither qualitative nor quantitative research is better – they are just different. Both have their strengths and weaknesses.”

3.3. Sources of Data

The aim of this study was to assess the material resource utilization and management practices in the government secondary schools of Jimma Town. The main sources of this study were the school principals and vice principals, department heads, purchasers, store keepers, teachers of the schools. These primary sources are selected, because of their responsibility, and they are users of the educational materials in the teaching learning process.

3.4. Sample and Sampling Techniques

The study area was Jimma town. This town was selected because other researchers did not give attention both in terms of the area and the educational materials management and utilization. In this town, there are four government secondary schools from which one is preparatory school. All these schools are taken as both a population and samples. These are Jiren secondary school, Sato secondary school, Abba Buna secondary school and Jimma Preparatory schools. Then, from the population schools' populations are taken. These are administrative staff, academic staff, Education office curriculum officers, School supervisors and principals. The administrative staffs are vice principals, store keepers, Library workers, Lab technician and school guards, while academic staffs are teachers. After deciding on the schools researcher has identified the samples from the population in the selected schools. The following table shows the population, sample size and sampling techniques used.

Table1: Summary of the Population, Sample Size and Sampling techniques

No	Participants	Total Popn	Sample size	%	Sampling technique	Remark
1.	Office curriculum officers	6	3	50	Purposive Sampling	Selected to be interviewed
2.	Supervision coordinator	1	1	100		
3.	Schools' principals	4	4	100		
	Total	11	8	73		
4.	vice principals	7	7	100	Purposive Sampling	Administrative workers selected to fill the questionnaires since they are very much responsible in the management
5.	Store Keepers	4	4	100		
6.	Library workers	5	5	100		
7.	School Guards	13	4	31		
8.	Lab technician	1	1	100		
	Total	30	21	70		
9.	Teachers	230	93	40	Random Sampling	Teaching/ academic/ Staff selected to fill the questionnaires

3.5. Data Collection Instruments

Data collection instruments also called research methods. With this regard, Dowson (2007:15) says “Research methods are the tools you use to gather your data.” In the current study three instruments were used. These are: questionnaire, semi-structured interview and direct observation. These instruments are considered important to triangulate the data and/or to combine the strengths of each instrument by minimizing their weaknesses.

3.5.1. Questionnaire

The researcher preferred questionnaire as the main data gathering instrument because it is easier to handle and simpler for respondents to answer within short period of time (Koul, 2008). Also Gall et al. (2007) indicated that the questionnaire is the most widely used type of instrument in educational research. Thus, the questionnaires were prepared in English language containing both open-ended and closed-ended items. Regarding the parts, there were general background and the main questions of the items. On the main part, questions were presented by classifying in to important theme and identify the respondents view through the use of Likert Scales. The questionnaires were developed from literature focusing on the basic research questions of the study. The questionnaires were used to collect data from academic and administrative staff to get their view on the five basic research questions of the study.

3.5.2. Semi-structured Interview

This interview was conducted in order to get in depth information and to cross check and supplement the information collected through the questionnaire about the material resource utilization and management practices in Jimma town Secondary schools.

This instrument was particularly used to get data from curriculum officers, secondary school supervisor and principals since these bodies better understand the management and utilization of educational materials. In doing this, interview guide questions were prepared with the main focus to get detail information focusing on the basic research questions. The discussion was taken place in local languages (Afan Oromo) to make the communication understandable, and the analysis clear and the result better.

3.5.3. Observation

Observation was conducted to get adequate data on basic research questions that focus on the availability and maintenance of the schools' educational materials and their management as well as utilization. The observation had its own check lists to better facilitate the observation process. The observation of the school facilities was including: observing the stores, library, teaching aid center, classrooms and the school plants/physical facilities like playing ground.

3.6 Pilot Testing

Before the actual data collection, pilot test was conducted to see the quality of the instruments. Accordingly, a pilot test was conducted by distributing 20 questionnaires to the respondents who were not participated in the study, in opposite shift who were participated in the study in Aba Buna secondary School. The main purposes of the pilot test were to see the readability of the items, the time given, the consistency and content of the items. Accordingly, the format and order of the question were improved. A thorough editing was done both by the researcher and other language experts. Four general items were improved to be specific. The time was found to be sufficient. The reliability of the questionnaires was measured by using cronbach's alpha method by the help of SPSS version 16. Consequently, the Alpha results were 0.852, which indicated the questions constructed were measuring a similar concept highly. As suggested by Cohen, Manion and Morrison (2007) the reliability coefficient above 0.7 are generally found to be internally consistent. Then, the questionnaires were administered to the research respondents for actual data collection of the study.

3.7. Methods of Data Analysis

Based on the nature of the basic question developed and the data collected from the respondents regarding the present educational materials management and utilization practices in secondary schools of Jimma town, Oromia Regional State both descriptive and inferential statistics were employed by using SPSS version 16.0.

To analyze the respondents' characteristics descriptive statistics like frequency and percentage were used while frequency, percentage, mean and the t-test was carried out to determine the significance level of differences in the responses of academic staff and administrative staff respondents. Likewise, Rank correlation was used to analyzing the major factors that were affecting educational materials management and utilization.

Moreover, information and/or opinion reported by respondents through the open ended questions, structured interview and observation were considered in data interpretation and analyzed by supplementing those data gained through closed ended questionnaires.

3.8. Ethics of the study

In conducting this study, emphasis was given to every important ethical issue. First, before entering into the actual data collection, a formal letter was received from the department of Educational Planning and Management of Jimma University. Then, the letter was given to the Education Office head by the researcher and good rapport was created at the same time. Similar procedure was followed when the researcher go to schools. In addition, people were participated with their full permission. Every effort was made to keep participants anonymous and confidentiality. Moreover, every source that is used in this study was acknowledged.

CHAPTER FOUR

4. Presentation, Analysis and Interpretation of the Data

This Chapter deals with the presentation and analysis of the data collected from different groups of respondents through questionnaires, interviews and observation. The purpose of this study was to assess the practice of educational material resource management and utilization. In order to achieve this purpose, 114 questionnaires were distributed to 93 academic staff and 21 administrative staff. The return rate of the questionnaires was 100%. All the questionnaires were filled and returned by all the respondents. Moreover, 4 school principals, 3 curriculum officers and one supervisor were interviewed.

4.1. Characteristics of the Respondents

In this part the personal characteristics of the respondents is presented, analyzed and interpreted as follows.

Table: 2 -Percentage Distribution of Respondents' Characteristics

No	Variable	Category	Respondents					
			Administrative staff		Academic staff		Total	
			No	%	No	%	No	%
1	Sex	Male	18	85.7	75	80.6	92	80.7
		Female	3	14.3	18	19.4	22	19.3
		Total	21	100	93	100	114	100
2	Age	< 24 years	0	0	2	2.2	2	1.8
		25-29 years	3	14.3	14	15.1	17	14.9
		30-34 years	1	4.8	8	8.6	9	7.9
		35-39 years	1	4.8	8	8.6	9	7.9
		40-44 years	5	23.8	8	8.6	13	11.4
		45-49 years	7	33.3	25	26.9	32	28.1
		>50 years	4	19	28	30.1	32	28.1
		Total	21	100	93	100	114	100
3	Educational qualification	Below Certificate	5	23.8	-	-	5	4.4
		College diploma	3	14.3	-	-	3	2.6
		BA/BSc	13	61.9	92	98.9	105	92.1
		MA/MSc	0	0	1	1.1	1	9
		Total	21	100	93	100	114	100
4	Service years	<6Years	2	9.5	10	10.8	12	10.5
		7-12 years	1	4.8	8	8.6	9	7.9
		13-18years	1	4.8	9	9.7	10	8.8
		19 year and above	17	81	66	71	83	72.8
		Total	21	100	93	100	114	100

As shown on item 1 Table 2 18(85.7%) of administrative staff were Male and 3(14.3%) of them were female, 75(80.6%) and 18(19.4%) Academic staffs were males and female respectively. This indicates that the majority of respondents are males. Therefore, the schools are by male dominated.

Regarding the age categories of the respondents, 2(2.2%) of academic staff were <24 years, 3(14.3%) and 14(15%) were between 25-29 respectively, and 1(4.8%),8(8.6%) administrative and academic staff of them were between 30–34 respectively, 1(4.8%) and 8(8.6%)of academic and administrative staff were between 35-39 years respectively, 5(23.8%) and 8(8.6%) of them were between 40-44 years old while 7(33%) and 25 (26.9%)of them were fall between 45-49 years respectively. The rest of the age 4(19%) and 28(30%) were >50 years old respectively.

With regard to the educational level of academic and administrative staff, item 3 table2 indicates the majority 13(61.9%) and 92(98.9) of them were first degree holders, 5(23.8%) and 3(14.3%) of administrative staff were below certificate and college diploma respectively. But, 1(1.1%) academic staff was second degree holder.

Finally, the respondents were asked to indicate their work experience; accordingly 2(9.5%) and 10(10.8%) of administrative staff and academic staff were less than six years work experience while 1(4.8%) and 8(8.6%) were founded in 7–12 years; also other 1(4.8%), and 9(9.7%) of the academic and administrative staff respondents' work experiences were 13 – 18.The majority 17(81%) and 66(71%) were above 19 years work experience in their respective order.

4.2. Analysis of the Data

4.2.1 Performance of Material Management Practice

This part deals with the analysis and presentation of the data gathered from respondents on the practices of educational materials management and utilization through questionnaires, interview and observation. The questionnaires were prepared having five point Likert scale range from Excellent (=5) to Very poor (=1). Mean scores, standard deviations overall mean, and t-test result from the responses were used to analyze quantitative data. Within the five point ranges, three trisecting scores were used to make the analysis clear as suggested by Anbessa (2012); these scores were 2.49, 3.49 and 4.49. Thus, the practices of educational materials management and utilization for the questionnaire items were analyzed based on the responses of the respondents with a mean value from ≤ 1.49 were very poor, 1.5 to 2.49 were poor, from 2.5 to 3.49 were good/moderate, from 3.50

to 4.49 were very good, and from 4.50 to 5.00 were excellent. Results from Open-ended items and interview questions were also analyzed to supplement and validate the findings from each close-ended item as necessary.

Table: 3 Respondents view on the Performance of Material Management Practice

	Items regarding material management practice	Respondents	N	Mean	Std. deviation	Overall mean	p-value
1	Need assessment on educational materials in your school	Acadm. Staff	93	3.04	1.083	3.09	.702
		Admin. Staff	21	3.14	1.062		
2	Planning of educational materials in your school	Acadm. Staff	93	3.38	1.031	3.24	.278
		Admin. Staff	21	3.10	1.221		
3	Selection of educational materials in your school	Acadm. Staff	93	3.00	1.000	3.025	.846
		Admin. Staff	21	3.05	1.071		
4	Purchasing of educational materials in your school	Acadm. Staff	93	2.71	1.079	2.88	.217
		Admin. Staff	21	3.05	1.322		
5	Distribution of educational materials in your school	Acadm. Staff	93	3.10	1.133	3.215	.388
		Admin. Staff	21	3.33	1.111		
6	Utilization of educational materials in your school	Acadm. Staff	93	2.97	.961	3.105	.267
		Admin. Staff	21	3.24	1.179		
7	Handling of educational materials in your school	Acadm. Staff	93	3.02	.989	3.155	.264
		Admin. Staff	21	3.29	.902		
8	Inventory control of educational materials in your school	Acadm. Staff	93	2.71	1.239	2.915	.868
		Admin. Staff	17	3.12	1.495		

Note: P-value was calculated at $\alpha=0.05$ levels, and $df=112$

It can be seen from Table 3 item 1 that, academic staff and administrative staff were asked to give their response regarding need assessment on educational materials of the schools. The mean score of academic staff respondents is 3.04 and that of the administrative staff respondents is 3.14. Hence both means showed that need assessment on educational materials were carried out in their school fairly. Also the overall mean 3.09 shows the presence of fair practice towards this item. The p-value $.702 > 0.05$ indicates that there is no statistically significant difference between the two groups of respondents towards the item. The interview made with the principals, curriculum officer and office supervisor has objective evidence to corroborate the responses of respondents and revealed that the management and utilization of educational resources is insufficient. The overall result shows that this practice is performed moderately.

Regarding item 2 of the same Table, planning of educational materials in their school was also rated by each group of the respondents. The mean scores of the academic staff and administrative staff respondents were 3.38 and 3.10 respectively rated as good. Also the overall mean 3.24, which shows good towards this practice. The t-test result with p-value $0.27 > 0.05$ shows that there is no statistically significant difference between the two groups of respondents towards the item. Hence, it is possible to say that the planning of educational materials in the study schools was practiced in a good or moderate way. In the same way, the data obtained from interviews shows that planning of educational materials in the schools was practiced by school leaders and teachers, but not always done strongly. With this regard, UNESCO (1984) indicate that in identifying educational materials need, it is very important to have a good planning process to get data for quantitative requirements of educational materials and the presence of qualitative information, standards of educational materials with respect to the education objectives of a country is essential.

As to selection of educational materials, Table 3 item 3 depicts that the academic staff and administrative staff mean scores were 3.00 and 3.05 respectively shows the practice is found to be in a good/moderate condition. The p-value of $0.846 > 0.05$ proves that there is no statistically significant difference between the two groups of respondents towards the item. This shows that selection of educational materials was moderate. Similarly, the data obtained from principals' through interview has evidence to confirm the responses' of respondents.

With regard to item 4 in the same Table above, the mean scores of academic staff and administrative staff about purchasing of educational materials were 2.71 and 3.05. The overall mean also, 2.88. Even though the mean score by the academic staff respondents was less than that of the administrative staff respondents, the purchasing of educational materials is moderately practiced. The p-value of $.217 > 0.05$ indicates that there is not statistically significant difference between the responses of the two groups of respondents. Similarly, the data collected from the principals, supervisor and curriculum officers through interview showed that even if it has committee to purchase educational materials there is shortage of quality and specification on purchasing educational materials due to the shortage of trained person on specification in schools. As mentioned by Mbamba (1992) the major function of purchasing embraces the flow of materials from the supplies to an organization which has the intention of facilitating the

attainment of predetermined objectives. The term involves determining the need, selecting the supplier, arriving at a proper price terms and condition, issuing the contract or order, and following up to ensure proper delivery. So, the trained person on the part is very crucial.

Regarding the distribution of educational materials in their school in Table 3 item 5, the it was shown that the mean scores of academic staff and administrative staff were 3.10 and 3.33 respectively show, it is practice in good way. Also the overall mean 3.21, which shows that the practice is performed well. The p-value of $0.388 > 0.05$ indicates that there is no significant difference between the responses of the two groups of respondents. Hence, based on the overall mean value, it can be concluded that distribution of educational materials in the school was medium. Similarly, the data collected from the principals, supervisor and curriculum officers through interview supports the responses' of respondents.

As can be seen from Table 3 item 6, respondents were asked to give their response about the utilization of educational materials. Accordingly, the mean scores results of academic staff and administrative staff respondents were 2.97 and 3.24 respectively with an overall mean 3.10, with a verbal interpretation of 'good'. The p-value of $0.267 > 0.05$ indicates that there is no statistically significant difference between the two groups of respondents towards the item. This shows the utilization of educational materials in the school was good even though administrative staff have higher level of agreement to the item than the academic staff.

As to handling of educational materials, Table 3 item 7 depicts that the academic staff and administrative staff mean scores were 3.02 and 3.29 respectively which is good. Also the overall mean 3.15, which shows good/moderate towards on the item. The P-value of $0.264 > 0.05$ proves that there is not statistically significant difference between the two groups of respondents towards the item. Similarly, the data obtained from principals' through interview reveals that handling of educational materials in some schools indicates that there is shortage of shelf and small house of storage. The same manner is observed through observation. As mentioned by (Harris, 1985:192) whatever type of the storage system selected, educational materials management requires a proper warehouse in which materials can be kept safely and properly. For the proper and safe handling of educational materials, a warehouse must be dry.

As inventory control of educational materials, Table 3 item 8 depicts that the academic staff and administrative staff mean scores were 2.71 and 3.12 respectively with an overall mean of 2.91

which was medium or good. The p-value of $0.86 > 0.05$ proves there is not statistically significant difference between the two groups of respondents towards the item. This shows inventory control of educational materials was practice moderately. Similarly, the data obtained from principals' through interview reveals that inventory control of educational materials carried out once a year in the schools. As mentioned by Amos and Magad (1995) continuous inventories are kept in order to be certain that regularly used supplies and educational materials are always on hand and that there is no over stocking or under stocking. Educational institutions must strive for maximum utilization of educational materials and prevent the breakdown of the teaching learning process from lack of necessary materials resources. Hence, educational institutions are required to keep complete and up to date records of educational materials resources.

In whole, the educational material management functions presented from item 1 to 8 was practiced moderately as the results of the t-test and interview revealed. In discussing the efficient and effective management and utilization of educational materials, Mbamba (1992) pointed out that materials resource management in relation to education as an aspect of managerial functions concerned with planning, purchasing, 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.

4.2.2. Availability of Educational Materials in the Secondary Schools

This part focus on the presentation and discussion of data gathered from respondents regarding the availability of educational materials in laboratory, library and pedagogic center as presented in Table 4 to 6. Hence, respondents required to rate the level of their agreement on the five point Likert scale item questionnaires range from Very adequately Available (=5) to Not Available at All (=1). Within the five point ranges, three trisecting scores were used to make the analysis clear as suggested by Anbessa (2012); these scores were 2.49, 3.49 and 4.49. Accordingly, the results from the questionnaire items were analyzed with a mean value of ≤ 1.49 were not available at all; from 1.5 to 2.49 were less available; from 2.5 to 3.49 were moderately available; from 3.50 to 4.49 adequately available, and from 4.50 to 5.00 very adequately available. Results from Open-ended items and interview questions were also analyzed to supplement and validate the findings from each close-ended item as necessary.

4.2.2.1. Availability of the Educational Materials in Laboratory

Table: 4 Respondents view on Availability of Educational Materials in Laboratory

Item	Respondents	N	Mean	Std. dev.	Overall mean	p-value
1 Balance beakers	Acadm. Staff	59	2.49	1.180	2.90	.030
	Admin. Staff	13	3.31	1.316		
2 Eye wash station	Acadm. Staff	59	2.31	1.071	2.34	.815
	Admin. Staff	13	2.38	1.261		
3 Filter paper	Acadm. Staff	59	2.61	1.232	2.76	.424
	Admin. Staff	13	2.92	1.441		
4 Microscope	Acadm. Staff	59	2.66	1.139	2.75	.598
	Admin. Staff	13	2.85	1.144		
5 Wash bottle	Acadm. Staff	59	2.49	1.278	2.63	.503
	Admin. Staff	13	2.77	1.641		
6 Heat and thermodynamics	Acadm. Staff	59	2.25	1.212	2.58	.081
	Admin. Staff	13	2.92	1.320		
7 Electricity and magnetism	Acadm. Staff	59	2.29	1.204	2.53	.211
	Admin. Staff	13	2.77	1.423		
8 Light and optics	Acadm. Staff	59	2.25	1.168	2.43	.328
	Admin. Staff	13	2.62	1.325		
9 Alternative energy	Acadm. Staff	59	1.93	1.081	2.23	.073
	Admin. Staff	13	2.54	1.127		
10 Thermometer	Acadm. Staff	59	2.51	1.265	2.56	.781
	Admin. Staff	13	2.62	1.193		
11 Conductors	Acadm. Staff	59	2.32	1.265	2.54	.251
	Admin. Staff	13	2.77	1.235		

Note: P-value was calculated at $\alpha=0.05$ levels and $df= 112$

N is based the respondents response who only provide their answer on these items.

In Table 4 item 1, respondents were asked about the availability of laboratory equipment in the secondary schools. Accordingly, the mean ratings of the academic staff on the presence of balance beakers were 2.49, and that of the administrative staff were 3.31 which show less availability and moderately available. The overall mean 2.9 also shows that balance beakers are available in the schools on a moderate level. The p-value of $0.03 < 0.05$ proves the two groups of respondents was significantly difference in their response on the item. Regarding item 2, or about eye washes station, the mean scores of academic staff and administrative staff were 2.31 and 2.38 respectively indicate the less availability of eye washes station. The overall mean 2.34 is also found in the same verbal interpretation of less availability. The p-value of this item was $.815 > 0.05$ proves that the two groups of respondents are not significantly difference in their response on the item. Concerning filter paper the mean score was 2.61 for academic staff and 2.92 for administrative staff while overall mean of the two groups was 2.76 indicate that this

equipment is moderately available. The p-value of $0.424 > 0.05$ proves that the two groups of respondents was not significantly difference in their agreement on the level of availability of filter paper in the laboratory.

Moreover, mean scores on the availability of microscope 2.66 and 2.85 for academic staff and administrative staff respectively show that this material is moderately found in their schools. The p-value of $.598 > 0.05$ proves that the two groups of respondents were not significantly difference in their response on the item. An overall mean 2.75 of the two groups also shows that similar verbal interpretation towards on the item. The mean scores of respondents on the availability of wash bottle were 2.49 and 2.77 respectively with a verbal interpretation of moderately available. The p-value of $0.50 > 0.05$ proves that the two groups of respondents was not significantly difference in their agreement on the item. In addition to that, the respondents mean scores on the availability of heat and thermodynamics equipment was 2.25 for academic staff and 2.92 administrative staff. The p-value of $0.081 > 0.05$ proves that the two groups of respondents was not significantly difference in their agreement on the item. Never the less, the mean scores on the availability of electricity and magnetism bottle was 2.29 and 2.77 for academic and administrative staffs respectively. The p-value of $.211 > 0.05$ verifies that the two groups of respondents were not significantly difference in their agreement on the item. Also overall mean of 2.58 for heat and thermodynamics and 2.53 for electricity and magnetism bottle show that the availability of these equipment is on a moderate level.

With regard to item 8 in Table 4, respondents mean score on the availability of light and optics was 2.25 for academic staff and 2.62 for administrative staff show that this instrument is less available and moderately available respectively for the two group respondents. Also overall mean 2.43 shows the less availability of this equipment. The p-value of $0.328 > 0.05$ verifies that the two groups of respondents was not significantly difference in their response on the item. In addition, mean score of academic staff and administrative staff responses on the availability of alternative energy in the laboratory were 1.93 and 2.54 respectively in which the first mean indicate a verbal interpretation of less available while the second show moderate availability of this equipment. Also overall mean 2.23 the two groups show the less available of the item. The p-value of $.073 > 0.05$ proves that the two groups of respondents were not significantly differ in their agreement on the item. Concerning, thermometer, the mean score 2.51 for academic staff

and 2.62 for administrative staff show that the availability of this instrument is moderate in the schools. The p-value of $0.781 > 0.05$ proves that the two groups of respondents were not significantly differs in their agreement on the item. Also overall mean 2.56 shows similar verbal interpretation (moderately available) towards this item.

Finally, table 4 item 11 shows that the mean score of academic and administrative staff respondents on availability of conductors in the laboratory were 2.32 and 2.77 respectively. This shows the less availability and moderate availability respectively for the two groups. Also overall mean 2.54 shows the moderate availability of the item. The p-value of $0.25 > 0.05$ shows that the two groups of respondents were not significantly differs in their response on the item.

From the Table, it is evident that the secondary schools of Jimma Town seem to be in relatively less position in terms of fulfilling most of the laboratory equipment as needed in the schools to achieve the intended educational objectives. Further, analysis of the interview and observation data showed that the less availability of such equipment in the schools. School principals interview and the researcher's observation confirms that the schools did not have these vital and current materials to support the teaching learning process. In addition, lack of chemicals was found to be great problems in all the secondary schools of Jimma town. Where the materials are found like in Seto Semero Secondary Shcool, no service is provided to students because there are no technicians and important chemicals.

In general, from the data presentation, t-test result and interview, it can be said that Jimma Town Secondary Schools' laboratory are less functioning and providing service to the students and teachers since they did not have adequate laboratory equipment and trained man power to give the needed service. However, laboratory service is obviously a backbone to ensure the effective teaching learning of science subjects and better student understanding of the lesson contents in the secondary schools.

With this regard, Cardak, Onder and Dikmenli (2007:3) indicate that laboratory equipments and method of teaching through the use of these materials provides the activeness of the student, carries great value in terms of education. It is a place where new information is developed by sighting, developing ideas and interpreting the data by students. In studying about teaching methods through the use of various equipment JK (2004) suggested that for students to

experiment and learn about the science of biology, physics and chemistry, their high school laboratories need to have the proper equipment, there are some basic types of equipment that no laboratory should be without. No high school laboratory is complete without a good set of light microscopes and at least one or two dissecting microscopes. These devices are essentials for learning the basics of biology, from seeing the microorganisms in pond water to examining human and plant cells.

The researcher also go ahead to assess the availability of other materials that can help in the process of education. The next section and Table 5 below present the availability of library materials in the secondary schools of Jimma Town.

4.2.2.2. Availability of Library Materials

This sub-theme of basic research question two deals with the discussion of the data gathered from respondents on the Availability of Library Materials.

Table: 5 Respondents view on the Availability of Library Materials

Item	Respondents	N	Mean	SD	Overall mean	p-value
1 Reference books in the library for students	Acadm. Staff	93	3.20	1.203	3.29	.559
	Admin. Staff	21	3.38	1.431		
2 Presence of Latest references for teachers	Acadm. Staff	93	2.99	1.175	3.02	.837
	Admin. Staff	21	3.05	1.161		
3 Facilities like desks and chairs in the library	Acadm. Staff	93	3.37	1.205	3.49	.386
	Admin. Staff	21	3.62	1.203		
4 Electronic media in the library	Acadm. Staff	93	1.47	.951	1.66	.114
	Admin. Staff	21	1.86	1.195		

Note: P-value was calculated at $\alpha=0.05$ levels and $df= 112$

Scales; ≤ 1.49 = not available at all, $1.5 - 2.49$ = less available, $2.5 - 3.49$ = Moderate, $3.5 - 4.49$ = adequately available, ≥ 4.5 = very adequately available

From the data in table 5 item 1, academic staff and administrative staff were asked to give their response regarding availability of reference books in the library of the town's secondary schools. The mean score of academic staff respondents was 3.20 and that of the administrative staff respondents was 3.38 which show a verbal interpretation of moderate availability of such reference books. Also overall mean 3.29 shows show similar interpretation on the availability of

such books that is moderate. The p-value of $0.559 > 0.05$ indicates that there was no statistically significant difference between the two groups of respondents towards the item.

In Table 5 of item 2, respondents were asked about the availability of latest reference books in their library. Hence, the mean scores of the academic staff and administrative staff respondents were 2.99 and 3.05 respectively reveal both respondents view the availability of these materials is in a moderate level. The p-value $.837 > 0.05$ shows that there is no statistically significant difference between the two groups' responses on this item. Although the majority of respondents moderately rated on this item, the results from interviews from principals and curriculum officers and the researcher's observation show that there were not sufficient current references books in the library for both the students and the teachers.

As indicated in table 5, item 3, respondents were requested to rate about availability of facilities like desks and chairs in their libraries. Consequently, the academic staff and administrative staff mean scores were 3.37 and 3.62 respectively which depicts a moderate level of availability of such materials. The overall mean 3.49 also revealed the same rating. The p-value of $0.386 > 0.05$ proves that there is not statistically significant difference between the two groups of respondents towards the item. Even though, the respondents were said these materials are available in a moderate level, the data obtained through the interview from principals, curriculum officers and office supervisor as well as the researcher's observation shows that facilities like desks and chairs in the library was adequately available.

With regard to item 4 in the same Table above, the mean scores of academic staff was 1.47 and that of administrative staff was 1.86 showed the non-availability and less availability of electronic media respectively. The overall mean 1.66 showed the less availability of electronic media in the schools' library. The p-value of $0.114 > 0.05$ indicates that there is not statistically significant difference between the responses of the two groups of respondents. Similarly, the data collected from the principals, supervisor and curriculum officers through interview and also through observation showed that electronic media in the library was not functional in some schools of Jimma town secondary schools while it is not in the others.

4.2.2.3. Availability of Materials in Pedagogical Center

This sub-theme of basic research question two deals with the results and discussion of the data gathered from respondents on the Availability of Materials in Pedagogical Center.

Table: 6- Respondents view on the Availability of Materials in pedagogical center

Items	Respondents	N	Mean	Std. deviation	Overall mean	p-value
1 Maps	Acadm. Staff	93	3.00	1.093	3.09	.481
	Admin. Staff	21	3.19	1.209		
2 Globes	Acadm. Staff	93	2.86	1.138	2.95	.513
	Admin. Staff	21	3.05	1.359		
3 Charts	Acadm. Staff	93	2.76	1.117	2.95	.171
	Admin. Staff	21	3.14	1.236		
4 Models	Acadm. Staff	93	2.42	1.164	2.54	.396
	Admin. Staff	21	2.67	1.354		
5 Pictures	Acadm. Staff	93	2.59	1.125	2.82	.098
	Admin. Staff	21	3.05	1.161		

P-value at $\alpha=0.05$, and $df= 112$

Scales; ≤ 1.49 = not available at all, $1.5 - 2.49$ = less available, $2.5 - 3.49$ = moderately, $3.5 - 4.49$ = adequately available, ≥ 4.5 = very adequately available

In Table 6, academic staff and administrative staff were asked to give their response regarding the availability of pedagogical center materials in the secondary schools of Jimma Town. Regarding the availability Map, the mean scores of academic staff and administrative staff respondents were 3.00 and 3.19 respectively which show the presence of such materials is in a moderate level. Also the overall mean 3.09 shows similar rating – moderate towards the item. The p-value $0.481 > 0.05$ indicates that there was not statistically significant difference between the two groups of respondents towards the item. In the interview principals indicates the availability of some maps, but they indicate that there is lack of getting all the maps for many subjects as needed. Sometimes teachers face problems to get different maps as needed to use in the classroom.

Regarding item 2 in the same Table, availability of Glob in the pedagogical center in the schools was also rated by each group of the respondents. The mean scores of the academic staff and administrative staff respondents were 2.86 and 3.05 respectively in which both show the less availability of these materials in their schools. The p-value $0.513 > 0.05$ shows that there is not statistically significant difference between the two groups of respondents towards the item. Moreover, item 3 of Table 5 depicts that Charts in the pedagogical center are available in a moderate level as indicated by the mean scores of the academic staff 2.76 and administrative staff mean score 3.14. The p-value of $0.171 > 0.05$ verifies that there is not statistically significant difference between the two groups of respondents towards the item. Also overall mean 2.95 for each Glob and Charts show that the availability of these materials is found to moderate. Never the less, the data obtained from interviews and observation shows that Glob and Charts in the pedagogical center of the schools were less available. The respondents also indicate that where such materials available, they did not attractive to use in the teaching learning process because of long year service.

With regard to, the availability of Models in Table 6 above, the mean scores of academic staff were 2.42 and administrative staff were 2.67 with a verbal interpretation of less available and moderately available respectively. On the other hands, overall mean 2.54 showed that moderate availability of such undecided towards on the item. The p-value of $0.369 > 0.05$ indicates that there is not statistically significant difference between the responses of the two groups of respondents. But, the data through interview and observation showed that Model in the pedagogical center of the schools were not available.

Finally in item 5, table 6 shows that the mean scores of academic staff and administrative staff were 2.59 and 3.05. The overall mean 2.82 also shows that the availability of pictures in the pedagogic center is moderate. The p-value of $0.098 > 0.05$ show that there is not statistically significant difference between the responses of the two groups of respondents. But results from interview and observation showed there were very few pictures in the pedagogical center which are not used properly because of long service.

4.2.3. The Practice of Educational Materials Resource Utilization

This part emphasized on the presentation and discussion of data gathered from respondents on the practice of educational materials resource utilization. Thus, respondents were asked to rate the level of their agreement on the five point Likert scale item questionnaires range from Always (=5) to never (=1). As previously used, within the five point ranges, three trisecting scores were used to make the analysis clear as suggested by Anbessa (2012); these scores were 2.49, 3.49 and 4.49. Accordingly, the results from the questionnaire items were analyzed with a mean value of ≤ 1.49 were never practices; from 1.5 to 2.49 rarely; from 2.5 to 3.49 were sometimes; from 3.50 to 4.49 often practiced and from 4.50 to 5.00 always practiced. Still the results from Open-ended items and interview questions were also analyzed to supplement and validate the findings from each close-ended item as necessary.

Table: 7- Respondents view on Practice of Resource Utilization

	Items regard resource utilization	Respondents	N	mean	Std. deviation	Overall mean	p-value
1	The facilities in the laboratory used in teaching	Acadm. Staff	93	2.42	1.087	2.80	.005
		Admin. Staff	21	3.19	1.209		
2	Facilities in the library are used in teaching	Acadm. Staff	93	2.81	1.145	3.07	.065
		Admin. Staff	21	3.33	1.278		
3	Facilities like models, charts, etc. from pedagogical center are utilized in teaching	Acadm. Staff	93	2.44	.949	2.57	0.22
		Admin. Staff	21	2.71	.784		
4	The play field is used for teaching	Acadm. Staff	93	2.58	1.136	2.6	.891
		Admin. Staff	21	2.62	1.244		
5	The reference books are properly utilized	Acadm. Staff	93	2.82	1.113	3.07	.064
		Admin. Staff	21	3.33	1.276		
6	The text books are used in the teaching	Acadm. Staff	93	3.81	1.173	3.83	.860
		Admin. Staff	21	3.86	1.236		
7	The plasma are used in teaching	Acadm. Staff	93	2.58	1.297	2.53	.743
		Admin. Staff	21	2.48	1.401		
8	The computers are used in the school	Acadm. Staff	93	2.49	1.176	2.93	.003
		Admin. Staff	21	3.38	1.322		

Note: P-value at $\alpha=0.05$, and degree of freedom=112

Scales; ≤ 1.49 = never, 1.5 –2.49 = rarely, 2.5 –3.49 = sometimes,
3.5 – 4.49 = often, ≥ 4.5 = Always

The results in Table 7 focus on the Practice of Resource Utilization in Secondary Schools of Jimma town, as reported by respondents. Accordingly, the mean scores of the academic staff was 2.42 and that of the administrative staff was 3.19 in which the facilities in the laboratory are used in teaching learning process rarely and sometimes respectively. Also overall mean 2.8 shows the utilization is performed sometimes. The p-value of $0.005 < 0.05$ proves that the two groups of respondents were significantly difference in their response on the item.

On the other hand, facilities found in the library are used in teaching learning as reported by academic and administrative staff with the mean scores 2.81 and 3.33 respectively with verbal interpretation of 'sometimes'. Also overall mean 3.07 shows that the facilities in the library are utilized sometimes in teaching and learning. The p-value of $0.065 > 0.05$ shows that the two groups of respondents were not significantly difference in their response on the item.

When respondents asked how often they utilize facilities like models, charts, etc in the pedagogical center for teaching, as shown in Table 6, the academic staff mean score was 2.44 and the administrative staff mean score was 2.71 which indicates rarely and sometimes utilized respectively. Also overall mean 2.57 shows that the staff uses those materials sometimes in teaching with them. The p-value of $0.22 > 0.05$ shows that the two groups of respondents was not significantly difference in their response on the item.

In the same table 7 of item 4, mean score of respondents on the utilization of the play field for teaching were 2.58 for academic staff and 2.62 for administrative staff in which both indicated that the use of this school physical resource is used for teaching sometimes. Also overall mean 2.6 shows the teachers use the field sometimes. The p-value of $0.89 > 0.05$ proves that the two groups of respondents was not significantly difference in their view on the item.

Concerning, item 5 of similar table, the mean scores of academic and administrative staff on the utilization of reference books were 2.82 and 3.33 respectively, in which both group's rating show the utilization with this regard is performed sometimes. Similarly, the overall mean 3.07 has similar interpretation towards the item. The p-value of $0.064 > 0.05$ shows that the two groups of respondents were not significantly difference in their response on the item.

Regarding the use of text books for teaching learning, the mean scores for academic staff was 3.81 and administrative staff was 3.86 in which the verbal interpretation of this practice shows often. Also the overall mean 3.83 shows indicate that they often use text books in teaching lessons. The p-value of $0.860 > 0.05$ shows that the two groups of respondents were not significantly difference in their response on the item.

With regard to table 7, item 7 the mean score on the utilization of plasma in teaching was 2.58 for academic staff and 2.48 for administrative staff in which they utilize this vital instrument sometimes and rarely as respectively rated by the two groups. Also overall mean 2.53 shows that plasma is used sometimes. The p-value of $0.743 > 0.05$ that the two groups of respondents are not significantly difference in their response on the item. Farther more computers were used in the schools rarely and sometimes since the mean scores for academic staff was 2.49 and 3.38 respectively confirm that much practiced. Also overall mean 2.93 shows its utilization is sometimes. The p-value of $0.003 < 0.05$ shows that the two groups of respondents were significantly difference in their response on the item.

From the Table above, it is possible to conclude that the secondary schools in Jimma town seem to be in a relatively less position in terms of effectively utilizing material resources found in deferent sections like the laboratory, library etc. in the teaching learning except text books. Further analysis of the interview with school principals, curriculum officers and observation data verify the utilization of material resource in the schools is preformed not adequately and most frequently.

4.2.4. The Practice of Educational Materials Maintenance Activity

This part deals with the discussion of the data gathered from respondents on the practice of educational materials maintenance activities. On this practice, respondents were asked to rate their level of agreement on the extent to which educational materials maintenance activities was practiced on the basis of a five point likert scale item questionnaires. These five point scales range from Strongly Agree (5) to Strongly Disagree (1). Mean scores, standard deviations overall mean, and p-value were calculated from the responses. Similar procedure was followed as used previously in analyzing quantitative data. Open-ended questions were also analyzed to strengthen the close-ended items besides using the responses from the interview to validate the findings during the process of presentation and analysis of all data in each close-ended item as necessary.

Table: 8- Respondents view on the Practice of educational materials maintenance

Items	Respondents	N	Mean	Std. Div.	Overall mean	p-value
1 Cracks on buildings and electric fixtures are easily detected and repaired.	Acadm. Staff	93	3.17	1.109	2.96	0.144
	Admin. Staff	21	2.76	1.338		
2 Broken chairs and tables are quickly repaired.	Acadm. Staff	93	3.18	1.151	3.14	0.766
	Admin. Staff	21	3.10	1.480		
3 Damaged doors and windows are immediately replaced.	Acadm. Staff	93	3.04	1.160	3.09	0.776
	Admin. Staff	21	3.14	1.493		
4 Damaged water pipes are immediately repaired.	Acadm. Staff	93	3.19	1.135	3.33	0.314
	Admin. Staff	21	3.48	1.250		
5 Ceiling & roofs easily are detected and repaired.	Acadm. Staff	93	2.94	1.082	2.92	0.931
	Admin. Staff	21	2.90	1.513		
6 Grasses on the playing ground, classrooms floor and toilets are regularly cleared.	Acadm. Staff	93	2.87	1.086	2.96	0.519
	Admin. Staff	21	3.05	1.322		
7 Laboratory materials are always maintained to protect from damage	Acadm. Staff	93	2.39	1.104	2.45	0.703
	Admin. Staff	21	2.52	1.537		
8 Teaching aid materials are always maintained for use	Acadm. Staff	93	2.59	1.209	2.72	0.373
	Admin. Staff	21	2.86	1.315		

Note: P-value at $\alpha=0.05$, and $df=112$

Scales; ≤ 1.49 = Strongly Disagree, $1.5 - 2.49$ = Disagree, $2.5 - 3.49$ = Undecided, $3.5 - 4.49$ = Agree, ≥ 4.5 = Strongly Agree

As shown in Table 8 item 1, academic staff and administrative staff were asked to show their degree of agreement on maintenances of cracks on buildings and electric fixtures in the secondary schools. The mean score of academic staff respondents was 3.17 and that of the administrative staff respondents was 2.76 in which respondents were unable to decide on the presence of this practice. Also overall mean 2.96 shows similar idea towards this item. The p-value $0.144 > 0.05$ indicates that there is no statistically significant difference between the two groups of respondents towards the item

Regarding item 2 of the same Table, respondents were asked whether broken chairs and tables were repaired or not. The mean scores of the academic staff and administrative staff respondents were 3.18 and 3.10 respectively still they did not decide on the presence of this practice. Also overall mean 3.14 shows that the respondents undecided towards on the item. The p-value $0.766 > 0.05$ shows that there is no statistically significant difference between the two groups of respondents towards the item. But, the data obtained from interviews and observation shows that repaired broken chairs and tables was moderately practiced in their school. In some schools of the town maintenance of broken chair were carried out once in a year. In other there was stored in store and/or put somewhere in the school compound.

As can be seen in Table 8 item 3, the mean scores of the respondents on the replacement of damaged doors and windows were 3.04 and 3.14 for the academic staff and administrative staff respectively in which the respondents unable to decide on the presence of maintenance on damaged doors and windows. The overall mean 3.09 showed that the respondents 'undecided' on the item. The p-value of $0.776 > 0.05$ established that there is not statistically significant difference between the two groups of respondents towards the item. Never the less, the data through interview and observation shows replacing damaged doors and windows was not adequately performed because of lack of budget for maintenance. With regard to item 4 in the same Table above, the mean scores of academic staff and administrative staff were 3.19 and 3.48 respectively in which the verbal interpretation is 'undecided' on this practice. The p-value of $0.314 > 0.05$ indicates that there is not statistically significant difference between the responses of the two groups of respondents.

In Table 8 item 5, respondents were asked if ceiling & roofs are easily detected and repaired in their school or not. The mean scores of academic staff and administrative staff were 2.94 and 2.90 respectively showed that respondents did not decide on the presence of this practice. The p-value of $0.931 > 0.05$ indicates that there is not statistically significant difference between the responses of the two groups of respondents. On the other hands, the data through interview and observation showed very few ceilings and roofs were repaired when they get some budget from the community or from other sources.

With regard to item 6 in the same Table above, the mean scores of academic staff and administrative staff were 2.87 and 3.05 respectively. Also overall mean 2.96 shows undecided towards on the item. The p-value of $.519 > 0.05$ indicates that there is not statistically significant difference between the responses of the two groups of respondents. However, grasses on the playing ground, class rooms' floor and toilets were not regularly cleared as interview and observation shows.

Item 7 table 8 the mean scores of academic staff were 2.39 (which was disagree on the item) and as administrative staffs 2.52 (which was undecided). But, the overall mean 2.45 shows the disagreement of the respondents towards the maintenance of laboratory materials to protect from damage. The p-value of $.703 > 0.05$ indicates that there is not statistically significant difference between the responses of the two groups of respondents. There for, the majority of the respondents disagreed on the issue. So, it can be said that, laboratory materials were not always maintained to protect from damage. Similarly, the data through interview and observation showed that there is lack of adequate maintenance for laboratory materials.

Finally, in Tables 8 item 8 respondents were asked whether teaching aid materials are always maintained for use or not. The mean scores of academic staff and administrative staff were 2.59 and 2.86 respectively in which both respondents undecided on the item. The overall mean 2.72 shows that the respondents unable to decide on the presence of this practice. The p-value of $0.373 > 0.05$ indicates that there is not statistically significant difference between the responses of the two groups of respondents. However, the data through interview and observation showed that, teaching aid materials were not always maintained for use in the secondary schools of the study area.

In general, the result of the study on the practice of educational materials maintenance showed that the presence of this practice in the secondary schools is not practically observable since the majority of the respondents unable to decide on such practice. This shows that maintenance activities are not adequately performed in the schools to keep their life span.

According to (Osborn and Ray) maintenance of educational materials in schools is vital as it provides the means to ensuring that plans are kept in good order to guarantee continuity of materials, waiting due to breakdowns is kept to a minimum (Osborn, 1980). Maintenance of educational materials includes activities which are needed to allow for repair, servicing and replacement procedures. Ray (2001) also stressed that the point that maintenance enables the provision of services without go-slow. Hence, the function of the school system associated with up keep, repair and replacement that ensure continuous usability of the physical plant, equipment and service facilities. Furthermore, maintenance helps in protecting future damage of materials and lays a good ground for reuse which otherwise, demand or force to buy the newer one that is, of course, costly for the institution.

4.2.5. Rank Analysis of Factors Affecting Educational Materials Management and Utilization

Academic staff and Administrative staff presented to rank in order six major factors that affect educational materials management and utilization in school from 1st to 6th from the most to the least ones, which, 1 is serious problems 6, is weaker while 2, is the strongest 3, stronger 4, strong and 5, is weak. The table below presents the number of respondents rated factors that affect educational materials management and utilization in rank from the most to the least. The weighted average rank by each group of respondent is computed for each factor. The weighted average rank is then used to generate the rank for each factor by each of the respondent groups.

Table 9: The rank of major factors that are Affecting Educational Materials Management and Utilization in the Schools

Factors affect educ. Materials	Respondents	Rank	Rank	Rank	Rank	Rank	Rank	Total	Rank
		1	2	3	4	5	6		
Lack of training for the staff	Acadm. Staff	39	30	13	1	5	5	93	1
	Admin. Staff	18	3	0	0	0	0	21	1
	Total	57	33	13	1	5	5	114	1
Lack of good planning skills	Acadm. Staff	23	32	18	14	4	2	93	2
	Admin. Staff	0	5	8	7	1	0	21	3
	Total	23	37	26	21	5	2	114	3
Lack of users' skills	Acadm. Staff	11	27	33	10	11	1	93	3
	Admin. Staff	0	12	2	6	1	0	21	2
	Total	11	39	35	16	12	1	114	2
Problems of good storage and handling	Acadm. Staff	10	28	15	28	9	3	93	4
	Admin. Staff	1	6	8	2	4	0	21	3
	Total	11	34	23	30	13	3	114	4
Lack of proper Distribution	Acadm. Staff	10	20	16	15	25	7	93	5
	Admin. Staff	0	5	2	3	11	0	21	5
	Total	10	25	18	18	36	7	114	5
Environmental factors like rain, hot air condition	Acadm. Staff	7	10	12	2	11	51	93	6
	Admin. Staff	1	3	1	0	1	15	21	6
	Total	8	13	13	2	12	66	114	6

Lack of training for staff was found to be ranked as the 1st major factors that affect educational materials management and utilization in school by both Academic staff and administrative staff respondents. This factor was rated as rank 1 by 39(42) of Academic staff respondents and 18(85.7) of administrative staff respondents.

Lack of good planning skill is placed as the 2nd by academic staff whereas it is 3rd according to administrative staff respondents ranking. Lack of users' skills is ranked 3rd by academic staff respondents and the 2nd by the administrative respondents. Problems of good storage and handling ranked 4th by academic staff respondents and the 3rd by the administrative staff respondents.

However, both respondent groups placed lack of proper distribution as the 5th major factors that affect educational materials management and utilization. Also, both academic staff and administrative staff placed Environmental factors like rain, hot air condition as the 6th major factors. And also, shortage of guideline was raised by both groups of respondents as another major factor that can affect educational materials management and utilization in Jimma Town secondary schools.

Similarly, the data obtained from the interviews made with the principals, curriculum officers and supervisor shows that lack of training for staff is the most major factors that affect educational materials management and utilization in Jimma Town secondary schools. Next to the lack of training for the staff, Lack of users' skills and lack of good planning skills also most commonly major factors that affect educational materials management and utilization in the schools. In addition, shortage of guideline, problem of good storage and handling, lack of proper distribution and Environmental factors like rain, hot air condition factors are sometimes affect educational materials management and utilization in Jimma town secondary schools. Therefore, one can understand from this the above major factors affect educational materials management and utilization in the schools.

CHAPTER FIVE

5. Summary, Conclusions and Recommendations

This part of the study deals with the summary of major findings, the conclusions drawn, and the recommendations forwarded on the basis of the findings.

5.1. Summary of the Major Findings

The main purpose of this study was to assess the current practices of educational materials management and utilization in secondary schools of Jimma town. Jimma town secondary schools principals, academic staff and administrative staff, curriculum officers and supervisor were the target population of the study. The population is composed of 230 academic staff, 30 administrative staff, 4 principals, 6 curriculum officers and 1 office supervisor. As a result, 93 academic staff and 21 administrative staffs were selected as a sample from the population by simple random sampling technique. In addition to these samples, 4 principals, 3 curriculum officers and 1 supervision coordinator were selected through purposive sampling. Descriptive survey research design was employed as a design of the study.

The study was aimed at assessing the current practices of educational materials management and utilization in secondary schools of Jimma town Oromia region and to provide possible solutions for the problem. In order to attain the objective of the study, the following basic research questions were stated and answered. The basic research questions were:

- 1 To what extent do the secondary schools practices need assessment, planning, purchasing, controlling, moving and storing of educational materials?
- 2 To what extent educational materials are available in Jimma Town secondary schools?
- 3 How often are the practice of material resource utilization is performed in teaching learning in the secondary schools of Jimma Town?
- 4 How adequate are the maintenance activities carried out on the educational materials in the secondary schools of Jimma Town to sustain their life of service?
- 5 What major factors do affect educational materials management and utilization functions in the mentioned schools?

Based on the analysis and interpretation of the data, it was possible to come up with the following major findings in relation to the basic research questions:

- The experiences and level of education of teachers and principals in the study area were found to be satisfactory to get adequate data for this study.
- The practice of need assessment on educational materials, selection of educational material, purchasing, distribution of materials and inventory control of educational materials in the schools was found to be in poor condition as revealed by the two groups' overall mean scores that are found between 2.5 and 3.49 in which there were no statistically significant differences between the responses of the two groups in each item.
- The secondary schools in Jimma town also found to be in relatively less position in terms of fulfilling most of the laboratory equipment as stated by both groups over all mean scores that are found between 2.37 and 2.77 in which there were no statically significant difference between the responses of the two groups in each item. Moreover, the result from interviews revealed that there were no up to date laboratory chemicals to use for the teaching learning. Besides this, the schools did not have laboratory technicians except in one secondary school. Hence, the most of the secondary schools in the town are functioning without adequate equipment, chemicals and laboratory technicians' service in the schools.
- The result of the study also revealed that there were no adequate current references books in the library of the schools as mentioned by both groups over all mean scores that are found between 2.75 and 2.97 in which there were no statically significant difference between the responses of the two groups in each item. In the same way, the data obtained from interviews and observation also showed that there is lack of up-to-date references books in the libraries. With regard to facilities, the libraries have adequate desks and chairs. However, the libraries did not have electronic media. Similarly, the data obtained from principals', curriculum officers and office supervisor through interview as well as from observation evidences were found to confirm the responses' of the respondents from the questionnaire.
- Regarding the availability of materials in the pedagogical center, very few materials are available in poor conditions as revealed by two groups over all mean scores that are found between 2.72 and 3.02 in which there were no statically significant difference between the

responses of the two groups in each item. For instance, maps, globes, models and other important pictures were not adequately available in the secondary schools. Besides lack of such materials in some schools, in other schools they did not attractively use in the teaching learning process.

- The result of the study also revealed that secondary schools of Jimma town seem to be in relatively less position in terms of efficient and effective resource utilization except textbooks. Other instructional resources found in the laboratory, library and pedagogical center were not adequately used to support the teaching learning process.
- With respect to the practice of educational materials maintenance, academic and administrative staff respondents with their overall mean score found between 2.5 to 3.49 revealed that they did not see maintenance activities to fix cracks on buildings and electric fixtures, repairs on damaged water pipes and ceiling as well as roofs. They also indicated that grasses on the playing ground and class rooms' floor and toilets were not regularly cleared, laboratory materials were not always maintained to protect from damage and teaching aid materials were not always maintained for use. Therefore, the study revealed that the practice of educational materials maintenance is found in a poor condition in which respondents even did not able to decide on some of the measures taken to improve the condition of the materials through continuous maintenance in the secondary schools.
- Concerning the practice of educational material resource utilization, academic staff and administrative staff with their mean score rated between 2.5 to 3.49 revealed that educational materials found in the laboratories, libraries and pedagogical center including computers and plasma were used sometimes. Only text books were used to teaching learning process more often than other educational materials as revealed by the two groups overall mean score 3.83.
- Regarding the major factors that affect educational materials management and utilization, the respondents were given various alternatives to rank from highest/most difficult factor to the least one. Accordingly, lack of training for the staff was found to be the 1st major factor while lack of good planning skill by the school leaders was ranked in the 2nd place being the major factor that affects educational materials management and utilization in the schools. Lack of users' skills was ranked as the 3rd major factor. Moreover, problem of good storage and

handling of educational materials and lack of proper distribution were ranked as the 4th and 5th factors respectively. Finally, environmental factors like rain, hot air condition etc. were ranked as the 6th major factors that affect educational materials management and utilization in secondary schools of Jimma Town.

5.2. Conclusion

Based on the above findings the following conclusions were drawn:

- The result of the study revealed that the practice of need assessment, selection of materials, purchasing, distribution and inventory control of educational materials was found to be in a moderate level. Thus, it is possible to conclude that the practice of educational materials management and utilization is less practice /use/ educational of materials.
- The availability of important resources in the secondary schools' laboratory, library and pedagogical center were not adequate except desks and chairs as well as text books. The schools also did not have trained laboratory technician and chemicals that can be used in the laboratories. There for, it is possible to conclude that the secondary schools of Jimma Town are not providing education service for students with a good teaching learning environment that can enhance the students' engagement in education and teachers' commitment in teaching the students through adequate instructional materials support in the way they can achieve the intended goal of education at the secondary school level.
- With respect to the practice of educational materials maintenance, they did not see maintenance activities to fix cracks on buildings and electric fixtures, repairs on damaged water pipes and ceiling as well as roofs. The grasses on the playing ground and class rooms' floor and toilets were not regularly cleared, laboratory materials were not always maintained and teaching aid materials were not always maintained for use. Thus, it is possible to conclude that the practice of educational materials maintenance is found in a poor condition.
- With respect to material resource utilization, it was found out that educational materials found in the laboratories, libraries and pedagogical center were used sometimes except text books. This implies that, secondary school teachers and leaders were not properly providing improved teaching through the use of the scarce resources by discharging their responsibilities through efficient and effective use of the educational materials.

- Among the various factors that affect the effective management and utilization of educational materials, lack of educational material management training for staffs is the most serious challenge/problems, lack of good planning skills of leaders on material mgt and utilization is the second serious challenge, lack of users' skills is 3rd, good storage and handling, lack of proper distribution as well as environmental factors like rain and hot air condition were identified in their order from most challenging to the least one. Therefore, it is fair to conclude that the management and utilization of educational resource is mainly affected by lack of leaders' and staff's skills on how to manage and utilize these resources for educational purpose.

5.3. Recommendations

Material resource management is a crucial issue in educational institution and inevitable to accomplish the objectives of the institute, and it is a corner stone to achieve the educational objective by providing quality education in creating supportive environment. On the basis of the findings and conclusions drawn, the following recommendations were forwarded:

1. The result of the study revealed that the need assessment, selection, purchasing, distribution and inventory control of educational materials was not well done. Therefore, Regional Education Bureau and Jimma Town Education Office are recommended to provide training for Jimma Town secondary school principals and supervisor to enhance their educational material management and utilization capacity with regard to need assessment, selection, purchasing, distribution and inventory control.
2. The result of the study showed that there was lack of important educational materials in the schools' laboratories, libraries and pedagogical center. Also, not have trained technicians to utilize materials in the laboratory and library. Thus, Jimma Town Education Office, the school leaders at the school community are recommended to fulfill by producing important instruments to secondary schools through creating fundraising activities, budget allocation and increasing stakeholders' participation with this regard. More specifically, Jimma Town education office should assigned laboratory technicians, trend library workers and other personnel who can work on mgt and utilization in Jimma Town secondary schools.

3. Evidences from respondents that the maintenance of educational materials was not adequately carried out. Some of these materials could easily be maintained and reused if there were maintaining services. The reason for this according to the interviewees' opinion was lack of budget to cover maintenance costs, lack of qualified technicians for maintenance of educational materials and attention deficit on the part of school leaders. Despite these constraints, still there is evidence to suggest that the secondary schools are expending a great deal of effort to maintain school facilities and equipment. Therefore, Town education offices and secondary schools would assign qualified technicians to maintain educational material permanently and allocate the budget to cover the maintenance cost.
4. The utilization of the available educational materials is also unsatisfactory in the secondary schools. Therefore, the supervision coordinator, school management bodies (principals and school improvement committee) as well as school instructional supervisors should work hard jointly with teachers to use the resource available in their schools efficiently and effectively in the teaching learning process. Continuous orientation should be given to all academic staff and administrative staff regarding the utilization of educational materials for educational purpose by schools principals.
5. The management of educational resource is mainly affected by lack of capacity (staff training, planning skill, and users' skills) by leaders and academic and administrative staff. Thus, skill training should be provided by Jimma Town Education Office to school leaders and teachers to alleviate major factors and improve the storage, handling and distribution of educational materials.
6. Moreover, educational material management should be improved in the way that the quality can positively influence the students' performance and conduct a farther study in the issue.

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APPENDICES
JIMMA UNIVERSITY
INSTITUTE OF EDUCATION AND PROFESSIONAL DEVELOPMENT STUDIES
DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT
APPENDIX-A: Questionnaire for Academic Staff and Administrative Staff

I would like to express my appreciation in advance, for taking your time to fill this questionnaire. The main purpose of this questionnaire is to get reliable data on the study entitled “*The Current Practices of Educational Materials Management and Utilization in Secondary Schools of Jimma Town*”. Thus, your genuine response will help the study to provide reliable and valuable suggestions and recommendations; your responses will be used only for academic purpose.

General Directions

1. No need of writing your name
2. Mark “√” tick in the box of your alternative answers
3. Please give answer to each closed ended items as appropriate
4. Please give your short and precise response to the open-ended questions

Section 1: General Information and Personal Data

1. **Name of the school:** _____
2. **Sex:** Male Female
3. **Age:**
< 24 years 25-29 years 34 years 35-39 years
40-44 years 45-49 years >49 years
4. **Level of educational qualification**
Below Certificate Level Certificate College diploma
BA/BSc MA/MSc
5. **Year of service.**
<6 Years 7-12 years
13-18 years 19 year and above
6. **Your current job** _____

Section 2: Main Questions

I. Please rate the extent to which need assessment, planning, purchasing, controlling, moving and storing of educational materials are performed in your school through the participation of responsible bodies by the numbers indicated:

5 = Excellent; 4 = Very Good; 3 = Good; 2 = Fair; 1 = Very poor

No	Items regarding material management practice	Scales				
		5	4	3	2	1
1	Need assessment on educational materials in your school					
2	Planning of educational materials in your school					
3	Selection of educational materials in your school					
4	Purchasing of educational materials in your school					
5	Distribution of educational materials in your school					
6	Utilization of educational materials in your school					
7	Handling of educational materials in your school					
8	Inventory control of educational materials in your school					

II. The Availability of Educational Materials in Your School

2.1. Laboratory Equipments

5 = very adequately available; 4 = adequately available; 3 = undecided;

2 = less available; 1 = not available at all

No	Item regarding Laboratory equipment	Scale				
		5	4	3	2	1
1	Balance beakers					
2	Eye wash station					
3	Filter paper					
4	Microscope					
5	Wash bottle					
6	Heat and thermodynamics					
7	Electricity and magnetism					
8	Light and optics					
9	Alternative energy					
10	Thermometer					
11	Conductors					

2.2. Library Materials

5 = very adequately available; 4 = adequately available; 3 = undecided;

2 = less available; 1 = not available at all

No	Item regarding library	Scales				
		5	4	3	2	1
1.	Reference books in the library					
2.	Presence of out date references book in the library					
3.	Facilities like desks and chairs in the library					
4.	Electronic media in the library					

2.3. Materials in the Pedagogical Center(Teaching Aid)

5 = very adequately available; 4 = adequately available; 3 = undecided;

2 = less available; 1 = not available at all

No	Items Regarding pedagogical center	Scales				
		5	4	3	2	1
1.	Map					
2.	Globe					
3.	charts					
4.	Models					
5.	Pictures					

III. The Practice of Resource Utilization in Secondary School

5 = Always; 4 = often; 3 = sometimes; 2 = rarely 1 = never

No	Items regard resource utilization	Scale				
		5	4	3	2	1
1.	The facilities in the laboratory are used in teaching					
2.	The facilities in the library are used in teaching					
3.	The facilities like models, charts, etc in the pedagogical center are utilized for teaching					
4.	The play field is used for teaching					
5.	The reference books are properly utilized					
6.	The text books are used in the teaching					
7.	The plasma are used in teaching					
8.	The computers are used in the school					

IV. The Practice of educational materials maintenance activities carried out in your school

5 = Strongly Agree; 4 = Agree; 3 = Undecided; 2 = Disagree; 1 = Strongly Disagree

No	Items Regarding Maintenance	5	4	3	2	1
1.	Cracks on buildings and electric fixtures are easily detected and repaired.					
2.	Broken chairs and tables are quickly repaired.					
3.	Damaged doors and windows are immediately replaced.					
4.	Damaged water pipes are immediately repaired.					
5.	Ceiling & roofs are easily detected and repaired.					
6.	Grasses on the playing ground, class rooms floor and toilets are regularly cleared					
7.	Laboratory materials are always maintained to protect from damage					
8.	Teaching aid materials are always maintained for use					

V What are the major factors that affect educational materials management and utilization in your school?

Rank from the most to the least major factors in the utilization of educational materials in your school, Use, 1 for the first major factor , 2 for the next, 3 for the 3rd, etc to the least factor and write in the box (blank space).

- a. Lack of training for the staff
- b. Lack of good planning skills
- c. Lack of users' skills
- d. Problems of good storage and handling
- e. Lack of proper distribution
- f. Environmental factors like rain, hot air condition etc

If others specify and include in the rank _____

What strengths and weakness you want to highlight regarding materials management and utilization.

Strengths _____

_____.

Weaknesses _____

_____.

What suggestions do you have to improve the various problems and challenges of material management and utilization _____

_____.

APPENDIX-B: Interview for School Principals

Dear respondent, the purpose of these interviews is to collect relevant data on the study entitled “**The practice of educational materials management and utilization in secondary schools of Jimma town**”. Your responses are vital for the success of the study. You are kindly requested to response the interview confidentially. Be sure that your response will not be used for other purpose rather than academic.

Part – I: General Information and Personal Data

1. Sex _____
2. Age _____
3. Academic Qualification _____
4. Experience in year as: a teacher _____ Department Head _____ vice principal _____
5. Current position _____

Part – II: The main questions of the interview

1. How do you see the management of educational materials in your school related to need assessment, planning, purchasing, controlling, moving, storing, maintaining and inventory control?
2. What strengths and weaknesses do you observe in your school in the management of educational materials?
3. What management approaches or strategies do you use for educational materials management?
4. How adequate are the maintenance activities carried out on the educational materials in your school? Can you explain it with practical examples?
5. What did you do to assemble and utilize the relevant individuals within and outside the school for efficient materials and facilities management?
6. Who are the main responsible bodies in the management and utilization of such materials? What strengths and weaknesses you have ever experienced in discharging your responsibilities with this regard?
7. What are the major factors (problems) that can affect the management and utilization of educational materials in your school?
8. What do you suggest to solve the overall problems in educational materials management and utilization in your schools?

**APPENDIX-C: Interview for curriculum officers and secondary schools
supervision Coordinator of Jimma Town Education Office**

Dear respondent, the purpose of these interviews is to collect relevant data on the study entitled “**The practice of educational materials management and utilization in secondary schools of Jimma town**”. Your responses are vital for the success of the study. You are kindly requested to response the interview confidentially. Be sure that your response will not be used for other purpose rather than academic.

Part – I: General Information and Personal Data

1. Sex _____ 2.Age _____ 3.Academic Qualification _____
4. Experience in year as: a teacher _____ Principal/vice principal _____ Supervisor _____
5. Current position _____

Part – II: The main questions of the interview

1. How do you see the management of educational materials in the secondary schools related to need assessment, planning, purchasing, controlling, moving, storing, maintaining and inventory control?
2. What strengths and weaknesses do you observe in the secondary schools in the management of educational materials?
3. What management approaches or strategies do the principals use for educational materials management?
4. How adequate are the maintenance activities carried out on the educational materials in the school? Can you explain it with practical examples?
5. How do you see the principals’ competence in assembling and utilizing the relevant individuals within and outside the school for efficient materials and facilities management?
6. Who are the main responsible bodies in the management of such materials? What strengths and weaknesses you have ever seen in the schools with this regard? What are your roles with this regard?
7. What are the major factors (problems) that can affect the management of educational materials in your sector schools?
8. What do you suggest to solve the overall problems in educational materials management in secondary schools?

APPENDIX-D: Observation checklist

I. The Availability of Educational Materials in Schools

I.1. What Laboratory Equipments looks like?

No	Are there the following Laboratory equipments in schools laboratory?	Scale		Remark
		Yes	no	
1	Balance beakers			
2	Eye wash station			
3	Filter paper			
4	Microscope			
5	Wash bottle			
6	Heat and thermodynamics			
7	Electricity and magnetism			
8	Light and optics			
9	Alternative energy			
10	Thermometer			
11	Conductors			

1.2 How Library Materials looks like?

No	Item regarding library	Scales		Remark
		Yes	no	
1.	Are there Reference books in the library?			
2.	Are there out date reference books in the library?			
3.	Are there Facilities like desks and chairs in the library?			

1.3 Materials in the Pedagogical Center

No	Items Regarding pedagogical center	Scales		Remark
		Yes	no	
1.	Is there pedagogical center in schools?			
2.	Are Maps in pedagogical center?			
3.	Are Globes in pedagogical center?			
4.	Are charts in pedagogical center?			
5.	Are Models in pedagogical center?			
6.	Are Pictures in pedagogical center?			

II. The Practice of educational materials maintenance activities in the schools

No	Items Regarding Maintenance	Scale		Remark
		Yes	No	
1.	Are there Cracks on buildings and electric fixtures in schools?			
2.	Are there Broken chairs and tables in the schools?			
3.	Are there Damaged doors and windows?			
4.	Are there un repaired Damaged water pipes?			
5.	Are there detected and unrepaired Ceiling & roofs?			
6.	Are there unclear Grasses on the playing ground, class rooms' floor and toilets?			