

**ASSESSMENT OF EDUCATIONAL RESOURCE
MANAGEMENT: THE CASE OF TULU-DIMTU AND
NIFAS-SILK TVET COLLEGES OF ADDIS ABABA CITY
ADMINISTRATION**

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SCHOOL OF GRADUATE STUDIES
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ACRONYMS

TVET:	Technical and Vocational Education and Training
VET:	Vocational Education and Training
TM:	Time Management
OS:	Occupation Standard
EOS:	Ethiopian Occupational Standard
ENQF:	Ethiopian National Qualification Framework
ETQF:	Ethiopian TVET Qualifications Framework
COC:	Center of Competency
AACA:	Addis Ababa City Administration
ILO :	International Labor Organization

ABSTRACT

The major purpose of the study was to investigate the practices and problems of educational resource management and possible solutions or the utilization of material facility in government TVET colleges in Nifas Silk and Akaki Kaliti sub cities. To this effect, out of five two government TVET colleges were selected. To this end, descriptive design was used as design and to enrich the study, mixed of qualitative and quantitative used as a method. The trainers were selected by using stratified random sampling and for deans, department heads and TVET experts were included by using accidental sampling technique. Questionnaire, interview, observation and documents were used as data collection instruments. The collected data were analyzed by using frequency and percentage. It was found that: the TVET workshops in both colleges were not equipped with the necessary material resources, facilities were not well equipped based on the standard given, and trainers did not get instructional materials for their teaching activities in the practical activities. Physical facilities of the colleges are not utilized efficiently. Moreover, the maintenance sections were not present in the college to utilize the resource efficiently. Based on the findings it was concluded that: Absence of adequate learning- teaching facilities and materials, absence of maintenance section, absence of efficient utilization of educational resource and lack of adequate awareness on the management of educational resources. Based on the findings and conclusions the following were recommended: 1/awareness should be created concerning the management of educational resources among trainers, department heads, TVET deans and TVET experts by the TVET agency; 2/ Educational materials and facilities need to be ensured by the TVET agency so as to ensure more practical training activities for trainees; 3/ Student-oriented methodology should be more used by the trainers in the practice should be equipped and relevant reference book; 4/ each department should have maintenance section.

CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND OF THE STUDY

The success or the failure of any educational program depends on the quantity and qualities of educational inputs employed during the training process. One of the best inputs for training purpose is curriculum materials (Sadker, 1997; 95).

One of the aims of education is to strengthen individuals' and societies' problem-solving capacity, ability and culture at all levels. Education enables human beings to identify harmful traditions and replace them by useful ones. It helps human being to improve, change, as well as develop and conserve its environment for the purpose of an all-rounded development by diffusing science and technology into the society (TGE, 1994).

In the 1960's the number of Technical and Vocational Schools in Ethiopia were only four in number. As Teshome (2007:196) indicated, the number of TVET institutions has increased from 17 in 1996/97 to 158 in 2003/04 and enrolment increased from 2,924 to 102,649 at national level. In Addis Ababa City Administration (AACA, 2007/8), the number of TVET colleges reached more than 95 and the enrolment figure also reached 86,949 trainees. Similarly 3,035 trainers were hired in private and public colleges (MOE, 2008).

To promote development and change, AACA has embarked on strategizing the most important policy in the sectors including: construction, industry, trade, health, and other services and social development sectors. Among these sectors, the development of Technical and Vocational Education and Training (TVET) has been identified as a crucial prerequisite for economic progress in Addis Ababa TVET Strategy (MOE, 2005).

The people need to have the chance for being exposed to education in general education and practical skills of training in particular. This exposure would help them to ensure their existence and contribution in building their country's economy. In this regard,

vocational education has a significant role. In Nifas- Silk and Akaki-Kality Sub-cities, there are 5 government owned TVET colleges currently participating in hard areas of training. Among these, two of them are Tulu-Dimitu and Nifas-Silk TVET colleges which are providing training for a short period of time, these colleges were selected to see educational resources management practices.

Each training area should be organized based on the standard of the given curriculum. This can be seen in two ways. Firstly, for basic theory, need of appropriate reading materials like modules, reference books, handouts etc. Second, for practical training, needs workshops with appropriate training materials where those trainees exercise and develop what they have learnt from the theory. This helps trainees to utilize the allocated time effectively for practical training purposes.

To the contrary, due to inefficient educational resources management, it is very common to see training processes without adequate facilities like appropriate modules and text materials for theoretical teaching and for practical training materials are not well organized and available in the workshops. Furthermore, some trainers do not update their handouts from year to year and do not give attention to organize training materials based on the curriculum given.

Hence, the above objective realities require research for the efficient and effective supply, organizing training workshops and utilization of educational resources based on the given curriculum.

1.2. STATEMENT OF THE PROBLEM

On the basis of TVET Proclamation NO. 391/2004. Article 16.1 Middle Level Technical and Vocational Education and Training undertaken in training institutions shall comprise 70% practical and 30% theoretical education. But, facilities and equipments of the TVET system have not been accompanied by corresponding provision of up-to-date technical equipments and materials. Inadequacy of instructional equipment and materials is noted in many public colleges (ENQF, 2008:34).

The success of the training process is more dependent up on how the institution and colleges become capable of managing and utilizing their materials and equipment effectively and efficiently to optimal degree. Regarding this point UNESCO (1984:24), notes that even if countries made a great effort to acquire and utilize educational materials and equipment, they are not always utilized to the optimum degree.

The effectiveness of TVET institution regarding quality teaching-learning out comes, depends up on the quality of equipment and material resource as well as their effective utilization.

Despite the proclamation and positive guidelines in relation to educational development, the actual practices experienced by the existing education institutions appear to be quite different. In most cases, in hard training areas in particular, proper attention is not given, workshops are not properly organized and the actual training processes are not generally supported by practical training services. Occupational training is more theoretical with trainer's handouts and with low practical efforts to use standard training modules. This shows that the training approach is not properly organized based on the curriculum and a guideline. This further implies the need for undertaking detailed research for solving the existing educational resource practice problems.

The current problems of TVET colleges concerning hard training areas are being suffered from lack of appropriate training materials, modules, textbooks, equipment for organizing workshop, and with low commitment of the trainers to reduce the focus on the theoretical approaches training culture due to shortage of educational resources.

The practices and problems of resources management in hard training areas in public TVET colleges were not well studied. Hence, the researcher believes that this study fills the existing gap. To this end, the following basic research questions were set.

1. How adequate are the available educational materials in the public TVET colleges in Nifas-silk and Tulu-Dimtu in light of the standard set in the TVET strategy of the country?
2. Are the colleges using physical facilities efficiently?

3. Are there qualified personnel assigned to the maintenance of equipment?

1.3. OBJECTIVES OF THE STUDY

1.3.1. GENERAL OBJECTIVE

The main objective of this study was to identify major problems of educational resources in terms of physical training facilities and instructional materials availability, and to show factors that affect the quality of training in relation to practical training.

1.3.2. SPECIFIC OBJECTIVES

The specific objectives addressed by this study are:

1. To assess the status of training workshops in terms of curriculum standard in the field of hard training areas.
2. To examine the maintenance capacity of the college,
3. To identify the efficient utilization of physical facilities of the college,
4. To analyze whether there is a gap between the given curricula and actual practice of the training in the TVET colleges; and

1.4. SIGNIFICANCE OF THE STUDY

The efficiency of physical facilities and training material resources are among the most important factors of the TVET College to enhance the accomplishment of the desired goals.

The findings of this research would:

1. The study provides information about the current status of physical facility and training materials resources management for the stake holders (department heads, deans, TVET experts, Trainers, and the government);
2. Enable policy makers at all levels to see what is actually going on in the TVET institutions in relation to their expectations and wakes them up for making necessary adjustments; on rules, regulations, policies and proclamations on TVET program;

3. Suggest some relevant solution to the trainer and administration staff how they improve the utilization of their physical facility and training material resources;
4. Serve as a stepping stone for future researchers to conduct further research in the area;

1.5. DELIMITATION OF THE STUDY

For the successful accomplishment of the study in terms of magnitude, area to be covered and the resource required conducting the research, delimitation has to be worth mentioning. The study was delimited to address the major practices and problems of educational resource management, mainly on degree of accessibility of training materials and facilities for practical and theoretical training for utilization. The study was also delimited to Technical and Vocational programs of hard training area. The study would not include the financial, human, and purchasing processes. However, for review of literature purpose and to show the classification of educational resources, such resources are included in review of the related literature.

There are 5 government owned colleges and institutions in Akaki-Kaliti and Nifas Silk Sub-City Administration giving various trainings in hard skills to 4,949 trainees in regular and extension program. Concerning the private ownership, there are 4 privately owned TVET Colleges and Institutions in the sub-cities. Among the government owned institutions, two of them were selected for the study.

1.6. LIMITATION OF THE STUDY

There are important considerations to be made with respect to the limitations on the design of this study. The major limitations are: first, the method of filling out the questioners may not have been performed in a consistent manner where the subjects were able to respond without undue destruction and with concentration. Second, respondents did not provide responses to the open-ended questionnaires. Which forced the researcher to spend more time on data collecting; thirdly, there was financial shortage which forced the

researcher to find financial support. Finally, the above limitations might have influence in the generalizability of the findings of this study.

1.7. OPERATIONAL DEFINITION OF TERMS

Hard area of training: in this research it includes Auto, metal manufacturing and machine, construction, electricity technology, survey and drafting, textile and garment, Animal science and urban agriculture, ICT and Hotel and tourism;

Soft area of training: it refers Accounting, Administration office and secretarial technology (secretary), Marketing, Purchasing, Insurance, and Human Resource Administration (HRA),

Competence: involves applying knowledge, skill and attitude to perform work activities to the standard expected at the work place,

Educational resource: refers in this research, facilities, training standards, materials requirements and supply,

Equipment: refers to non-expandable item which are more or less permanent, have a long life and quality as capital expenses;

Management: is the planned achievement of certain goals by the use of policies, strategies and facts operated in the best possible way;

Educational resource management: refers to facilitating teaching learning process by accessing adequate instructional materials for education and training processes;

Occupational standard: duties and tasks determined to be performed by the employees;

Occupational training standard: means inputs to develop a curriculum based on occupational standard which includes skills and the duration of the training;

Public training institution: means a training institution established with the funds of and operated under the guidance and control of the government.

Technical and Vocational Education and Training: any education and training activity which leads to the acquisition of knowledge, understanding and skills which are relevant to access to the employment and to performance in the work place.

Vocational education and Training (VET): refers for this study purpose business area of training such as accounting, Administration office and secretarial Technology (secretary), human resource administration, marketing, purchasing and insurance.

1.8. ORGANIZATION OF THE STUDY

The study comprises five chapters: the first chapter includes introduction of the study, statement of the problem, significance of the study, delimitation of the study, limitation of the study, definitions of terms. The second chapter deals with review of related literature. The third chapter deals with research design and methodology. The fourth chapter is the heart of the study that comes with data presentation, analysis and interpretations; and the fifth chapter presents the findings, conclusion and recommendations, lastly references and appendices are attached.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

This chapter deals with review of the related literature. Books, Journals, and other related materials that were written on the material and equipment are thoroughly reviewed. The following points were reviewed in detail. The points are, concepts of TVET, access of educational material for practical and theoretical training, Standards of facilities like workshop, simulation room, educational resource, division of educational resource, educational resource management, utilization of physical facilities and methodology required for TVET etc.

1.2. CONCEPTUAL FRAMEWORK OF TECHNICAL

VOCATIONAL EDUCATION AND TRAINING (TVET)

1.2.1. Definition of Technical Vocational Education and Training (TVET)

Vocational education is defined by Babisso (2006:3) stated, as an organized educational program which is directly related to preparation of individuals for paid or un paid employment: or additional preparation for a career requiring other than advanced degree: it is used to develop skill, knowledge, attitudes, work habit and appreciations needed for workers to enter and make progress in employment on a useful and productive basis.

According to Gasskov (2000:12), Technical and vocational education and training is a type of education in which individuals acquire knowledge and different type of skills which help to satisfy intermediate level of society's needs of manpower and creating employment opportunities to the citizens. According to him, the following points are stated as the function of VET:

- The VET system should deliver both foundation and specialist skills to private individuals, enabling them to find employment or launch their own business.
- Skill training is an instrument for structural change
- It helps to equalize the opportunities that people have to earn their living through the acquisition of skill

- Education and training can be viewed as tool for achieving national economic and social objectives, such as encouraging regional development and supporting priority industrial sector

In principle, there are four main areas in which programs for Vocational education are organized into agricultural education, Trade and industrial education, Home economics education, and business education (Babisso, 2006:4).

Career education occurs informally in elementary school, with individual lesson on different occasions (Sadker, 1997:215) at secondary level; the vocational education curriculum is clearly targeted to specific type of work, course title such as Human resource administration (HRA). Accounting, Hotel and tourism and secretary, accounting, and purchasing, construction, Auto, manufacturing, electro technology and urban development etc.

Hence, TVET training are divided into two major classification ,Technical Education and Training (TET) which are commonly called hard training like wood work, metal work, electricity etc., and Vocational Education and Training (VET) which commonly soft training . One of the training divisions in Vocational Education and Training is business education and training mentioned above.

2.1.2 Major Pillars for Learning in TVET

Up on the concept of education and training, Delors et al. (1996:153) found learning as “the treasure within”. These pillars of Education and training include; learning to know, learning to do, learning to live together and learning to be.

Delor’s ideas have been influential on the development of the concept of life skills. Life skill encompasses social attitudes, basic knowledge and practical skills. Skills and knowledge are foundations for youngsters to be economically productive when they enter the world of work.

Based on the above concept, it can be summarized that vocational training by practical training the exercise increase the competence of trainees and the labor market would also be satisfied by the skill of the trainee.

2.1.3 Classification of Training Modes

Gasskove (2000:215) has identified five major training models so far. These major modes include: enterprise-based training (the Japanese system), training center-based instruction, the dual training (the German system), vocational school-based learning (the French system), and general secondary schools and comprehensive high schools (the American system).

In Ethiopia, training mode is a separate training focusing on technical schools, colleges and universities. TVET programs have been organized for school-based or the enterprise-based which includes the TVET provision schemes on comprehensive schools, polytechnic (general schools), special technical and vocational schools, and technical colleges. On the other hand, such TVET programs are organized in company-based post-employment focusing on-the-job or off-the-job training schemes.

Therefore, in Ethiopian education and training as TVET, such as technical and vocational training, on-the-job training or apprenticeship training are delivered in formal and non-formal way.

In so whatever, in any type of training mode of classification the quality of training is determined by the utilization of identical equipment and materials that exist in the real life work through the process of training.

2.1.4 Indicators of Quality in TVET System

There is no general agreement among educators on the issue of the best TVET quality indicators to prepare skill crafts people and technicians. On the other hand, most educators agree on some common principles which guide the designing of quality TVET programs. Among these principles, the five most important and influential ones are those related to (ENQF, 2008): (a) quality of curricula, (b) entry requirements of trainees, (c)

commitment of trainers, (d) the access and rate of consumption of educational resources and (e) the application of different types of methodology during the training process.

Therefore, to deliver the quality and relevance education and training in the TVET system the factors mentioned above influence the institution positively or negatively.

2.1.5 Rules and Regulations of TVET

The government issues policy, strategy and regulations so as to improve quality of education and training for giving more attentions pertinent to educational resource in the TVET system some of them are:

The new education and training policy (MOE, 1994), article number 3.7.1, states that, in order to promote the quality, relevance and expansion of education due attention should be given to the supply, distribution and utilization of educational materials, educational technology and facilities.

In the TVET strategy (MOE,2003) it has also been stated that, the premises and principles formulated in the capacity building strategy and other relevant policy paper have further been elaborated with the aim of improving the resource based for TVET in Ethiopia through cost saving, efficiency increase and mobilization of additional resources.

Moreover, the curriculum guide (MOE, 2007) has also disclosed that, necessary training, learning-teaching materials, tools and equipment, and facilities with standard practices facilities are required for quality training and must be accessible to all colleges.

From the document statements point of view implied so far, necessary rules and regulations have been issued to implement TVET system with its own standard implying no problems concerning the various rules and regulations.

Therefore, statements of guidelines, policy, strategy and rules are issued and released to access and utilize education resources based on TVET training standard such as training materials, facilities equipment etc.

2.1.6 The Major Instructional Techniques

The instructional designer should be able to examine the media and techniques available and should choose the method most appropriate for the behavior being considered. This procedure should be appropriate for all the various types of objectives, from motor-skill specification in pilot training to style of managerial behavior in various organizations. For vocational education and training the following techniques are more appropriate as Ornstein (1995: 161) has stated:

1. Field visit study tours: trainees are given the opportunity to observe and interact with the problem being solved or skills being learnt;
2. Exercise: trainers give for the trainee's assignments to complete which are related to the topic of the training activity ;
3. Role play; trainees act out a real life situation in an instructional setting;
4. Lecture/Instructor presentation: the trainer orally presents new information to trainees using a variety of training techniques and communication instruments;
5. Demonstration: showing the trainees the correct stapes for completing a task, or showing an example of a correctly completed task, various types of communication tools can to be used during the demonstration;
6. Reading; the trainers provide for the trainees written materials to be read that present new information;
7. Case study: trainers provide the trainees information about the situation and direct them to solve a problem concerning the situation;
8. Group discussion: trainer leads the group of trainees in discussing a topic. Group size may vary, but the discussion will be less effective if the group is too few or large;

In the curriculum guides of both (MOE, 2003 and 2007) the instructional methods/techniques that help the learning-teaching to become effective, have been included in the title of learning methods. These include, lecture, project, discussion, practical exercise, demonstration, visits to work places, role play and internship.

Various factors can influence the selection of instructional methodology. Yet the most important factors that must be taken in to consideration while selecting methods of TVET training are five. These are:

1. The content,
2. The training objective,
3. Trainers' competence,
4. Trainers' size and experience, and
5. The practical requirement

Therefore, to select the best instructional techniques accessing the above variety of basic factors and their appropriate use should also be deeply considered.

2.2 SOURCES OF EDUCATIONAL RESOURCES

Technical and vocational education and training will be carried out as per the curriculum developed based on the Ethiopian occupational standard. The curriculum provides details on the expected outcome, program content, learning strategy, evaluation and assessment as well as on the resource conditions of the programmed stated in model curriculum guide.

TVET strategy (MOE, 2005) has given the mandate for the Addis Ababa TVET agency to coordinate the transformation of occupational standards into curricula in modular approach and will facilitate the development of curricula in cooperation with concerned and relevant stakeholders.

To provide educational materials for TVET level (MOE, 2007) states that, trainers or teachers are expected to select, prepare and organize training materials as suggested in respective curriculum, guides and on their prevailing conditions of the colleges.

Hence, the Federal TVET agency is an authorized body of the government to formulate the duration of the training, to provide necessary educational facilities and materials, and to supervise the training process with the given standard.

In addition, the management of the colleges should have the awareness of educational materials impact on quality of education, and they have to facilitate resources for modules preparations by the trainers.

2.2.1 Classification of Educational Resources

A resource generally refers to anything in the two colleges to facilitate the process of learning and teaching in motion. Resources that are deliberately organized from which the learners draw and/or acquire information, knowledge and skills; (Gizaw, 1989:56).

The main types of educational resources include:

1. Human resources
2. Material resources
3. Financial resources
4. Physical resources
5. Time resources
6. Informational resources

Prior to managing and evaluating performance, the college deans must assure that the colleges are being supplied with the above six types of resources adequately utilized in due course of time. Nevertheless, more often than not colleges seem to have been inadequately supplied with the necessary materials such as reference books, laboratory books, equipment, etc.

Yet, colleges are said to be provided with a list of standardized items of materials and other equipment which in most cases are not accessible or available for use. This very fact shows that materials and equipment largely affect the learning-teaching activities in general and that of the college administration in particular.

The college deans have been facing difficulties in collecting and in distributing the available college resources to the trainers and the trainees as needed. The shortage of instructional resources, no doubt, will enable the college personnel to be aware of the scarcity and to properly handle, administer and wisely use the available resources in

carrying out the learning-teaching activities as effectively as possible. The major types of resources which have been mentioned above will be discussed as follows.

2.2.1.1 Human Resources

Human Resources refer to people directly or indirectly involved in carrying out activities related to learning and teaching. In an educational organization, human resources include the workers and the students (that is in the two colleges the trainers and trainee). The trainers here consist of the teaching and non-teaching staff. The non-teaching or supporting staffs in an educational organization are those employees that provide the support services, who organize and conduct instructions as well as learners who operate in the process, (Gizaw, 1989:241). These include:

- Teaching staff,
- Professionals like psychologists, librarians, health workers, registrars,
- Professional administrators
- Support personnel (clerks, store keepers, catering personnel, drivers, gardeners, guards, learners, accountants, secretaries, foremen, janitors, cooks, etc),
- Learners for whom the whole operation's focuses on,
- Parents, particularly, providing service that facilitates the teaching-learning process and the society in addition to contributions which help in creating an environment conducive for teaching-learning expected to consume the end product of education.

People are the prime factors in maintaining the teaching-learning activities in the college system. Consequently, they need proper management. For this fact, administrators should involve their human skills to work with and through other people. Administrators, be educational or others, fulfill their duties and responsibilities through working with others. To this effect, they should create a conducive environment in order to provoke the interests and increase the working capacity of the workers to accomplish the educational objectives.

2.2.1.2 Material Resources

These include those materials which are so designed, modified, and prepared to assist teaching-learning activities. They can be produced according to specific age and level of instructions. To mention some, textbooks, reference books, teaching guides, manual programmed instructions, audio-visual aids, television, radio, films, projects etc. Because resources are scarce, they need proper management within and outside classroom situation. Costly resources need to be managed and used properly.

Though textbooks and other teaching materials have truly remained the most valuable to students and teachers, they are the most costly items required for a minimum standard of education. They are also critically short in supply in the colleges of the poorer developing countries.

For material resources are costly, they should be distributed and controlled effectively to ensure their proper management and proper use. In relation to this, the college deans together with their follow administrators should understand that scarce instructional material resources must be used and administrated according to the set rules and regulations by the members of the college community.

Moreover, college deans should open their doors for information pertaining to resources acquisition, allocation, distribution and application to the objective it is meant to serve. The available information on resources will help college deans to set a certain controlling mechanism to be supplied by teaching and non-teaching personnel.

1. Training Materials

As far as the learning-teaching processed of vocational education and training are concerned, there are consumable and non-consumable materials that help the learner to exercise more in the training facility center in every duty and task.

For this reason, training materials (tools, supplies, and equipment) are purchased or made based on the given curriculum, to facilitate the practical training condition, to improve preferable methodology and to enhance quality of TVET training system.

2. Curriculum and Modules

The main objective of the curriculum is to guide the implementers on how to train students who have completed middle level technicians. The curriculum of the middle level TVET programs provide different packages of courses that can be broadly classified, Babisso (2006:190) has stated that, in the three categories: main courses, supportive courses and common courses. The package of the main courses provides a number of independently prepared modules of employable skills which have been designed to train students so as to perform a certain duty under the prevailing condition and established standard.

The success or failure of any educational program depends on the quantity and quality of educational inputs employed during the training process.

To get expected outcome with acceptable skill, knowledge, and attitude on the behavior of the trainees, all packages pertinent to curriculum elements prepared and accessed to TVET provider's curriculum guide alone does not fill the gap observed for the availability of reference materials and the knowledge and attitudes of the trainers vary from institution to institution.

Then, training materials which have been recommended by the curriculum guide should prepared adequately and should be available in the library, in the training facility center, model office and if necessary in the hands of the trainees so as to achieve the desired goal of education and training in the TVET colleges.

3. Reference and Reading Materials

Reference and reading materials are materials other than modules and text materials. Learners are expected to develop different basic skills, like reading, writing, using reference materials and job seeking in their free time in the library.

Consequently, libraries of the TVET colleges need to be equipped with: references, books hand-outs, manuals, magazines, newspaper and other reading materials based on the curriculum given.

2.2.1.3 Financial Resources

It is one of the resources needed by TVET college administration. It is an essential tool used to purchase goal and services required to effect to teaching and learning operation. Its allocation and acquisition could be many and varied. Williams (1971:38) suggested the following ways for the acquisition of financial resources:

- Amount allotment for education of the total budget and domestic product (GDP)
- Public (community) donation for education of youth private foundation, and
- Informational organization aids

Finance resource has to be budgeted into recurrent and capital budget. For the source of equalization in narrow and scarce, it requires careful distribution to job areas and careful management, particularly in developing countries including Ethiopia. Because such countries cannot all by themselves provide the amount of money (finance) for attraction.

In most developed countries, there is a shortage of financial resources in spite of the acknowledged importance and priority of education. Therefore, the financial resources need careful management if education is to be run smoothly.

2.2.1.4 Physical Resources

A college plant and its surrounding if properly organized and used to effect good teaching and learning activities can be classified as physical resources of the college. The physical facilitates (resources) that enhance the teaching and learning activities according to Gizaw (1989:78):

- i. The college plant comprising
 - ❖ The classroom,
 - ❖ Laboratories,
 - ❖ Libraries,
 - ❖ Offices, auditorium, workshop,
 - ❖ Recreational and sport fields, etc.

- ii. The college physical environment that includes the rivers, hills, plains, valleys, rocks, roads, buildings etc.

Being used properly, such facilities will provide teachers with the necessary information by facilitating good teaching and learning interaction. Consequently, the physical facilities are often said to act as mediators for learning-teaching interactions.

2.2.1.5 Time Resources

It is obvious that organizational activities require time resources. This refers to the appropriate time used to carry out performances. Time resources enable the college deans to set sequential instructional arrangement, for instance period allotment. Time can be managed through periods while planning ahead will make the biggest contribution to personal time control. Several techniques may also comprise more work in to or attain greater results from a shorter period of time. These techniques fall into three general classifications:

- i. Having others do more for you
- ii. Making a conscious decision to do only those things that are truly important, and
- iii. Quickly doing things yourself

Time as educational resource, one of the most fundamental and an indispensable resource on the earth is time. Time is important both at the individual and organizational level as nobody can do without it. Time is unique because, it is scarce, irreplaceable resource and commodity which can be neither purchased nor sold.

To provide standard and quality of training as intended, the practical and theoretical time given by the curriculum have been seen as educational resource and have been treated separately. Time is one of the educational resources that need to be managed like other material resource. To manage the time, total available time and its classification in the instructional process and the number of the training hours should be known.

Duration of training in TVET proclamation No. 391/2004, Art. 11 states that, the number of hours for and the length of duration of the training shall be determined by the states based on the level of skill required.

On the same document Article No. 15 it has been stated that, the number of hours and duration of training for every area of training shall be determined by the office of the council or agency. The main responsibility of the TVET Agency (ENQF, 2008) as it has been stated is that, to determine the duration of training programs, prepare model curricula and issue directive regarding TVET implementation.

As stated in the curriculum guide of TVET (MOE,2007), the program will have duration of 2740 hours at an average for main and supportive modules excluding hours for common courses which are used for both theoretical teaching and practical exercises to complete diploma program.

To improve the quality of education and training in the TVET system requires utilizing practical and theoretical hours should be utilized efficiently by considering time as educational and scarce resource.

2.2.1.6 Informational Resources

Information management involves discovering and using data and knowledge within the organization, finding and exploiting external sources of information, and developing an efficient system for making only the useful information available to the people who need it, when they need it.

Korda (1975:98) stated that the information always comes from below, and the more important it is, the farther down one has to go to collect it. The administrator can communicate from his/her level in the hierarchy downward to subordinates' information on decisions that have been made, instructions on operating procedures, announcements, interpretation of events, approval or disapproval of requests, and similar matters. However, no real information relating to the evaluation of an existing policy program or the institution of new policies originates in the superintendent's office or the dean's office.

The information originates at the operating level, and the most important operating level is the classroom.

Knowing how information is used in making short-and-long-range decisions is an important first step in building a system to provide the needed data. A systematic examination of the sources of information internally and externally will then uncover a wealth of data to apply to the information needs. An important consideration in dealing with information sources is to avoid having critical data become irretrievable lost, through never having been recorded in the first place.

2.3 Factors Affecting Educational Resource Management in TVET Colleges/Institutions

Man is living under the dynamic environment. No one can be out of the influence of the changing environment. Therefore, organizations as well as individuals need to adjust themselves with the changing environment of both to the external and internal. When we say working environment it, can be seen from different angles: physical work environment (like light, heating, seating arrangements, ventilation, noise, etc.), mental work environment and the social work environment.

The worker and the working environment in which the job/work can be done are the most crucial factors for the qualities and quantities of the product or services based on the nature of work. The quality of the work life and the worker itself is not out of the influence of the changing environment. According to Gupta (2006:107), “the efficiency of employees depends, to a great extent, on the environment in which they work. Work environment consists of all factors which act and react on the body and mind of an employee.”

Therefore, so as to plan the work, the working environment and the human factor should be carefully considered. Faraday (1977:267) suggested the proper adjustment to be considered in designing working environment to facilitating the working conditions. These are: sight and lighting, color, ventilation and heating, noise, seating arrangements, amenities etc.

As identified by Bush (1986:123), there are three major environmental impacts/pressures concerning educational management.

1. The management of schools and colleges is dominated by resources issues. Heads and principals spend much of their time on the organization and distribution of resources, often just to meet existing commitments.
2. The increasingly vulnerability of schools and colleges to environmental pressures may lead to decision-making being drawn to the center of many institutions. Trainers who have responsibility for relationship with the major external bodies and groups may be able to influence decisions by virtue of their control over various communication networks.
3. The continuing uncertainty over levels of funding and the supply of clients lead to an emphasis on decision-making for the short term.

Moreover, absence of performance standards and quality assurance system are also other impacts on management of educational institutions.

2.4 THE MAJOR FRAMEWORKS FOR EDUCATIONAL RESOURCE DECISION-MAKING

Organizational culture defines the framework in which resource decisions are made. The culture is reflected in the way that resource decision-making frameworks operate. Two broad decision-making frameworks or approaches, into which differing budgetary processes can be located, will be examined in this section. These are the rational and political approaches.

2.4.1. The Rational Framework

Rational approaches are based on the hypothesis that organizations directly relate resource expenditure to the achievement of organizational objectives. They assume that organizations have clear objectives and that resource allocation is organized in a systematic way to facilitate the achievement of those objectives. This means that, after assessing the alternative expenditure options, the finance spent and the resources acquired

should maximize those outputs which contribute to fulfilling organizational objectives. It is possible to isolate three key elements which underpin a rational budgetary approach.

- i. Output budgeting
- ii. Zero-based resource decisions
- iii. Multi-year-time-horizon

2.4.2. The Political Framework

However logical the key elements in the rational framework discussed above appear it is nevertheless true that political budgetary approaches show a remarkable capacity to persist. There are three key factors that influence the persistence of traditional budgeting processes. These can be observed as: instrumentalism, micro-political forces and the organizational process approach.

2.5 Effective Management of Educational Resources

Acquisition of resources unless supported by some procedures will create ineffective utilization of TVET college resources. To this effect, college deans together with their teaching and non-teaching personnel create a guideline to serve, as a mechanism is the effective utilization of resources.

Training materials such as textbooks, reference books, maps, globs, laboratory equipment and other materials are requested by the college deans and procured by the book stores for allocation. To request and procure the materials ahead of time determines the awareness and the efficiency of the college deans.

The procurement of training materials largely depends upon ahead of time demand of the college deans. That is to say, the determination is accompanied by mechanisms that can be applied for proper usage. For instance, rules and regulations of handling and managing resources would determine the store house where they are carefully placed and they are by ascertaining the responsibilities of college resources. All these precautions have to be taken ahead of time to ensure the effective teaching-learning by effective usage of college resources.

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 nearby areas. It includes both resources allocated to users are not to be kept in the store, but are to be handed out for the pupils/trainees and the teachers, to effect good teaching and learning interaction. In allocating educational resources at TVET college level, college deans need to formulate allocation mechanism. If books and other instructional materials are allocated to teachers properly, it will help the college offices keep a complete record of each teacher's account.

Once distributed students too, should be accountable for the loose and mishandling of textbooks and other instructional resources. This can be realized by making each student sign against the books received. It is also and/or equally important to inform parents and guardians of students through a duplicate copy of the signed papers. These signed papers or document show 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 college and parents will increase the materials' span of life.

2.6 Maintenance of Training Materials and Equipment

Training machineries and equipments of TVET College served for many people at large throughout the year by the trainees. Due to this and other reasons training materials need continuous maintenance and follow up. Ray, et. al (2001:238) stress the point that maintenance enables the provision of services without stoppage and in addition Elmo (1963:13) define maintenance as continuous process of repair and replacement of pieces of property whether grounds, buildings and 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 Harris (1985:209) maintenance function is seen as a layman's job and managers usually undermine its importance. It helps in protecting further damage of resource and lays a good ground for reuse, which otherwise, 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 institution facility operates and maintenance exists to support the primary purpose to bring 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)

According to MOE (2005:7) maintenance can be defined as those activities required keeping a facility as built condition, so that it continues to have its original productive capacity. And the responsibility of maintenance function is to ensure that production facility and equipment is available for productive use at minimum cost for the scheduled hours, operating at agreed standards with minimum waste. Maintenance is not only repairing activity of a facility, it is a total approach aimed at reducing down time. Repair is step in this total approach. The objective is systematic and scientific up keep of equipment for prolonging its life, assuring instant operational readiness and optional availability for production at all times.

The manual of MOE (2005:8) indicates major school facilities and a maintenance activities includes building (class room, workshops, canteens toilets, showers, asphalts, playing fields etc...), machineries and equipment (machine tools which include metal cutting, metal work and wood working motor vehicles, welding machines, grinding machines, generators, compressors pumps handling equipment, foundry equipment, so on)

These educational materials face (suffer from) the distinct type of failures. Excluding damage caused by careless handling, storage, improper utilization and operation condition.

These are:

1. Early failures, due to poor design ,material and work shop

2. Random failures, which occurs an expected due to sudden stress accumulation because of over load
3. Ware house failures, which are caused by ageing

According to Melaku (1992; 24) the effectiveness of school maintenance program is largely a function of three factors

1. The availability and quality of operation and maintenance personnel
2. The quality of the school facilities, equipment and site
3. The availability of equipment and resource

These educational materials to use efficiently and effectively, the maintenance program are necessary to maintain the damage college facilities, equipment and tools available in the TVET colleges.

2.6.1 Types of Maintenance

Harris (1985:213) categorized maintenance function in to 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 material is out of use.
2. System maintenance: Maintenance carried out in there 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, finical labor in activity and production down time.

3. Set up maintenance: In this case there are some organizations that have a separate department or section which is responsible for repair and replacement. The set up person immediately goes in to 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. Crises maintenance: as name indicates, such maintenance takes place after the equipments or material has been damaged.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. RESEARCH METHODOLOGY

The descriptive survey design becomes useful when the purpose of the research is to picture the current situations, (Ayalew, 1991:65). It also allows collection of the data using tools and documentary analysis describes, and interprets what is in detail. It is concerned with conditions or relationships that exist, opinions that are hold, processes giving on, effects evident, or trends that are developing. It is basically concerned with the present although it often considers past events and influences being related to current conditions primarily; descriptive survey design helps to obtain population and also enables the researcher get access to multiple methods of gathering information.

According to Creswell (2003:78), descriptive design is appropriate for collecting adequate information on attitudes, opinions and views of response. Besides, it focuses on investigating issues, practices and problems of the target colleges.

According to Creswell (2003), a mixed method is useful to capture the best of both quantitative and qualitative methods. Therefore, to assess the existing problems and practices of educational resource management in the TVET colleges of Nifas-Silk and Tulu-Dimtu, mixed methods of analysis were employed. Quantitative method was used as a main means of analyzing the collected data through questionnaires. In addition, qualitative method was used for supplementing the data collected through questionnaires

3.2. SOURCE OF DATA

The study was designed to assess the practices and problem concern with Educational Resource Management in TVET Colleges of Nefas-Silk and Tulu-Dimitu in Addis Ababa, it also dealt with commitment of the efficient utilization of physical facility and training material management.

The major primary sources of data were trainers, department heads, deans of TVET Colleges and TVET experts in each sub-city. These sources were used as sources of data

for the position they held provide them the opportunity to contribute to the understanding of problems related to educational resource management. Trainers were chosen because they were at the forefront of TVET program implementation. In secondary data, relevant books and journals which indicate the efficient utilization of physical facility and training material management were consulted to support the findings of the study.

3.3. SIZE OF THE SAMPLE

As to sample size, (Best, 2003:19) states that 30 or more are to be considered large and those with fewer than 30 small. Then, the sampling unit included 28 trainers from Tulu-Dimtu and the rest 42 trainers from Nifas-Silk TVET colleges, total of 70 trainers participated in providing information to the questions in the questionnaires. There are also 2 deans and 6 department heads from both TVET colleges and 2 TVET experts from both sub-cities, 80 total sample population were involved

There are 5 TVET colleges in Akaki-Kaliti and Nifas-Silk Sub-Cities Administration affording hard training skills. In order to make the sample reasonable and representative, 30% (2) of TVET colleges were selected by using purposive sampling technique. The reason was that to see the practice of educational resource management in the two recent TVET Colleges.

The researcher took 40% of trainers from each TVET Colleges so as to make the study more valid and reliable. The number of trainer's population in hard skills such as Auto, Metal manufacturing and machine, survey and drafting, Electricity Technology, furniture making, textile and garment, animal science and urban agriculture, ICT and Hotel and Tourisms study areas are 175.

Out of these trainers 62 (35.3%) are female 113 (64.7%) are male. From each training occupation 40% of trainers in each college totally 70 trainers were selected by using stratified sample technique. Stratification is used when the population reflects an imbalance on a characteristic of a sample. The strata (Sub – group) taken from the TVET colleges were selected with an internal of ten strata the 175 population of trainers who are

providing hard skills. Thus, for the purpose of equal proportion 40% of trainers were selected from each TVET college to be included in the research.

Stratified random sampling and also called quota or proportional random sampling involves dividing the population into homogenous sub groups and then taking simple random in each group to minimize risk of biases. In the study therefore, Proportional sampling technique was applied so as to give equal chance to all occupational training areas and finally simple random sampling technique is used to select trainers in a section. The procedure for selecting a stratified random sample consists of (a) dividing the population by the stratum (b) sampling within each group in the stratum so that the individuals selected is proportional to their representation in the total population (Creswell, 2012). It insures that the stratum desired would be presented in the sample in proportion to that existence in the population. And, it also guarantees that the population would be included in the sample.

This is believed to be representative and adequate to secure information to its relative advantage, and helps to collect relevant and detailed information from the respondents. These selected respondents are assumed to have the experiences which they could share to the body, as a result of their position and involvement in leading and facilitating the programs of the colleges.

Regarding official respondents, there are six owners how act as a dean position in both college, twenty department heads in both college and six TVET experts at both sub cities. Then, two deans, six department heads and two sub city TVET experts were selected by using accidental sampling method. So that every target group of population in the study area has proportional to the total population to being selected to have valid sampling techniques.

Table 3.1: Sample Population and Sample Size

No	Respondents	Training areas	TVET Colleges				Total Sample size
			Tulu-Dimtu		Nefas Silk		
			Population size	Sample Size %	Population size	Sample Size %	
1	Trainers	Construction	9	4	12	5	9
		Auto	7	3	9	4	7
		Metal Manufacturing and machine	7	3	12	5	8
		Electricity Technology	8	3	12	5	8
		Survey and drafting	8	3	15	6	9
		Furniture making	6	2	6	2	4
		Textile and garment	11	4	8	3	7
		Animal science and urban agriculture	4	2	10	4	6
		ICT	5	2	8	3	5
		Hotel and tourism	6	2	12	5	7
3	Deans		3	1	3	1	2
4	Department heads		10	3	10	3	6
5	Experts from sub city		3	1	3	1	2
	Total						80

As shown in table 3.1 there are 28 trainers in Tulu-Dimtu 42 trainers in Nefas- Silk, and a total of 70 trainers participated in providing information to the questions in the questionnaires. There are also two TVET experts from both sub-city, six department heads and two deans from both TVET colleges also took part in the interview.

3.4. PILOT STUDY

The purpose of the pilot is assess the relevance of the instruments designed to collect data for the study. The aim is to find out ambiguities, omissions and misunderstandings of each item. Using the relevant comments and suggestions from the instrument, the pilot study was conducted in Gena technical and vocational college which was not included in the main study. Two department heads, five trainers, one dean and one TVET experts participated in the pilot study. Questions were distributed to all above mentioned parties. After the pilot study was conducted both reliability and validity were established.

In order to improve the reliability, Cronbach alpha test will used and if result of this pilot test is greater than the Cronbach alpha test 0.7 (Gerge and Mallery, 2003). This

indicated that questioners were reliable. So, those to all the items of the instruments were made as possible to the study problem. Based on the instrument was checked as follows:

- The items were inspected
- The content validity of the instrument, was checked
- The order of the question omissions, vague items and terminologies were improved and made the-items measure what they are supposed to measure.

3.5. DATA GATHERING INSTRUMENTS

The researcher generally employed four types of data gathering tools. These are questionnaires, interviews, document analysis and observation.

A questionnaire is a data collection tool, which enables the researcher to get wider information from sample population and make possible an economy of time and expense and provides a high proportion of usable response (Best and kahan, 2003) .It also helps to obtain un biased factual data, opinion and attitudes in structural framework from respondents, and it is used for appropriateness to its natural characteristics that allow informants express their ideas and opinions freely; similarly, questionnaire were used because it is preferable data collecting tool, which enables to effectively collect in a planned and manageable ways from large population, participants can respond to questions with assurance that their response will be anonymous, and so they may be more truthful than they would be in a personal interview, particularly when they are talking about sensitive or controversial (Leedy, 1980).

The questionnaires were designed in order to be answered by the trainers of the TVET colleges and it contains mainly closed-ended and few Open-ended items, Depending on the type of questions items, choices and rating scales were used in the questionnaires.

Regarding an interview, as Kvale (1996) remakes, as an interview, an interchange of view between two or more people on a topic of mutual interest, sees the centrality of human interaction for knowledge production, and emphasizes the social situatedness of research data.

The interview was also a flexible tool for data collection, enabling multi-sensory channels to be used: verbal, non – verbal, Spoken and heard.

Interview is used as instrument to collect useful information from department heads, sub city TVET experts and from both TVET college deans, especially on issues relating to availability of guidelines for the management of educational resource.

Moreover, to get more information about the current status of the colleges observation was also used. In addition, the government of Ethiopia issued variety of policies, strategies, proclamations, rules, and regulations to promote quality of education and training. Therefore, official documents of TVET colleges were also reviewed and included to strengthen the weight of the research.

3.6. Data Collection Procedure

Before dispatching the questioners for gathering information for the actual investigation, it was piloted at Gena TVET College to ensure the reliability of the instrument.

The first step in collecting the necessary data was making face to face contact with college deans, department heads and with sub-city TVET experts. For the sake of introducing the purpose of the investigation, facilitating conditions and environment's for the data collection.

Next, the student researcher with the deans of the respondent's colleges arranged the time and place to get the respondents and name lists of training staff, the interview schedule and the distribution of questioner papers carried out by the student researcher with the help of TVET coordinators.

Finally, the researcher collected questioner papers. Out of 70 questioner papers distributed to both colleges, 63 questioner papers were filled and returned from both TVET colleges and used for the data analyzed.

3.7. ANALYSES OF DATA

Regarding data analysis, the quantitative method used for the responses to close-ended questions in the questionnaires and qualitative method was used for the responses to open – ended questions in the questionnaires and the interview part.

The responses to questionnaires, observations, interviews and the document analysis were collected and edited systematically according to the similarities of issues that were need to be raised in data tools. The analysis and interpretation of the data collected from the questionnaires were carried out using descriptive statistics that is percentage and frequency. They were employed because of the nature and size of the data (Yakunnoamlak, 2000).

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

The main objective of this study was to identify the practice and problems of educational resource management and crucial practices to be taken as a lesson and to extend the best practices to other TVET institutions in Ethiopia. As a result, it would be evident to point the major problems of educational resources management focusing on occupational training standards including facilities for various trainings, learning-teaching materials, efficient utilization of training materials, degree of maintaining training materials, assuring the conditions of training workshops in terms of the curriculum standard in hard training skills and finally, to show the gap between the given curricula and actual practices of the trainings to the concerned partners of the learning-teaching processes.

The study was delimited to hard training area because there are more trainees in the specific areas of training in Tulu-Dimtu and Nefas-Silk TVET colleges. In these colleges, currently in the hard training areas includes, Hotel and Tourism, Construction, metal manufacturing and Machine, Auto, Electricity Technology, Animal science and urban agriculture, survey and drafting ,Furniture making, textile and garment , and ICT. In the ten occupational area of training with enrollment rate of 3,262 male and 1,687 female, with a total of 4,949 trainees.

Questionnaire distribution and return

From the population of trainers, 70 questionnaires were distributed and 65 (92.38%) were returned and 2 (3.2%) discarded for inappropriate filling of the questionnaires. A total of 63 (90%) trainers' responses were used for data analyses. Therefore, because 90% of trainers were returned the questionnaire, it is valid to proceed the research work.

The interview with Tulu-Dimtu and Nifas-Silk TVET Colleges' deans, department head and with Nifas-Silk and Akaki-Kaliti sub-city TVET experts were successfully completed. Observation was employed by using the structured checklist prepared based on occupational training Standards.

To make the observation successful; workshops, classrooms, library documentation and internet access were observed.

4.1. CHARACTERISTICS OF THE RESPONDENTS

Characteristics of the respondents were analyzed in table 4.1 based on the returned questioners and interviews as follow.

Table 4.1 Biographical Information of the Respondents

No	Items	Department head		Trainers		Deans		Experts	
		No	%	No	%	No	%	No	%
1	Sex								
	Female	1	17	13	20.6	--	-	-	-
	Male	5	83	40	79.4	2	100	2	100
	Total	6	100	63	100	2	100	2	100
2	Qualification								
	Second degree /MA	2	33.3	7	11.1	-	-	-	-
	Degree(Bsc/BA/Bed)	4	76.7	49	77.8	2	100	2	100
	Diploma	-	-	7	11.1	--	-	-	-
	Certificate	-	-	--	-	-	-	-	-
	Total	6	100	63	100	2	100	2	100
3	Years of service								
	5 and blow years	1	16.6	38	60.3	-	-	-	-
	6-10 years	3	50	17	27	-	-		
	11-15 years	2	33.3	8	12.7	2	100	1	50
	16 and above years	-	-	-	-	-	-	1	50
	Total	6	100	63	100	2	100	2	100

Out of the 63 trainers, 6 department heads, two deans and two sub city TVET experts, the sex composition of the respondents revealed that 40 (79.4%) of trainers, 5 (83%) of department heads, 2 (100%) of the TVET deans and 2 (100 %) of the TVET experts were male, while concerning the female respondents, 1 (17%) of the department heads and 13 (20.6%) trainers were female. Therefore, the training areas has being dominated by male trainers (79.4%) and (83%) male department heads, so that both TVET College might not have worked hard to bring female as a trainer and department heads.

As a result, female trainers could not practice on leadership and they were kept away from deciding crucial issues including on their rights. On the other hand, most trainers informed me that females walk away from taking responsibilities on the hard training areas that might have resulted either from lack of interest or fear.

Concerning the qualification of the respondents, seven of the trainers and 2 of the department heads were M.A holders. While the BA holders were 49 trainers, 2 deans, 4 department heads and 2 TVET experts. The data also indicated that 7 trainers were diploma holders. The TVET proclamation states that trainers in TVET colleges should have first degree and above. Based on the data, the majority of trainers fulfilled the policy requirement.

As far as the service year is concerned, the data revealed that 38 (60.3%) of trainers and 1 (16.6%) of department heads served for 5 and below years. While 17 (27%) of the TVET trainers and 3 (50%) of department heads served for 6-10 years. For the service years of 11-15, 8 (12.7%) of trainers, 2 (33.3%) of department heads two of deans and one of the experts were included. The data also depicted that one of the experts have served for 16 years and above. All these crude facts indicated that the respondents' accumulated ideas and knowledge could contribute to share important ideas in assessing and managing educational resources in the colleges provided that the college management give the trainers the opportunity to share their experiences.

4.2. Analysis And Interpretation Of Data

Data collected by using instrument like questionnaire, observation, interview and documents were analyzed and interpreted as follows:

Table 4.2: Responses to Learning-Teaching Facilities, Materials and the Access to Educational Resources

No	Replies	Trainers	
		No	%
2.1	Learning facilities such as model rooms, projects, workshops, transparencies and white board are well equipped based on the given standard.		
	Strongly disagree	5	7.9
	Disagree	38	60.3
	Undecided	7	11.1
	Agree	13	20.6
	Strongly agree	-	-
	Total	63	100
2.2	Trainers get instructional materials for every task for practical training continuously.		
	Strongly disagree	-	-
	Disagree	37	58.7
	Undecided	4	6.3
	Agree	22	34.9
	Strongly agree	-	-
	Total	63	100
2.3	Training manuals are given for the trainees helping to exercise more in the practical facility centers.		
	Strongly disagree	-	-
	Disagree	35	55.5
	Undecided	8	12.7
	Agree	20	31.7
	Strongly agree	-	-
	Total	63	100

It was stated in the curriculum of (MOE, 2003) and (MOE, 2007) that due emphasis should be given for learning-teaching facilities before any training is carried out. The MOE (2004) has also disclosed that the quality of any TVET program is largely dependent upon the organization's degree of training facility. For relevant and quality of education, TVET colleges shall be featured by the presence of well-planned, adequate and properly equipped physical facilities. It should also be noted that tools and equipment are mandatory for practical training in the workshops of the TVET colleges.

Having in mind the documents mentioned above, Table 4.2 Item 1 depicted the availability of educational resources based on the given standard, 5 (9.5%) of the trainers

strongly disagreed, 38 (60.3%) majorities of the trainers disagreed on the availability of educational resources. 7 (11.1%) trainers remained undecided. However, 13 (20.6 %) of the TVET trainers agreed. Therefore, the availability of resources in the training areas were not yet organized based on the standard given.

For a triangulation purpose, the researcher tried to observe the availability of learning facilities in the study areas. There were still absence of training facilities for training activities except auto, construction and furniture making training areas.

Provided with the above facts, it can be concluded that in both TVET colleges training and education were given without physical facilities like workshops, model rooms, projectors, transparencies etc. such problems have made the educational resources not to get managed based on the standard given.

In Item 2 of Table 4.2, in responding to whether trainers get instructional materials in every task for practical training on a continuous situation; 37 (58.7%) of trainers disagreed on trainers being provided with the instructional materials for every task in the practical training in continuous manner 4 trainers (6.3%) preferred undecided. On the other hand, 22 (34.9%) trainers agreed on the issue.

One can conclude that the trainers in the TVET Colleges did not get instructional materials which are crucial to support and make the lesson to be easily understood for every activity when the practical training is considered.

It was stated in the review of related literature that in the two categories: main courses, and supportive courses of the TVET colleges, the package of the main courses provides a number of independently prepared modules of employable skills which have been designed to train students so as to perform effectively, (Babisso, 2006)

Regarding Item 3 of Table 4.2, in replying an answer if training manuals were given for the trainees so as to help them exercise more in the practical facility centers; 35 (55.5%) of trainers disagreed on providing teaching materials for trainees. eight (12.7%) of the trainers kept undecided. In contrary to these data, 20 (31.7%) trainers agreed.

From the data gathered, it was learnt that trainees in the different areas of training did not get training manuals though in the TVET proclamation it was stipulated that learning manuals should be provided to students in order to make learning activities successful and to achieve the objectives of any TVET colleges by exercising more in the practical facility centers.

Table 4.3: Similarity of Instructional Materials to the learning- teaching activities

No	Replies	Trainers	
		No	%
2.4	Available materials and equipment are related (similar) to the learning-teaching activities		
	Strongly disagree	33	52.3
	Disagree	11	17.4
	Undecided	12	19
	Agree	7	11.1
	Strongly agree	-	-
	Total	63	100
2.5	Tools, equipment and consumable supplies are available in the workshops and similar based on the curriculum guide.		
	Strongly disagree	-	-
	Disagree	39	61.9
	Undecided	5	7.9
	Agree	19	30.1
	Strongly agree	-	-
Total		63	100

According to the information obtained from Table 4.3, in Item 1: 33 (52.5%) of trainers strongly disagreed on available materials and equipment which were related to the learning-teaching activities, 11(17.4%) of the trainers disagreed, 12 (19 %) of the trainers undecided. Only 7 (11.1 %) trainers said that they agreed on the similarity of the materials and equipment.

From the analysis made, one can infer that most of the available materials and equipment did not coincide with the learning-teaching activities of the TVET colleges. This has become a barrier to make the courses given in the institutions more achievable and understandable.

In the review of related literature, it was stated that training materials (tools, supplies and equipment) are purchased or made based on the given curriculum, to facilitate the practical training condition, to improve preferable methodology and to enhance quality of TVET training system.

A brief look at Table 4.3 in Item 2 above indicated that, 39 (61.9%) of trainers disagreed on tools, equipment and consumable supplies are available in the workshops and similar based on the curriculum guide. The responses on undecided were 5 (7.9%) of the trainers. However, 19 (30.1%) of the trainers agreed.

Hence, it can be concluded that in the TVET colleges the workshops were almost with small amount of available tools, equipment and consumable supplies based on the curriculum guide. This in turn also depicts that the curriculum guide implying workshops have to be supported with tools, equipment and consumable supplies have been a bit violated.

Table 4.4: The Availability of Learning Materials

No	Replies	Trainers	
		No	%
2.6	Training, learning-teaching materials (such as modules, references books, textbooks etc) are available in your college.		
	Strongly disagree	-	-
	Disagree	33	52.4
	Undecided	11	17.4
	Agree	19	30.2
	Strongly agree	-	-
	Total	63	100
2.7	Reference books are available in the library based on the curriculum guide.		
	Strongly disagree	37	58.7
	Disagree	14	22.2
	Undecided	7	11.1
	Agree	5	7.9
	Strongly agree	-	-
Total		63	100

The success or failure of any educational program depends on the quality and quantity of educational inputs employed during the training process. Consequently, the training

materials which have been recommended by the curriculum guide should be prepared adequately and should be available in the training facility centers, model rooms and if necessary in the hands of the trainees so as to achieve the desired goal of education and training in the TVET colleges.

It was shown in Table 4.4 in Item 1 that; 33 (52.4%) of trainers disagreed on training, learning-teaching materials like modules, reference books, and textbooks etc. are available in the Colleges. Meanwhile, 11 (17.4%) of trainers kept undecided. On the contrary, 19 (30.2%) of the trainers agreed on teaching-learning and training materials are available in the colleges.

To counter check the responses of the trainers and to in reach in study in generals. The student researcher interviewed TVET experts in the sub-cities, college deans and of department heads. According to all respondents the resources available in the colleges were not as the TVET curriculum standard.

From this analysis made, one can infer that there was absence of modules, reference books and textbooks in the colleges. As a result, it would be difficult to conduct the learning-teaching processes provided with lacked training materials. So, the TVET agency should consider such problems of learning-teaching materials and provide the essential resources to the colleges so as to strengthen the training processes continually.

It was implied in chapter two that libraries of the TVET colleges need to be equipped with: reference books, books, hand-outs, manuals, magazines, newspapers and other reading materials for learners are expected to develop different skills.

According to the information obtained from Table 4.4 of Item 2, 37 (58.7%) of the trainers strongly disagreed on reference books are available in the libraries of the TVET colleges based on the curriculum guide. 14 (22.2%) of the trainers disagreed, 7 (11.1%) of trainers remained undecided. But, 5 (7.9 %) of trainers agreed on reference books based on the curriculum are available in the libraries. For a triangular purpose, the researcher interviews the respondents. The responses of all respondents were almost the same that the library should be equipped as a standard with only few in number are presented in the TVET colleges

From the above facts one can conclude that those libraries of the colleges were not organized with the necessary reference books based on the curriculum. This consequently would make hard training skills difficult to be perceived by the trainees.

For a triangular purpose, the researcher tried to observe the availability of reference books in each TVET colleges. They were only 24 reference books out of 125 items as stated in the curriculum guide.

Table 4.5: Effective Utilization of Educational Resources

No	Replies	Trainers	
		No	%
1	Is there any idle or unused material equipment and machinery in the college?		
	A, yes	41	65
	B, NO	13	20.6
	C, I don't know	9	14.3
2	If your response for the above is "NO" to what extent the available materials in the college effectively used.		
	A, very high	-	-
	B, high	-	-
	C, Moderate	13	100
	D, low	-	-
	E, very low	-	-
3	How do you rate the efficiency of trainers and staff regarding the proper handling of material and equipments		
	A, very high	16	25.4
	B, high	13	20.6
	C, Moderate	34	54
	D, low	-	-
	E, very low	-	-
4	Have you used your college physical facilities efficiently?	-	-
	A, yes	23	36.5
	B, NO	40	63.4
	C, I don't know	-	-
5	Does the trainees miss use the institution facilities?		
	A, yes	19	27
	B, NO	34	54
	C, I don't know	10	16
6	If your response for the above is "Yes" what is the reason of miss use the institution facilities?		
	A, they are disappointed due to failure in EGSECE	-	-
	B, they are careless	4	23.6
	C, they don't know the cost	5	29.4
	D, all are answer	10	52.6
	E, if any other specifies	-	-

Table 4.5, item one attempt to answer the question if there is any idle or damaged material resource, equipment, and machinery in the training colleges. As indicated on the

table 4, 41 (65 %) of the trainers said yes, only 13 (20.6%) of the trainers said no, 9 (14.3%) indicated that they don't know about this.

From the figures one can infer that the training colleges are not using the available materials, equipment and machineries. Training facilities are proved by allocating a significant investment from the countries' limited resource. Therefore institution with good facilities create attractive training environment.

Therefore every trainer should discharge its responsibility to maximize the proper utilization of resource.

As shown in the table 4.5; item 2, all respondents views that the training material resource is used at moderate ,This shows that the training colleges needs to increase the capacity of utilization ,improve better management of ,tools and training materials.

Item 3 Table 4.5 attempts to answer the question on how do you rate the efficiency trainers and staff regarding the proper handling of material and equipments which is the most important aspect of TVET.

Accordingly, the trainers of these sample training colleges, 16 (25.8%) said it is very high, 13 (20.6%) of them indicated it is high, 34 (54%) of them stated that the efficiency of trainers and staff regarding the proper handling of material and equipments is moderate.

According to the above information, the efficiency of trainers and staff members regarding the proper handling of material and equipments is moderate. By implication , a major task of a trainers and staff members in a vocational training the proper handling of material resource and equipment which are expensive and help the trainee to acquire skill, knowledge as well as ,that brining a change in attitude in the learners on how to handle a training resources and equipments. Better trainers and staff members handling the material resource and equipment of the training colleges, the better the quality of training.

As table 4.5, item 4, indicates the respondents were asked whether the college used physical facilities efficiently or not. The respondents reported that 23 (36.2%) were used the facilities of the college efficiently and the maximum number of the trainers that is 40 (63.8%) reported that the physical facilities of the colleges were not used efficiently.

Based on the above question item 4 of the same table asked if “No” what the reasons. The respondents specifies poor management system, mishandling of the teaching staff, lack of awareness how to manage resource and lack of willingness in resource management which leads not to use physical facilities efficiently.

To counter check the responses of trainers, the same question forwarded for interview. All deans and (33.3%) department heads gave similar suggestions that the colleges were utilized physical facilities efficiently. But all TVET experts and (67.7%) department heads gave dissimilar the TVET colleges were not utilized physical facilities efficiently.

Regarding the utilization of available facilities ILO (1999:39), states that if training institution are to utilize more fully the training facilities already existing in the local communities, their programs of vocational and training would be much more significant than they are.

Item 5 table 4.5 attempts to answer the question does the trainees misuse the institution facilities. 19 (27%) respondents said yes, 34 (54%) respondents said that no and 10 (16%) respondents said that they do not know about the trainees misuse the institutions facilities. Based on the above question item 5 of the same table asked if ‘‘yes’’ way not.4 (23.6%), 5 (29.4%) and 10 (52.6%) of the respondents answered that the trainees misuse the institution facilities because of they are disappointed due to failure in EGSECE, they are careless and they do not know the cost of the material consequently.

And also, in the same table in the open ended asked the respondents specified the reason, the respondents specified management problem, lack of skilled man power, lack of awareness, lack attitude and lack of planning educational resource are the reason of ideal or unused material equipment and machineries. ,

Respondents were also requested to suggest possible solution for better utilization of educational resources for training. Some of solution suggested by the majority was:

1. Create awareness about importance of educational resource.
2. Develop sense of belongings among the training staff and trainees.
3. Encouraging administrative staff participation in planning, organizing and utilizing of educational resource to minimize wastage of material.
4. Changing the attitude and perception of trainers about the importance of the utilization educational resource on TVET implementation program.

Management capacity building is necessary to trainer based through problem and need analysis. Accordingly, cooperative training schemes should be promoted to encourage the institutions to develop flexible and innovative solutions for cost-effective training delivery.

Table 4.6: Actual participation in materials resource management

No	Replies	Trainers	
		No	%
1	Participation of training staff in material resource management		
	A, Very high	-	-
	B, high	10	15.9
	C, Average	37	58.7
	D, low	9	14.3
	E, Very low	7	11
Total		63	100%

In item 1, the respondents were asked to answer as to the actual participation of training institution training staff members in material resource management.

Accordingly, 10 (15.9%) of them said that the actual participation of training staff members in material resource management was high, 37 (58.7%) answered that it was average, 9 (14.3%) and 7 (11%) of the trainers respond that the actual participation of training staff member in material resource management is low and very low consequently.

According to the response the trainer and administrative staff have confirmed that the actual participation of training staff member in material resource management was at average. The study indicated that training staff in TVET colleges should limit participation in material resource management. But all partners will be required to increase their effort knowledge and expertise in many areas of studies, Effective mechanism must therefore be established to share experiences and expertise through ongoing activities, may include jointly share resource data, multi-media technologies and enter departmental cooperation.

Table 4.7: The physical facilities of the TVET colleges that are exposed to damage

No	Replies	Trainers									
		Highly damaged		Moderately damaged		damaged		Little damaged		Not damaged	
		No	%	No	%	No	%	No	%	No	%
1	College buildings	-	-	10	23.8	3	14.3	-	-	-	-
2	Tables	-	-	9	16.7	4	19	-	-	-	-
3.	Chairs	-	-	11	26.2	3	14.3	-	-	-	-
4	Machine in work shop	-	-	6	14.3	6	28.6	-	-	-	-
5	Equipment in work shop	-	-	4	9.5	5	23.8	-	-	-	-
6	Electric system	-	-	2	4.8	-	-	-	-	-	-
7	Tools in work shop	-	-	-	-	-	-	-	-	-	-
8	Water pipe	-	-	-	-	-	-	-	-	-	-
9	Black board	-	-	-	-	-	-	-	-	-	-
10	White board	-	-	-	-	-	-	-	-	-	-
11	Library books	-	-	2	4.8	-	-	-	-	-	-
12	Health facilities	-	-	-	-	-	-	-	-	-	-
Total		-	-	42	66.6	21	33.3	-	-	-	-

As indicated in table 4.7 most of the respondents lie on moderately damaged. This shows that the college buildings, tables, chairs, workshop machines, electric system, library books are the most exposed physical facilities to damage.

The result shows more damaged physical facilities like buildings, tables, chairs, electric system and library books are not mostly utilized by trainers and trainees properly. This shows that care be given for those items less than the other items.

Table 4.8 Rate of maintenance of training material resource

No	Replies	Trainers	
1	How do you rate the capacity of the training institution regarding maintenance of materials and equipment		
	A. Very high	4	6.3
	B. High	16	25.4
	C. Moderate	28	44.4
	D. Low	15	23.8
2	If your answer for the above question is “low” what are the reason		
	A. absence of skill developed tanning for trainers	5	33.3
	B. absence of maintenance department	10	66.6
	C. no need to involve the maintenance activity	-	-
	D. absence of skill developed training for work shop technician	-	-
	E. less qualified work shop technician in the college	-	-
	F. if any other specify	-	-
3	Does your department have experienced maintenance personnel?		
	A. Yes	-	-
	B. No	44	69.8
	C. I don't know	19	30.2
4	Skills of trainers to maintain facilities and tools in the training center		
	A. Very high	-	-
	B. High	8	12.7
	C. Moderate	15	23.8
	D. Low	40	63.5
	Total	63	100

In item 1, table 4.8, respondents were asked to rate the capacity of the training colleges to maintain facilities and equipment.

The respondents 4 (6.3%) stated that they are among the very high, 16 (25.4%) replied that they are among the high, the rest respondents 28 (44.4%) among the moderate. On the other hand, considerable fraction of the total respondents 15 (23.8%) replied the reason for the capacity of the institution regarding maintenance is low. Based on the above question item 2 of the same table asked if “low” what are the reason, 5 (35.7%) replied no skilled developed training for trainers, 10 (66.6%) stated the absence of maintenance department.

From these figures one can infer that the training institutes have no qualified maintenance personnel. The new education and training policy (1994), article No 3.7.1, states that in order to promote the quality, relevance and expansion of education due attention should be given to the supply, distribution, maintenance and utilization of educational materials, education technology and facilities.

In item 3 of table 4.8, respondents were required to answer whether there is experienced maintenance personnel in the training college. As it is indicated on the table, 44 (69.8%) of the trainers said no, There is no maintenance personnel in the training institutes, the rest of 19 (30.2%) said I do not know.

For triangular purpose, the same question was forwarded for interview. According to all respondents, the TVET colleges have no maintenance personnel.

This shows that majority of the respondents disclosed that the training colleges are among the moderate. The most important objectives of the programs are perceived by the respondents was to enable them to vocational skills that would make gain full self-employed as a means of ensuring as promoting self-reliance and making them more productive and useful citizens for proper handling of technical-vocational equipment and machineries. Accordingly, efficiency of material resource handling, maintenance may lead to efficiency of training program. Trainee can develop the habit of handling and can acquire a skill of maintenance in the training institute.

According to table 4.8 item 4, the respondents were asked to answer to what extent the trainers skilled to maintain facilities tools, and machineries in the training colleges.

Regarding the trainers, 8 (12%) of them said that it is high, 15 (23.8%) said that it is moderate. While the rest 40 (63.5%) answer that low,

This shows that a majority of the respondents have disclosed the trainer's skill to maintain of facilities, tools and machineries is low.

In TVET college's facility infrastructure is critical to excellence in training opportunities. Machineries, tools and equipment in training are the physical learning environment which maintenance is responsible for.

It is necessary that the trainers understand the causes, repair facilities at optimal cost and handle them in systematic and scientific up keep of equipment for prolonging its life.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this part of the thesis, the summary, conclusions and recommendations were discussed in detail.

5.1. SUMMARY OF THE FINDINGS

The purpose of this research was to assess educational resource management practices and problems, and suggest possible solutions for the utilization of material, and physical resources in the TVET colleges of Nifas-Silk and Akaki-Kality sub-cities. To this end, the following basic questions were set.

1. How adequate are the available educational materials in the public TVET in Nifas-silk and Akaki-kality sub-city Administration in light of the standard set in the TVET strategy of the country?
2. How are the colleges the using physical facilities efficiently?
3. Are there qualified personnel assigned to the maintenance of equipment?

In order to find reasonable answers for the research questions above, appropriate data collection procedures were employed. The study employed a descriptive design and mixed, quantitative and qualitative as a method and it was conducted in two government TVET colleges. These sample training colleges were selected from Nifas-Silk and Akaki-Kality sub-cities on the basis of purposive sampling techniques.

The subjects of the study were 63 trainers, 6 department heads, 2 TVET experts and 2 TVET deans. Accordingly, the trainers in the TVET colleges were selected through stratified sampling and simple random. While the deans, department heads and TVET experts were selected by using accidental sampling techniques.

Information was obtained from these sample respondents through questionnaire, interview, observation and document analysis. The data obtained were analyzed using frequency and percentage.

The following were the major findings of the study:

1. Background to Respondents

I. Regarding respondents' sex, 13 (20.6%) of the trainers and 1 (16.6%) of the department heads were female. While the data showed the 5 (83.3%) department heads, 2 (100%) TVET experts, 2 (100%) TVET college deans and 40 (79.4%) of the trainers male. Thus, the respondents were predominantly male;

II. Concerning the qualification of the respondents, seven of the trainers and 2 of the department heads were M.A holders. While the BA holders were 49 trainers, 4 departments heads, 2 deans, and 2 TVET experts. The data also indicated that 7 trainers were diploma holders. The TVET proclamation states that trainers in TVET colleges should have first degree and above. Based on the data, the majority of trainers fulfilled the policy requirement;

Accordingly, 7 (11.1%) of the trainers were not competent to provide TVET in accordance with the occupational standards of the colleges. This is because they were diploma holders.

III. As far as respondents' experience was concerned, 25 (39.7%) of the trainers, 5 (83.3%) of department heads, 2 (100%) of the TVET deans and 2 (100%) of the TVET experts had accumulated experiences. This in turn would help to provide important ideas on how to manage educational resources in the colleges. However 38 (60.3%) of the trainers and 1 (16.6%) of the department heads are fresh gradates.;

2. According to the data on learning facilities, 38 (60.3%) of the trainers confirmed that facilities were not well-equipped based on the standard given. This would hinder the effectiveness and implementation of the TVET programs in the college;

3. Trainers did not get instructional materials for their teaching activities in the practical activities. The data showed 37 (58.7%) of the trainers said they did not get instructional materials;

4. According to the data, 35 (55.5%) of the trainers expressed that training manuals were not given to the trainees for exercising purposes in the workshops;

5. Available materials and equipments were not similar to the learning teaching activities as the data showed 33 (52.3%) of the trainers strongly disagreed on the issue;
6. Regarding whether tools, equipment's, and consumable supplies are available in the workshops and similar based on the curriculum guide, 39 (61.9 %) of the trainers disagreed;
7. Regarding whether there is idle or unused material equipment and machinery in the TVET colleges, the data depicted 41 (65%) of the trainers negatively responded there is idle or unused material equipment and machinery;
8. Training, learning-teaching materials such as modules, reference books, textbooks etc. were not available in the colleges based on the standard. The data also showed, 37 (58.7%) of the trainers disagree;.
9. Whether the reference books are available in the library based on curriculum guide, it was found that 37 (58.7%) of the trainers the books in the library is not based on the curriculum guide;
10. The study indicated that the physical facilities of the college are not efficiently utilized, the data showed 40 (63.4%);
11. The study indicated that proper care was not given for the available physical facilities by the trainer and administrative staff and lack of follow up to solve the problem by the college administrative. The data showed 34 (54%);
12. Regarding whether there is maintenance personnel in the TVET colleges the data showed 44 (69.8%) of the trainers said "No";
13. The study indicated that the actual participation of training staff members in material resource management was at average. The data showed 37 (58.7%);
14. To sum up, according to the responses of each open-ended questions forwarded by the respondents of government TVET colleges of Nefas-Silk and Tulu-Dimtu, the major problems in the implementation were
 - ❖ The educational resources were poorly managed and practiced by the trainers, department heads and the TVET management;

- ❖ In the TVET colleges under study it was found that: there was lack of materials and facilities. These include lack of textbooks in library, lack of workshops, lack of reference books based on the curriculum, some resources were not available on time, and absence of supportive books.;
- ❖ Lack of coordination and low participation rates among department heads, trainers and TVET Colleges on handling and utilization of educational resources.
- ❖ Lack of knowledge how to maintain and manage the scares;

5.2. Conclusion

Vocational education is an expensive program compared to other academic courses and it has a close link with material resources. To this effect, the evaluation of vocational training institutes depends on the resources management. Training institutes should be well equipped and organized with the necessary material resource and facilities.

Based on the major findings, the following conclusions were drawn.

1. In the TVET colleges' under study, the trainers and department heads were not provided with the necessary learning-teaching facilities and materials;
2. In spite of the recommendation in the TVET curriculum, the educational resource management practices were not in parallel to TVET colleges. This could lead to the provision of less quality education and training;
3. The low participations of trainers, in terms of planning, organizing and utilizing educational resource would bring absence of trainers in terms of managing and utilizing materials in teaching activities,
4. Lack of adequate awareness on the management of educational resources in both TVET colleges could lead to ineffective utilization of education resources.;
5. The physical facilities of the college are not efficiently utilized due to lack of coordinated work by the college communities.
6. The administrators of the colleges did not efficiently manage the material resource due to lack of adequate knowledge and skill in the resource management practice.

7. The maintenance activities of the colleges are poor. When the training material resource is broken or damaged immediate measure is not taken to repair and reuse, this is due to lack of maintenance personal and lack of maintenance department. As a result of this a lot of training materials are ideal, therefore, it is possible to conclude that scarcity on one hand and improper utilization on the other affected the smooth implementation of training program in the colleges.
8. The training materials for every training process are very expensive and scares, on the other hand improper handling, improper maintenance improper utilization of training material resource was given due to the colleges.

5.3. Recommendations

Educational materials are essential inputs for running instructional objectives. Thus, these resources need a continuous and careful control. This is because the quality of training depends on the quality and quantity of input employed and the methods used during the training processes. This in turn would help in providing information, ideas, methods and valid data required for relevant decision-making. On the basis of the research findings obtained and conclusions arrived so far, the following recommendations were forwarded:

1. A great emphasis should be given to educational resources management by creating awareness among trainers, TVET deans and experts about the importance of resources in TVET system and, regulatory mechanisms shall be established to implement and evaluate the curriculum as prescribed in the policy document.
2. It was shown in the findings that the colleges were not supplied with adequate material resources and equipments and was not properly utilized. For effective learning-teaching process, the TVET policy implication needs.
 - Organizing training facilities and materials in a coordinated manner.
 - Training, teaching and learning materials should be sufficiently available.
 - Increasing supply of materials with relevant training and further training.
3. The methodology preferred in practical training in the workshops is student-oriented which has been stated in the training strategy for TVET colleges. For

practical training, tools, facilities and training manuals, and for theoretical learning-teaching materials like texts, modules are the forefront resources to maintain occupational training standards efforts towards enabling educational resources adequately available as stated in the curriculum guide.

4. Based on new curriculum, the libraries of the TVET colleges have to be equipped with relevant materials. New and updated reference books, hand-outs, manuals, newspapers, magazines and other reading materials and internet access should be created.
5. In the TVET Colleges understudy, there was no relation between the curriculum being implemented and the actual training practice of education and training in accordance to educational resources management. Therefore to narrow the gap, and to maintain the quality and relevance of education and training, the stakeholders need to exert their efforts.
6. The teaching-learning activities of education and training at the TVET level must be more supported by practical training involving adequate practices in the workshops and model offices of each department to make the training fit to the needs of employer in the real world of work. This in turn would promote practical training in TVET system.
7. To utilize the college physical facilities efficiently, awareness raising activities should be done by the administrative staff and coordinated work should be mandatory for the college communities.
8. To utilize the college training material efficiently, the commitment of the trainer and shop technician in addition to the administrative body of the colleges are very crucial for the college to utilize their training material resource efficiently.
9. Capacity building program should be offered for administrative staff for effective and efficient utilization of the colleges training materials.
10. The finding reveals that very expensive and important machinery was idle due to absence of maintenance personnel to solve this problem in each department, should have in maintenance section with necessary equipment, for this purpose

the college officials should work jointly with the trainer department heads and TVET agency.

11. The training staff should be prepared short trainings, workshops, seminars and sharing experience with other TVET colleges and organizations regarding maintenance and capacity building programs of trainers and work shop technicians is very essential to utilize the available training material resource efficiently.

REFERENCES

- A.A.C.A. (2005). *Technical and Vocational education and training (TVET) strategy*. Addis Ababa: Artistic Printing Enterprise.
- Ayalew Shibeshi. (1991). **Approaches to Education and management**, Part One: Unpublished Teaching Material, Addis Ababa University
- Babisso, A. (2006). *The Implementation of the Middle Level TVET Program in Addis Ababa*. Unpublished MA Thesis, Addis Ababa University.
- Best. J.W. and Khan, J.V. (2003). *Research in Education*. New Delhi: Prentice-hall Private Ltd.
- Bush, Tony (1986): **Theories of Educational Management**. The open University London: Harper and Row Publisher.
- Delors, J. and etal. (1996). *Learning the Treasure within report to UNESCO of the International Commission on Education for the Twenty-first Century*. Paris: UNESCO.
- Elmo, J.M (1963). *Modern Maintenance Management*. New York: Stmarting Press.
- Faraday, Joseph E. (1977). *Work Study*. Fourth Edition London: Pitman Publishing.
- FDRE (2004). *Proclamation to Provide for the Organization of a Technical and Vocational Education and Training System*. Federal Democratic Republic of Ethiopian Proclamation No. 391/2004, Addis Ababa.
- FDRE(2004). *Technical and Vocational education and training proclamation N^o-391*.Federal Negarit Gazeta N^o 26
- Gasskov, Viladmir (2000). *Managing Vocational Training Systems: A Handbook of Senior Administrators*. Geneva: International Labor Office:

- Gizaw Zewge (1989). *Educational Management: Concepts, Principles and Problems*, Unpublished Material, Ababa.
- Gupta, C.B. (2006). *Human Resource Management*. Ninth Edition. New Delhi: Sultan Chand and Sons Educational Publisher.
- Harris, G.W.(1985). *Management of the public school Logistic system*. Spring Field Charles C. Thomas.
- John W. Creswell. (2003) *Research Design, Qualitative, Quantitative and mixed methods Approach* 2nd Edition London: Sage Publication Inc.
- John W. Creswell. (2012). *Educational Research*. Boston: Pearson Education. Inc.
- Leedy, P.D. (1980). **Practical research: Planning and design**. New Jersey: Macmillan.
- Korda, Michael (1975). **Power, How to get it, How to use it**: New York: Ballantir, Inc.
- Kvale, S. (1996) *Interviews*. London: Sage.
- Melaku Yimam. (2002). **Resource Management in Education**. (Unpublished Material), A.A.U.
- MoE (2003). *Financing Technical and Vocational Education and Training in Ethiopia*.
- MoE (2005). *Educational Annual Statistics Abstract*: Addis Ababa.
- MoE (2006). *National TVET Strategy*. (Draft for Discussion).
- MoE (2007). *Ethiopian TVET System Model Curriculum*.
- MoE (2008). **Conceptual Framework for Development of the Ethiopian Qualification**.
- MoE (2003). *Indicators of the Ethiopian Education System*. MoE. Addis Ababa

- Ornstein. A. (1995). **Strategies for Effective Teaching**. 2nd edition University of Chicago: Brown and Bench Mark Publishers.
- Ray, Walter and Condoli (2001). *School Business Administration*. (7th ed.) London: Alyn and Bacon.
- Sadkar, M.P. and Sadhker. D.M. (1997). *Teachers, Schools, and Society*. New York: The McGraw-Hill Companies Inc.
- Teshome Yizengaw (2007). **The higher education: creativity space for reform**. Addis Ababa city.
- TGE (2004). *Education and Training Policy*.
- UNESCO (1986). **Training Materials in Educational Planning: Administration and Facilities**: Unpublished Material.
- Williams, B. Castel, (1971). *Personnel the Human Problems Management*: India: New Delhi Prentice-Hall.
- Yeknoamlak Alemu (2000). *A Comparative Analysis of Vocational Training and Employment Opportunities in Government Schools/Training Centers in Ethiopia*. Unpublished MA Thesis, Addis Ababa University.

Appendices

Appendix-A

Addis Ababa University

College of Education and Behavioral studies

Department of Vocational management

Post graduate Program

Questionnaire to be filled by trainers

The purpose of this questionnaire is to investigate the practice in using educational resource in selected TVET College in order to forward some suggestion to improve the quality of training. Your experience, feelings, and suggestions are worthwhile for the study and I confident that you will offer honest and frank response.

Thank you for your kind cooperation!!

Instruction:

Give short and brief answer for the items requiring completion and put “✓” mark for the items requiring selection in the space provided. You do not need to write your name on the questionnaire.

ITEM ONE: General Information

1.1 Name of the TVET college-----

1.2 Your department-----

1.3 Sex: Male Female

1.4 Your educational qualification

A. MA/MSC-----

B. BA/BSC/BED-----

C. College diploma-----

D. Certificate-----

1.5 Years of service in the college

A. 5 years and below-----

B. 6-10 years -----

C. 11-15 years-----

D. 16 and above years-----

ITEM TWO: Learning-Teaching, Training Materials, Facilities and Access Profile

2. Give below are a number of options indicating the facility, the maintenance capacity and efficient utilization of materials to deliver quality training, choose among the given options by marking “✓” on the space provided according to your feelings of their appropriateness. The Number indicates: 5. Strongly disagree 4 Disagree 3. Agree 2. Strongly agree 1. Undecided

No	Items	5	4	3	2	1
2.1.	Learning facilities such as model rooms, projects, laboratories, transparencies and white board are well equipped based on the given standard					
2.2.	Trainers get instructional materials for every task for practical training in a continuous manner,					
2.3	. The training manuals are given for the trainees so as to help them exercise more in practical facility center,					
2.4.	Available materials and equipment are similar or related to the learning-teaching activities real work conditions in your department,					
2.5.	Tools, equipment and consumable supplies are available in the facilities centers and based on the curriculum guide,					
2.6.	Training, learning-teaching materials (such as modules, reference books, text books, etc) are available in your colleges based on the standard,					
2.7	Reference books are available in the library based on the curriculum guide,					

2.8 In your institution (college) are there any idle or under used material resource?

A, Yes

B, No

C, I don't know

2.9 If your response for question number “2.11” is yes what do you think is the reason, please specify

A _____

B _____

C _____

2.10 If your response for question number “2.11” is “No” to what extent do you think the available materials in the collage effectively used?

A, very High B, High C, Moderate D, Low E, Very Low

2.11 How do you rate the efficiency of trainers in the college regarding the efficient utilization and proper handling of materials and equipment?

The number in the table below indicates:

5. Very High 4, High 3. Moderate 2. Low 1. Very Low

No	Items regarding maintenance	5	4	3	2	1
1	Performance of trainer to prevent damage of training material					
2	Skills of trainee regarding maintenance of training materials					
3	Operation (utilization) of training maintenance materials by trainees					

5. 15. Does the trainee misuse the college’s facilities?

A, Yes

B, No

C, I don’t know

2.12. If your response for the above question is 'yes', what is the reason of misuse of the College facilities?

A, they are disappointed due to failure in EGSECE B, they are careless

C, they don’t know the cost D, all will be answer E. If any other specify,

I. _____

II. _____

III. _____

2.13 What is your level of agreement with the idea that following should participate in materials resource management.

No		Strongly agree	Agree	Partially agree	Disagree	Strongly disagree
	Teaching Staff					

2, 14 Which of the physical facilities is frequently damaged in your college during utilization? Rate the seriousness of the damage in the table. The number indicates:

5, Highly damaged 4, Modertly damaged 3, damaged 2, Little damaged 1, Not damaged

No	Items regarding facilities	5	4	3	2	1
1	College building					
2	Tables					
3	Chairs					
4	Work shop					
5	Machine in work shop					
6	Equipment in work shop					
7	Tools in work shop					
8	Electric system					
9	Water pipe					
10	Black board					
11	White board					
12	Library					
13	Health facilities					

2.15 Have you used your college physical facilities efficiently?

A, yes B, No

2.16 If your answer for the above question is “NO”, please specify the reason/s

- I _____
 II. _____
 III _____

2.17. Listed below are some of the materials management function .Please rate the extent to which these function are performed in your college. The number indicates: 5, very good 4, Good 3, Faire2, Poor 1, Very poor

No	Items regarding material management	5	4	3	2	1
1	Handling of training material resource					
2	Utilization of training material resource					
3	Maintenances of training material resource					

2.18 How do you rate the capacity of you college regarding the maintenance of training materials (equipment)

A, very high B, high C, Moderate D, Low

2.19. If your answer for question number “2.22” is low what are the reason (you can mark more than one option)

1. Absence of skill developed training for the trainer
2. Absence of maintenance department
3. No need to involve in the maintenance activity on the side of trainer
4. Absence of skill developed training for work shop technical
5. Less qualified tool person/work shop technical in the college
6. If any other specify,

A _____

B _____

C _____

2.20 Do your departments have experienced maintenance personnel?

A, Yes B, No C, I don't know

2.21 If your response for the above question is “No” who maintain the damaged equipment, please specify,

A _____

B _____

C _____

2.22 Skills of trainer regarding maintenance training materials (equipment)

A, very high B, high C, moderate E, Low

Appendix-B

Addis Ababa University

College of Education and Behavioral studies

Department of Vocational management

Post graduate Program

Interview Gide for TVET Experts, Department heads and Academic deans

The interview question is designed for the purposes of studying the practice, problem and possible solution of management of educational resource in selected TVET colleges of Nifas-Silk and Akaki-Kality sub-cities.

Part One

Name of the college _____

Sex Male Female

Qualification _____

Working experience 1-5 6-10 11-15 16-20

Part Two

1. Are the educational resources of TVET colleges organized based on the standard given? a. Yes b. No c.I don't know
2. Are facilities for training (such as practical training center, model offices and simulations) organized based on the standard? a. Yes b. No c.I don't know
3. Are libraries of the TVET colleges equipped with appropriate educational resource like modules, reference books and text books as the standard given?
a. Yes b. No c.I don't know
4. Are the physical facilities of the college efficiently utilized?
a. Yes b. No c.I don't know
5. In your college, is there a maintenance personnel who maintains the damaged training materials? a. Yes b. No c.I don't know

If no who maintained the damaged materials?

6. What are the major reasons for material resource damage?

7. What do you suggest for better utilization of resources for training program to solve problem?

Appendix-C

Addis Ababa University

College of Education and Behavioral studies

Department of Vocational management

Post graduate Program

Observation Checklist

This checklist is meant to measure extent of the availability of facilities, instructional materials for facilitating practical training in the selected colleges.

Name of the colleges _____

Name of the department _____

Time of observation _____

Date of observation _____

No	Subject for observation	Categories		
		Yes	No	Remark
1. Facilities	1.1. Laboratories			
	1.2. Laboratory facilities			
	1.3. Visual training media			
	1.4. Computer for instruction			
	1.5. Model office facilities			
	1.6. Simulation room			
2. Instructional materials	2.1. Modules/texts			
	2.2. Trainers' guide			
	2.3. Reference books			
	2.4. Access of training materials			
	2.5. Appropriateness of materials			
	2.6. Adequacy of stock materials			
	2.7. Safety of non-stock materials			
3. Time usage	3.1. Theoretical time program			
	3.2. Practical time program			
4. Library service	4.1. Reference materials			
	4.2. News, magazines, etc			
	4.3. Internet service			
5. Stock level	5.1. Safety for storage			
	5.2. Record system			

Appendix-D

Addis Ababa University

College of Education and Behavioral studies

Department of Vocational management

Post graduate Program

Resource Conditions mentioned in the curriculum guide to all occupational training for TVET system.

No	Material resource situations	Remark
1	Learning-teaching, training materials	Not available
	➤ Modules	
	➤ Textbooks	
	➤ Trainers' guide	
	➤ Models and charts	
	➤ Training manuals	
	➤ Reference books	
2	Facilities for learning	Not available
	❖ Simulation room	
	❖ Model room	
	❖ Visual training media	
	❖ Training facility centers (Workshops)	

Source: Curriculum guide (2007)

NOTICE:

- A. Workshops were available for Auto, Construction, and furniture making occupational training only
- B. Other training materials and facilities were not available in the two colleges.

Appendix-E

Addis Ababa University

College of Education and Behavioral studies

Department of Vocational management

Post graduate Program

Equipment, Tools and Supplies Depicted in the Curriculum Guide to all Occupational Training for TVET System

No	Items	Remark
1	Equipment and email	Almost not available
	1. Internet and email	
	2. Projectors (over head, LCD)	
	3. Audio-visual equipment	
	4. Dictaphone equipment	
	5. Office furniture and equipment	
	6. Photo and video cameras	
	7. Fax machine	
	8. Computers with accessories	
	9. Printers	
10. Automobile vehicles		
2	Supplies	Almost not available
	1. Manuals	
	2. Box file. File cabinets	
	3. Cash register	
	4. Adding machine	
	5. Stationary materials	
	6. Format	
	7. Paper 80 gram all purpose	
	8. Rules 80 gram all purpose	
9. Rules and regulations and related government requirement		

Source: Curriculum guide (2007)

NOTE: Few supplies were available. These included stationary materials, paper 80 gram all purpose, one Automobile vehicle and formats. But, other supplies were not available. The researcher's observation confirmed non-available supplies.

Appendix-F

Addis Ababa University

College of Education and Behavioral studies

Department of Vocational management

Post graduate Program

Observation Checklist as Summarized

No	Items	Tulu-Dimtu		Nefas silk		Remark
		Yes	No	Yes	No	
1	Training materials					
	Training manuals		X		X	
	Training manuals access of materials		X		X	
	Appropriateness of materials		X		X	
2	Facilities		X		X	Except Co, Auto, Furniture making
	Model offices					
	Visual training media		X		X	
	Training facility centers		X		X	
	Simulation rooms		X		X	
3	Library services	X		X		
	Internet service		X		X	
	Magazines		X		X	Not functioning
	News papers		X		X	Very few
	Reference books		X		X	Very few

Source: Observation

Declaration

I, the under signed declare that this thesis is my work and that all some of material used for this thesis have been duly acknowledge

Name: Biniam Hailu

Signature _____

Place: Addis Ababa University College of education, department of Vocational education

Date of submission: _____

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

Name: Worku Mekonnen (Dr)

Signature _____

Date: _____