ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Factors Affecting the Utilization of Visual Instructional Materials in Misrak and Selam TVET Colleges of Addis Ababa

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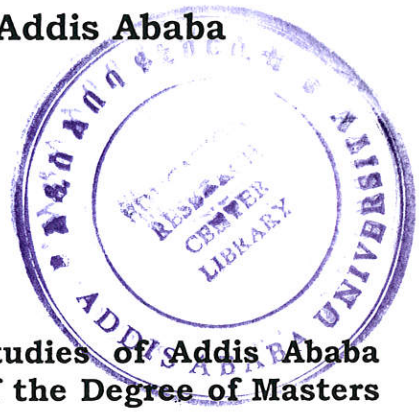

A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirement of the Degree of Masters of Arts in Vocational Education Management

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Abstract

This study attempted to find out the current trends in the utilization of visual instructional materials in government and private TVET colleges in Addis Ababa city administration. The research method employed was descriptive survey under which quantitative and some qualitative approaches were used to collect data. The main method of data collection tools was two sets of questionnaires one for instructors and the other for trainees. In addition to this interview and focus group discussion and observation using a checklist were used to support data obtained through the questionnaires. Using simple random sampling technique, the two colleges were selected out of five government and "six private" colleges that have incorporated several fields related to the study. A total of 287 respondents, out of which 48 instructors and 239 trainees were used as a sample population out of 92 instructors and 902 trainees. In addition to this 13 interview and focus group discussion respondents were also included in the study as a source of data. Main problems related to the study are: absence of pedagogical center, poor facilities of library and the department shops, support and motivation provided by the deans to their respective instructors and trainees, lack of willingness of some instructors to participate in creating visual instructional materials, inadequate training programs employed, budget constraints and support of community outside the colleges. In addition to the above, the utilization of visual instructional materials is affected by many problems to carry out the TVET programs efficiently. Thus different measures should be taken to overcome the problems related to utilization of visual instructional materials.

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ACRONYMS

VIM- Visual Instructional Materials

TVET- Technical, Vocational and Education Training

Abbreviations

PC- Pedagogical Center

PCH- Pedagogical Centers Head

TVETCPCH- TVET College Pedagogical Center's Head

CHAPTER ONE

1. The Problem and its Approach

1.1. Introduction

Education in any society aims at promoting the development of human knowledge, skill, values and attitudes. These needs can be attained in the teaching learning and training processes based on the educational goals. These goals can be attained when individual trainees acquire enough knowledge, skill and concepts to be able to think about and solve problems. To achieve these goals and to effect change, different courses are given in the form of training in Ethiopian TVET system at different levels. Based on the national education and Training goal, instructional objectives are designed. To meet these objectives, the training process of each course must be supported with the relevant visual instructional aids depending on the contents of the lesson or task.

The TVET program is designed to familiarize trainees with tools, products, processes and occupations of industry as well as the social and economic phenomena of the technological world in which they live and work. It can be practiced more if the trainees understand the course and if he/she participates in actual practical activities effected through the use of visual instructional aids. Visual instructional aids make the course understandable, learning and training in this way becomes more extensive and permanent. Even though, most of the VIMs used in these fields are imported items the colleges in general and instructors in particular should provide and facilitate the necessary instructional aids to be used during the training process. But without having sufficient experience in planning, preparing and utilizing of visual instructional aids in the process of training the educational goals; the educational objectives cannot be achieved.

Thus, visual instructional aids are indispensable in classroom and shop activities and the study attempts to investigate how VIMs are utilized in the process of TVET training and it is to this end that this study is made.

1.2. Background of the Study

According to the 1994 education and training policy, the Technical, Vocational, Education and Training in Ethiopia is being given in many areas of the country. The aim of the TVET program is to train citizens in industrial fields and other vocational areas and prepare them for the world of work in industries and organization and/or prepare them to be able to create their own jobs. This is true only when the trainees get training as it is intended. Good teachers, who were being aware of the danger of verbalism, have always looked for effective ways of making subject matter clear and meaningful to students. In order to conduct effective training, instructors are expected to utilize VIMs. In this regard Saettler (1968:12) states that "in 1886, objects, models, pictures, diagrams, experiments and printed or written materials are prepared and used by some teachers as visual instructional materials."

The mid 1950's have been considered as the beginning of modern developments in instructional technology that area of endeavor that has brought machines, materials, and techniques together for educational purposes. These are overhead projectors; slide projects, motion pictures, and other multi-media approaches. Many of this development bring upon presently emerging new instructional patterns and the role of instructional aids to serve them (Kemp, 1968:1-3).
Furthermore, technological advances created diversified and improved devices and techniques for beginning the best, the most relevant and the widest range of experiences to trainees and thus the use of various VIMs can improve students learning, at the same time; significantly reduce instructional time. However, according to the development of instructional materials, the most prominent stimulus arose during the World War II when armed forces suddenly face inappropriate accomplishment of tasks and the help offered by sensory materials in carrying out the training program impressed even the uninterested teachers to teach with visual instructional materials.

Regarding the utilization of instructional aids, Kenneth Baker, in Philip Hill's, (1987:1), indicated: we are now involving into what has been called a "second industrial revolution" or by some a "communication revolutions" or an "electronic revolution." The effect of electronic revolution especially the use of modern computers, created both a social and an economic revolution, which in some way and in some degree is affecting every aspect of our lives.

In all of this the trainers' are seen a necessary mediator in the education and training process but it must be noted that at present the teaching and training profession is in danger of turning in on

itself. The present attitude of Instructors of Misrak and Selam TVET colleges where by they behave in the classroom are apart from the realities of a changing world is compounded by a number of factors. So this study attempts to find out the basic problems encountered in utilizing visual instructional materials in the selected TVET Colleges.

1.3. Objective of the study

Effective education and training is a necessary condition for economic progress of any nation. Therefore, utilizing appropriate visual instructional aids in the process of TVET training is highly useful to improve the quality of training that in turn contributes to the economic development of the country and it is why the researcher is interested in investigating the case. The following are major objectives of the study:

- To investigate the current trend(s) of utilizing instructional aids in the provision of TVET program in the areas of industrial and business fields.
- To identify the major problems that affects the utilization of VIMs.
- To contribute some sounding ideas and knowledge that may be helpful to improve the performance and quality of TVET.

1.4. Statement of the problem

Using visual instructional aids while teaching and conducting training in TVET will greatly assist the instructors in clarifying the lesson, share their experiences to the trainees very easily and help to present the lesson systematically. As a result, trainees can appreciate the learning and training activity and they can actively participate in variety of the methods of training- learning process that take place both in the classroom, in the shops/or outside of these.

Unfortunately, some sounding problems such as absence of pedagogical centers, inefficiency in managing and shortage of budget to purchase instructional materials are some of the problems observed in the Colleges. And it is why the researcher is interested in investigating the root causes of the problem mentioned above and the study attempts to answer the following basic research questions.

1.5. Significance of the Study

The proper utilization of instructional materials will increase the understanding and degree of retention in learning. Moreover, it will help trainees in making various practical activities and asses their environment to learn and to get useful skills.

In this regard, the researcher believes that the study will be helpful to:

1. Policy makers, curriculum planners and educators in that it provides them with relevant information with regard to instructional materials in TVET colleges
2. Show both the trainees and instructors of the TVET colleges the importance of planning, preparing utilizing and evaluating the effectiveness of visual instructional materials in teaching and training process.
3. The professional teachers and students in other fields who may get chance to read this study may get valuable information that help them to tackle the problems encountered in the process of utilizing visual instructional materials.
4. Other researchers as a source of reference to carry out the study in depth.

1.6. Delimitation of the Study

Conducting a research at a wider range usually leads to difficulty of management. Due to this fact the study is confined to factors affecting utilizing visual instructional materials only in two fields namely, industrial and business fields. The study is conducted only in one out of five government TVET colleges and in one private TVET College out of thirty-eight private TVET colleges in Addis Ababa City Administration.

1.7. Limitations of the study

The researcher believes that the limitation of this study lies in the fact that the findings and conclusions made may not be adequate to represent both the regional and national TVET Colleges since the study dealt with only two colleges.

Data reduction in the data analysis process is subject to researchers bias.

The time constraint on the instructors, trainees and the deans to meet the demand of an in depth interview and focus group discussion is found to be a major limiting factor to gather sufficient information needed for the study.

1.8. Operational Definition of Terms

Instructional Aids

The term "Instructional Aids" is used here to mean all forms of teaching devices such as film strips, motions pictures, charts, models, mockups, display boards, text books, and various other printed materials... and are divides which help to make a lesson more understandable (Giachino, 1964: 160-161).

Media Center (Pedagogical center)

Is a place (section room or building) where all sorts of audio-visual materials and devices are located and made accessible to students or teachers. It can include library or be separate from it. If can also be called instructional materials center (Rosenberg and Doskey, 1976:133).

Visual Materials

Are real objects, diagrams, pictures, etc. used as aids to learning (Page and Thomas, 1977:359).

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1. Vocational Education

The history of vocational Education is as old as mankind. During primitive era, men used stone tools and sticks with which they dug out roots for their consumption and as a result vocation is occurred. Because of the progress in agriculture, division of work took place and then parents started teaching their children the kind of vocation they were engaged. During this period stone and wooden tools replaced by metal tools such as spear. Later on separation of agriculture from cattle hording took place and during this time water and wind mills which were used for sawing wood, carrying raft, pressing oil out of seeds, etc were put in to practice. During 18th century many types of improved tools, guns, heat engines were created. Such a gradual development of a society led the vocational education to take its current shape.

Here under the experiences of some selected countries of the world and Africa with regard to vocational education and training were briefly described.

2.2. Experiences of selected countries and Africa in TVET

2.2.1. United States of America

Following the technological progress, the late 18th century in United States schools begun to offer vocational education such as Manual Training and Mechanical Arts. Regarding this Lazerson, et al, (1962:58) states the following: in United States, vocational education took shape in the early 20th century by identifying itself with the democratization of access to secondary schooling and with assertion of schooling and economic relevance... in the later years, when the economic returns of schooling becomes less certain, the schools were judged to the failing. The educators, Webb, et al., (1996:594) asserts that secondary and post secondary programs of vocational education designed to provide an alternative to colleges preparation and to prepare students for employment in all occupations except those requiring at least a baccalaureate degree.

2.2.2. France

In 1905 another country, the French built the school in a number of Vietnamian cities for children of French residents. The assumption behind by the colonial government for the

Vietnamese was that they were meant to be humble farmers and artisans who were to be taught rice farming and certain craft which they already knew were not took keen to learn and the education had a vocational education orientation but towards the traditional occupations. These French schools were the only means by which Vietnamese could educate themselves. In 1924 the government passed a law that required all educational institutions to fulfill certain conditions adherence to government curriculum, hiring only government trained, Aparana Basu, (1965: 69)

2.2.3. Africa

During the 1950s, Africa Education expanded rapidly. Aided by the development funds of the various colonies by the United Nations and by technical assistance from many countries. Along with the opening of the European missions, the establishment of foreign trading posts, and importation of colonial military forces in the later years of 19th century, a new type of education-western education was introduced in Africa. In the pre World War I period the colonial government left the Africa educational program almost exclusively to the missionaries and those areas could be successful in the propagation of Christianity. Areas where Islam was firmly entrenched or regions in which local resistance appeared insurmountable were by passed and in some cases, remained island and mission nations (Scanlon, 1964). The above idea is also supported by Bassu (1965).

And therefore, because of the above and other cases or factors, the African Vocational Education characterized by the following:

- The first was that period in which the coming-of-age ceremonies, and the rites de passage, provided the principal education of the African child that later weakened by the pressure of westernization.
- Imported education from various areas of Europe and United States and "in the Muslim areas, there was often a fusion of this indigenous instruction with the imported Islamic teaching".
- Almost exclusively religious group carried on African education until the close of World War I by the introduction of Western Education by European Missionaries.
- During the third period, the ante-bellum era- the metropolitan powers undertook to provide financial and professional assistance for education of Africans.

- ❖ The final period, which began at the close of World War II, saw the emergence of a renewed interest in African education, and plans were drawn by all the colonial powers for its extension.
- ❖ In many of the African countries, Vocational Education is widely sailed as a tool for liberation and solution to economic problems. Vocational Education in many African countries is stemmed from their colonial countries that contributed much to their economic development.

In these countries and also in Africa vocational education is widely sailed as a tool for solutions for economic problems and contributed much to their development and from their experiences there is much to learn to our country, Ethiopia.

2.3. The Historical Development of TVET in Ethiopia

The history of technical and vocational education in Ethiopia goes back to the early 1940s when the focus was on technical subjects that included industrial arts in the general secondary schools with the aim of meeting the needs for skilled labor for economic development and growth, (see school curriculum, MOE, 1963).

Here the more pressing needs for higher skilled manpower specialized technical and vocational schools such as Addis Ababa Technical School (Tegbare-ed), Bahir Dar polytechnic, Jima and Ambo Agriculture schools were established in the 1940s and 1950s. History of Development of Ethiopian General Education, MOE, (1976) and it is also cited in Wanna Leqa, (1995). The institutions were training mid-level technicians in Auto mechanics, machines, wood technology, electricity, drafting, surveying, general mechanics, agro-mechanics, etc. According to MOE's report to the World Bank (1963), the objective of offering such courses in the secondary and technical schools, was to meet technical man power requirements, as well as improving opportunities of employment in different factories, companies and production enterprise, "instead of moving from office to office looking for clerical work as before..."

In the early 1960s most of the senior secondary schools were converted to comprehensive secondary school due to the high dropout rate, the growing demand for skilled manpower in vocational areas, and the increasing difficulties of access to higher education (Girma Amare, 1974). However, the development of vocational education and training in the past, was not adequate and not up to the desired level and quality owing to failure to give proper attention

and emphasis to the sub sector. Consequently the training system could not actively generate a work force capable of supporting and effectively contributing to the needs of the diverse sector of the economy.

The country's education before 1994 was entangled with complex problems of relevance, quality, can develop student's cognitive abilities, skills and attitudes were some of the major problems of the nation's education system. Furthermore, inadequate facilities, insufficient training of Instructors, overcrowded classes, shortage of books and other teaching materials and inadequate utilization of VIMs were part of the major problems.

In order to address these problems, the current Ethiopian government designed a new education and training policy, which emphasizes the development of problem solving abilities of the trainees. The TVET system as part of the whole educational system is expected to enable the trainees develops working skill, knowledge, and attitude, which will enable them, secure employment and/or create their own job. In order to promote skill, knowledge, attitude and experiences to the trainees, and to achieve TVET quality, utilizing VIMs in the process of the training is highly important.

2.4. Visual instructional materials

Visual instructional materials are those that are designed and used by Instructors to supplement the lesson presented in the classroom, in the shop, and outside the classroom and shop. Since learning and training in industrial and business areas is more intricate, good training can be effected only when all available VIMs that are helpful in providing best information to the trainees are used.

Giachino (1964: 160) explains visual instructional aids as follows: "the term instructional aids are used here to mean all forms of teaching devices such as film strips, text books, and various other printed materials. Aids themselves are employed primarily to supplement teaching methods. Thus, a chart may be used during a lecture to show pictorially what is being presented orally may be utilized during a demonstration to illustrate better specific operating stapes of an intricate machine".

He further states that the instructional aids are considered extremely valuable because they:

1. Clarify verbal explanations.
2. Demonstrate principles which otherwise are often difficult to visualize and
3. Add realism and interest to learning situation

Therefore, VIMs are valuable in conveying information, which cannot be realistically given by means of a lecture, or showing some industrial processes, which is impossible to demonstrate in the training shop. For example, a movie depicting the production of aluminum would be stimulating introduction to the study of aluminum. A lecture on nail and screw size becomes more meaningful if the Instructor can present a chart which displays the type and size of these items.

2.5. Characteristics of Good Teaching Aids

It is appropriate at this point to indicate some of the most desirable characteristics of a good VIM in order that these criteria may be recalled in designing, constructing and evaluating aids of various types. In planning, selecting utilizing and evaluating the VIMs, Weaver and Bollinger, (1949:88), cited the following characteristics of good teaching aids:

1. The aid should be large enough to be seen by all the class.
2. The important part should stand out. This is often done by using colors, crosshatching or shading.
3. Only essentials are included. All unnecessary details are eliminated. They are both worthless and confusing.
4. A teaching aid is used for a specific instructional purpose. It should not be used to fill in time or entertain students.
5. All lettering and notes should stand out; use plain letters that can be read form the rear of the room.
6. The vocabulary used in the notes should be within the ability of the student's understanding
7. It should be portable, easily moved and transported. An aid may be used for several years.
8. It should be displayed before the class only when needed.... It should be covered or removed when not in use.
9. It should be made to scale. Models or aids not in proportion confuse the learner and give him a false impression of an object.
10. It should be durable and strongly constructed to withstand continued use.
11. It should conform to accepted technical practice in the field... The efficient teacher helps abreast of the technical improvements in his subject.
12. It should show evidence of good workmanship and carefully finished in good state.

13. It should explain an abstract idea, show a relationship, or present a sequence of procedure that cannot be clarified without it.
14. The lettering should be large and bold to avoid eyestrain from any point in the classroom. Avoid decoration and prevent distraction.
15. Charts, drawings and photography's should be properly protected with paint, shellac, glass, cellophane, or other protective materials.

2.6. Training Instructors to Utilize VIMs

Most Instructors coming out of universities and colleges have considerable training in using the newer technologies. As their number increase, administrators expect more pressure on training institutes and colleges and that will increase their inventories of high-tech equipment with a consequent increase in the use of newer technologies. Henich, et al, (1993:24). So such a professional trainers who graduated from Higher Education may put considerable impact on utilizing visual instructional materials in the TVET program and using their potential can change and improve the effectiveness of the training.

2.7. Where to get Visual Instructional Materials?

There are different place where trainees and teacher trainers' may do reference works, the public, the school library, the shop and drafting room, and at home. Trainees should be encouraged to use the library because it is a suitable place for them to do reference work and planning at it also provide both trainers and trainers with reference materials such as hand books, dictionaries, encyclopedia and other books and pamphlets. According to Neal, (1958: 96), the functions of pedagogical centers' head is explained as follows: The pedagogical center head can be an important resource for the trainers to get VIMs because they may be in need of new materials for updating the content of the unit (or the task). Heinich, et al, 1993 support this idea as follows: The PCH can tell you about materials housed in a local resource center or school library media center. The trainer might survey some of the published media reference guides to get a general idea of what is available. Unfortunately, no single comprehensive guide exists for all VIMs available in all media formats in all courses the trainers may have to consult several sources.

In addition to the above points, classroom training can be enriched through the use of various sources. Among the many sources of VIMs some are:

- By making one's own instructional materials.

- By borrowing from business and industries
- By making field trip- that is to take trainees to the places where direct experience is taking place such as to business or to industries
- Asking assistance from other fellow trainers or professional person
- Inviting guest speaker who shares his experience to class regarding the lesson topic of the course as whole
- Curriculum guide. (Heinich, 1993).

Therefore trainers of these fields can make use of these and all other available sources of VIM to enrich the learning and training of trainees.

2.8. The Resourceful Instructor

Instructional aids ranges from the simple and available materials such as chalkboard to the complex and costly, such as engines, cash register, overhead projects, and transparencies. The resourceful instructor is not likely to use all the VIMs. However, after considering the factors in material selection he/she uses those that are available and feasible to the lesson/or task. The careful selection and utilization of instructional materials may determine the success or failure of instructional process. In view of this explanation, Giachino (1964:109) states the following: "There are many sources of materials that the teacher should be acquainted with. The teacher must evaluate these materials and select the one that is best suited to meet the needs of the class." And regarding the teacher participation, he points out that: ...as a teacher, you should now preview the materials by following the study guide. The study guide may be ready made by procedure of the material, teacher made or teacher pupil made. It is your responsibility as a teacher to plan the class preparation and make follow up so as to achieve the purpose for which materials is being used.

Concerning preparation of teacher- pupil made materials, Neal (1958:104-105) states the following: "There will be times when you will realize that you are not communicating with the pupils. You may search to find a book, a chart or some other materials to help you put across your point no success". Often time, in a situation like this, you will find the answer ties in producing your own instructional materials. It might be a large chart drawn on an ordinary white paper. The backside of old roll maps or posters works well, too. Here you have a teaching material that is easy to store and that use fits the teaching needs, and expensive to prepare.

When doing teaching, pictures may be more valuable and are found in magazines. When not used, they may be filed and kept in good places. Concerning pictures as a source of teaching materials and their method of filing, Neal, (1958:105) states the following:

> *As a teacher you will find that you are constantly searching for materials that will make your teaching more meaningful. One of the best sources of such materials is still or flat pictures found in magazines. They may be filled.... When you start your file, begin with general headings like, animals, communication, and transportation.*

Another concern is, it is not necessary to make instructional aids from the best or new materials. Many aids have been built from salvage materials or objects.

Besides the above facts, a resourceful teacher must be considerate of all the teaching aids made in the school shop, PC or even purchased items; they should be stored in a good place. Schultz and Curry, (1953:90) states about storage of instructional materials as follow: While the teacher and students are designing a new teaching aid, they should determine where it is going to be stored when it is not being used. If a teacher fails to think this problem through, he will probably ends up with an aid that can not be properly stored or displayed; it may be too large or even the wrong shape.

Since teacher trainers spend considerable time and energy in planning and construction of the aids, they should be constructed to last for several years. Accordingly, they must withstand wear and they should give taught to the treatment to which the aids will be subjected. According to the function of aids and initiation of creativity, Schultz and curry, (1953:88) state in their book as follows: "by producing teaching aids which are well engineered and attractive, the teacher encourages a high degree of craftsmanship from students. His efforts must always exemplify the standards that he hopes to encourage."

2.9. The Nature of TVET Training

Technical and business training areas of TVET which are followed a phase of general education, serves to familiarize trainees with tools, equipments, products, processes, and occupations of industry and businesses as well as the social and economic phenomena of the technological world in which they live and work.

According to the definition prepared by the American vocational association as stated in Giachino (1964:25), industrial arts education involves: Instructional shop work of non-vocational type which around the industrial and technical aspects of life today and offers

orientation through actual experiences, with materials and goods. It also serves as exploratory experiences, which are helpful in the choice of vocation.

The learning and training principles particularly applicable to learning and training situations in industrial arts and vocational education and training; Giachino (1964:47-48) states some of the points as follows:

> *Best learning results can be achieved when there is some means of applying what we learn. If reading assignments are made or if problem solving is being taught, it is best always to bring in some practical application to learning. More effective learning takes place when learning impression come through more than one of the senses. Seeing and hearing have come to present the most used senses in our modern scheme of education. In industrial arts and vocational education classes, the student is able to learn a great deal through the senses of touch and smell, especially the former.*

To effect best learning teacher trainers of these areas are required to plan a variety of activities. Regarding this Mayer and Mayer, (1995) revealed the following:

> *Many of their strategies have been identified through classroom research as being effective in keeping students involved in their studies and learning the required subject matter. Each teacher planned a variety of interesting activities for each class period so that students would read write, speak, listen speculate, and visualize other times and places.*

When the teacher trainer structures the contents to be learned into patterns that the trainees can recognize, they can easily store the learning in long term memory and retrieve the information in new situation. These required the teacher trainer encouragement of trainees. According to Mayer and Mayer, (1995) this idea is supported and explained as follows: When students are encouraged to engage in a variety of learning activities they are more likely to stay involved in their lesson and more likely to integrate their learning into useful intellectual patterns.

2.9.1. Planning to Train in Industrial and Business Areas.

A training plan is helpful in that it lists the proper tools, materials and visual aids needed for each lesson. Trainers who depend on the memories for this times frequently fail to secure everything necessary for training unit or demonstration. Several days before teaching a unit plan is helpful to the trainer to review the instructional points that have been identified and he/she may occasionally glance at his/her plan during classroom training. Regarding this point, Schultz and Curry (1959:61) states the following:

> *Good teaching requires careful planning. The teacher who teaches haphazardly from memory is bound to leave many instructional points. Untaught; good logical sequences for a class are likely to be overlooked; courses become static over the years since the teacher can not see the mistake that he is making. Careful planning makes the job meaningful and puts the work of the teacher on a scientific basis. .... a plan keep the*

class and the teacher on a track and provide an opportunity for students to move toward established goals in the allocated time.

Schultz and Curry (1959:61), further states some of the major points to be included in plans as follows:

- Objectives of the teacher of the unit or lesson with in the unit
- Materials needed by students to construct a project.
- Tools and equipments needed by students to do the work
- Materials, tools, equipments and other teaching aids needed by the teacher for each demonstration.
- Drawing or sketch for a project

A trainer of industrial and business areas are required to plan for training around the available materials, tools and equipments; otherwise, his training cannot be effective. Training in these fields can be affected greatly because of the fact that a teacher or other parties violet the teaching principle such as:

- Lack of semester or yearly planning of teachers
- Lack of not using salvage materials;
- Lack of demonstration;
- Not giving possible home take exams or assignments;
- Not using text book illustrations;

These points show that a trainer is not using a proper way of supplementing his lesson by some other method or methods. To integrate a lesson, a trainer must use different aids during his/her training in the classroom and in the shop and this arises form careful planning. The teachers operating with in various buildings and departments must evolve schedules so that all youngsters get maximum amount of instructional time possible (The Educator's Encyclopedia, in Smith, 1961:170).

2.9.1.1. Selection of Visual Instructional Materials

A teacher should also give attention to selection of VIMs, the purpose for which materials are to be used, the characteristics and special needs of trainees to be taught. In selecting VIM for instruction, a teacher- trainer must consider a variety of factors including the role it play in teaching learning and training process and the technical and practical aspects of the materials. Kemp (1968:228), states the following with regard to the selection techniques:

You probably wonder about availability of resources. If you selected a certain technique would the material and equipment be available? Another concern probably centered on cost. If you selected the technique that you felt was the best, could the school afford to supply you with the materials and equipment, which would be required? These materials are often called the "Logistics" of instruction.

2. 9.1.2. How to select Visual Instructional Materials

VIM is a catalyst for change in classroom process because it provides a distinct departure a change in context that suggests alternative ways of operating. Sandholtz, et al, (1997:48) support this idea as follow: Technology can drive a shift from a traditional instructional approach toward a more eclectic set of learning activities that include knowledge building situation for students.

Selection of visual instructional materials (VIMs) should be done with course objective in mind and in conjunction with the learning methods. On this point, Heinich, et al, (1993:34), explains the following:

once you have identified your evidence and stated your objectives, you have established the beginning points (avoidances present knowledge, skills and attitudes) and ending points (objectives) of instruction. Your task now is to build a bridge between these two points by choosing appropriate methods and media formats, then deciding on materials to implement these choices.

When selecting VIMs there are three options. Heinich, et al; states these options as follows:

1. Select available materials,
2. Modify existing materials, or
3. Design new materials

Other writers, Gagne, Briggs and Walter, (1992) also support this idea.

2.9.1.3. Selection criteria

The decision whether or not to use a particular piece of VIMs depends on several factors. Over the years scholars have debated about what criteria should be applied in selecting these materials. Studies have been conducted to quantify and validate various criteria. The net result is an understanding that different criteria are suitable for different situations. This trend summarized and presented by MC Alpine and Weston (1994: 19-30) in Heinich (1993) as follows: Recent research confirms the criticality of certain criteria in the appraisal of materials. Among the questions to be asked about each specific piece of media are the following:

- Does it match the curriculum?
- Is it accurate and current?

- Does it contain clear and concise language?
- Will it arouse motivation and maintain interest?
- Does it provide for learner participation?
- Is there evidence of its effectiveness (e.g., field test results)?
- Is it free from objectionable bias and advertising?
- Is a user guide or other documentation included?

According to kemp, (1968:228) " logistics refers to planning, handling, and implementation of materials and facilities". For selecting a technique is to look at the training aspect. According to him, the precondition for selecting instructional technique is stated as follows: "before a technique is selected the objectives must be clearly defined in a behavioral terms and then the content must be determined. The teacher must also know the centering behavior of each individual".

2.9.1.4. Designing Visual Instructional Materials

What does a professional visual designer think about when facing a visual design problem? The considerations are too numerous and complex to be spelled out fully here. However, there are a few fundamental principles of visual design that can be pursued even by novices. As is stated in Heinich, et al (1993:71).

For purposes of information and instruction, good visual design tries to achieve at least four basic goals in terms of improving communication between the massage sources (teacher) and receiver (learner):

- Ensure legibility as all the viewers can see the words and images.
- Reduce the effort required to interpret the message and understand it.
- Increase the viewer's active engagement with the message.
- Focus attention on the most important parts of the message.

Regarding the basic elements to be considered the same source as above explains the following: As is the case with selecting from available materials, certain basic elements must be considered when designing new material such as:

- Objective. What do you want your students to learn?
- Audience. What are the characteristics of your learners? Do they have the prerequisite knowledge and skills to use or learn from material?

- Cost. Is sufficient money available in your budget to meet the cost of supplies you will need to prepare for the materials?
- Technical expertise. Do you have the necessary expertise to design and produce the kind of materials you wish to use?
- Equipment. Do you have the necessary equipment to produce or use the materials you intend to design?
- Facilities. Is your design calls for use of special facilities available?
- Time. Can you afford to spend what ever time necessary to design and produce the kind of materials you have in mind?

2.9.1.5. Utilizing Visual Instructional Materials

Having selected, modified or designed VIMs, the instructors' then must plan how the materials will be used to implement their methods. They first preview the materials and practice implementation.

Next, prepare the class and make ready the necessary equipment and facilities. Then they can conduct the training using the utilization techniques. In addition to the above points, Heinich, et al, (1993:35), states the following: To be effective, materials based instruction should require active mental engagement by learners. There should be activities within the lesson that allow learners to process the knowledge or skills and to receive feedback on the appropriateness of their efforts before being formally assessed. No VIMs should be used with out prior screening. During the selection process the trainers should determine that the materials are appropriate for the audience and objectives. In using visual instructional materials, Neal (1958:105) states the following:

> *When using these pictures in your teaching, be necessary to find a way to preserve them for more permanency, such as by mounting pictures on cardboard.... If you are doing your work as a teacher in industrial arts education, for example, you may find that a little extra time spent in making up a set of wooden joints will pay a big dividends when you begin to teach units involving joint work.*

2.9.1.6. Preparing Visual Instructional Material /VIMs/

Next the trainer needs to prepare the VIMs to support the training activities they plan to use. This is true whether they are presenting the materials or their trainees are using them. According to Heinich, et al, (1993:49), and the above idea is supported in the following way: The first step is to gather all the materials and equipment that you and the students will need. Determine in what sequence the material and media will be used. Some teachers keep a list

of the materials and equipment needed for each lesson and an outline of the sequence in which the activities will be presented.

For teacher-based lesson, you may want to practice using the materials and equipment and for a student-centered lesson, it is important that students have access to all the materials, and equipment that they will need. The teacher's role becomes one of facilitator and you should anticipate what materials will be needed by the students and be prepared to secure any additional materials needed.

2.9.1.7. Prepare the environment for Good Learning

Wherever the learning is take place-in the classroom, in the media center, in the shop, on the athletics field the facilities will have to be arranged for proper student's use of materials and media. Certain factors are often taken for granted for any instructional situation-comfortable seating, adequate ventilation, climate control suitable lighting, and the like, Heinich, et al, (1993:50).

Research on learning tells us very clearly that what is learned from an activity depends highly on how the learners are prepared for the lesson, preparing the learners is just as important when you are providing a learning experience. Regarding this the scholars cited the following points. A proper warm up from an instructional point of view, may be similar to one of the following:

- An introduction giving a broader overview of the content of the lesson.
- Motivating statement that creates a need to know by telling how the learner will profit from paying attention.
- Cues directing attention to a specific aspect of the lesson. Heinich, et al, 1993:50).

Finally, evaluation also includes assessment of instructional media. Were your instructional materials effective? Could them be improved? Were they cost effective in terms of student achievement? Did your presentation take more time than it was really worth? Particularly after first use VIMs need to be evaluated determine whether future use, with or without modification, is warranted.

The results of your evaluation should be centered on an appraisal checklist.

- Did the media assist the students in meeting the objectives?

- Where they effective in arousing students interest?
- Did they provide meaningful student participation?

Class discussion, individual interviews, and observation of student behavior should be used to evaluate instructional material and methods. Failure to attain objective is, of course, a possible indication that something is wrong with the instruction. But analyzing student reaction to your instructional methods can be helpful in more subtle ways.

2.9.2. The Role of The TVET Principals/or Deans

The TVET principals can make available to their instructors main materials that are in libraries, school pedagogical center, and public utilities or privately owned. Public-spirited citizens are frequently inclined to give sets of books, equipments and other educational materials to the institutes. Dimock, (1993) states about leader support as follows: A transformational leader seeks to build a culture where individual members of staff strive to support and advance mutually determined outcomes for students. Sirgiovanni also supports the above idea in Dimock (1993:110).

If the college budget cannot afford some expenses Parent Teachers Association or local service centers may be willing to supply the deficiency. Here it is more likely that staff is informed about budget possibilities and constraints and have an active role in planning and allocating monies. But some principals forget their shared responsibility and Sands, (1949) supports this idea as follows:

> *Many school principals are inclined never to spend money when they can conveniently save it, irrespective of the cause and are satisfied if they can manage a budget with out increasing year expenditures. They entirely forget that the effectiveness of their school is measured by the educated product and not by the economic saving. To overcome such circumstance, it is a responsibility of the teacher to keep his/ her needs of visual aids constantly before the principals.*

Regarding the danger of poor delivery of training or giving training without using the instructional materials, Gagne, et al, (1992: 32) states the following:

Failure to improve the delivery of training system by utilizing VIMs may not lead to further planning until (1) some goals are changed, (2) some resources and constraints are changed, or (3) another delivery system can be conceived. Failure to do this may lead to piecemeal planning with generally unsatisfactory results. Luck of resolution of these issues may lead to various kinds of waste including (1) equipment and materials sitting unused because of lack of supporting personnel, (2) laboratories may not be used

because supplies was not budgeted for, (3) learning activities disrupted because of bad scheduling and goals not achieved because of essential prerequisite learning experiences were not provided. Together, principals and teacher trainers work to develop a common purpose themed to the improvement of teaching and learning or training to build a learning and inquiring community.

Adequate or sufficient human and material resources are critical considerations for effective TVET colleges. The number of personnel in the colleges must be sufficient to provide teacher trainers with time for staff development and to plan new activities. Rather than having all of there time scheduled for slack time during which they have some independence. They must have opportunities to experiment and invent or adopt an innovation, which is not possible in settings where efficiency has a higher priority than flexibility and creativity. They coordinate the work of all departments. Any system with more than one building or more than one school require considerable coordination among schools and departments.

The concept of resources also refers to the materials, supplies, and equipments that have VIMs in nature and require providing students with opportunities to learn. This idea is clearly supported by Gagne, Briggs and Wager (1992), as follows:

> *The design of that individualized system called for maximum use of available materials so that funds would be available for designing implementation plans, for performance measures to monitor students progress, and for computer costs to save teachers' time in scoring tests and keeping records. To help the trainer plan properly, the school administration plays a great role.*

Among the seven identifiable responsibilities of school administration the one that best suits to the topic under consideration is mentioned below:

> *Thus, it is the school administrator's responsibility to facilitate the necessary materials, which would be used in teaching learning process. A teacher alone can never do any thing without being provided with the necessary materials. Some school's provide a teacher with a kit of professional supplies, including stapling machines, staples, paper clips, scotch tape, ruler, note pads, pencils, ink, chalk, blackboard eraser, pen holder and points, thumb tacks, mucilage or glue, rubber erasers, colored pencils, and scissors. At the close of the year the teachers are asked to return these kits to main offices, and during the summer months each is re supplied before being returned to them. This has great merit in helping teachers handle many of the clerical details expected of them* (Educator's Encyclopedia, in Smith, 1961: 725).

So the TVET principals (deans) are expected to have strong consideration about instructors free time and other points explained under this topic because of their contributions to create the effective training institute.

2.9.3. The Role of TVET Instructional Materials Center

TVET Colleges are institutions, which serve as a base for certain field of knowledge and skills that are needed for the development of any country. The teaching learning and training process at this level needs much visual instructional materials development, and support. The ability of stimulating trainee's attitude and the possibility of changing verbal method of training to practical method depend on the competence of instructors in the college. Effectiveness in training can be achieved only if the trainees learn by their direct experience by the help of TVET instructional materials center such as pedagogical center and the library. The direct participation of trainees help them express their ideas, exchange their thought, encourages to learn and train more among themselves, and it widen their concept toward research activities and creative work.

In developed countries, there are pedagogical centers where professional staff members prepare and supply much of the instructional materials with little teacher trainers and trainees participation. But in our case, since there are no such professionals to prepare and provide the VIMs more responsibility is on Instructors of TVET Colleges and pedagogical center's heads. Today, TVET College pedagogical centers are coming to be seen as key elements in the work of TVET Colleges consequently, they are required to be broad in scope of their offerings. Teachers and school pedagogical centers as stated by Brown, (1969: 51-54) are:

a) Work together to clarify goals and objectives of the proposed instructional activities
b) Together determine functions related to the achievement of those objectives.
c) Work together in considering and selecting a variety of instructional resources.
d) Guide students in selecting and using materials through out the study period.
e) Evaluate the suitability and adequacy of facilities, resources and services utilized.
f) Schools pedagogical center heads furnish assistance to teachers and students in producing and applying instructional materials.

To fulfill the points mentioned above, the TVET College Pc's also have contribution in assisting instructors by providing the necessary help and supply prepared models, charts, and written guide materials.

Concerning the major roles and location of VIMs centers of TVET College, The Educator's Encyclopedia (Smith, 1961:725) states the following:

> *Instructional materials are shared among all teachers of the staff should be located in a central place in each school. Many school systems have a system wide instructional*

material center, which serves as a storehouse for a wealth of materials that are cataloged, maintained, and loaned out to teachers for their use and return. These materials include some that have been contributed by pupils in schools system and kept for future display, use, and model.

2.9.4. The Need to Give Training to TVET Pedagogical Center's Head (TVETCPCH)

A pedagogical center's head is a trained person who has knowledge and skill in selection, designing and developing visual instructional materials that are to be used by teacher trainers of a certain TVET College. He also helps and guide teacher trainers in developing their own visual instructional materials.

In some TVET Colleges in the absence of Pedagogical Center's Head, (PCH) a teacher-trainer himself is a responsible person who must select, design and develop proper VIMs that best suits to his/her lesson. When a trainer or a PCH does this s/he must be careful of certain important points. Regarding this Kemp, (1968:3-8) mentions some of the points as follows:

... their approach to the subjects, abilities to select illustrations of content and understanding of the role of media in instruction.
As an initial experience with instructional design approach, start small with only a few immediately controllable elements (possibly to serve one or two lesson objectives) and build toward an ultimate design.
Develop general guidelines for evaluation when objectives and content considered. Then plan and prepare the specific evaluation instruments (tests, performances, and so forth) during planning and production of media for instruction.

Carefully consider the selection of media to carry content and serve objectives. Such questions, as these should be asked;

- What will be the cost?
- How much time is available to locate or prepare each item?
- What technical skill or service is required?
- Should available materials (commercial or previously prepared) be considered for use?
- Will these be problem in utilization or are appropriate facilities, equipment, and supervision available and convenient?
- Are the planned materials the most appropriate to objectives and content?

Recognize that an extensive quantity and a wide variety of visual instructional materials probably will be needed for this method or group and individual instruction. Benefit by what

is known about how people learn. Make use of research findings.... As you plan the instructional design and then develop specific material. Therefore, PCH or a teacher trainer must have adequate training in selecting, designing and developing the appropriate instructional materials and make best use of it by integrating to the lesson.

2.9.5. The Instructor's Problem

The instructor has numerous obligations to his/ her students and a multiplicity of duties to perform their prime purpose of his/ her efforts is to aid the learner in the acquisition of knowledge as well as to direct his training toward the acquisition of skills. Weaver Bollinger and Weaver, (1949: 2). The above writers also added their view on teachers' performance as follows: Despite the organized instruction many teachers still cling to verbal symbolism as their only medium of instruction (Ibid 1949:2). These writers explained about the teacher problem in the following manner:

> *The teacher problem is how to convey to students certain ideas, basic knowledge, and information in the shortest possible time and in accordance with the principles of learning. To accomplish this objective and to aid the learner in retaining the knowledge, teaching aids are practically indispensable. They will not replace the teacher, but they will make the teaching job easier and result in greater learning (Ibid 1949:2)*

The other educators, Matiru, Mwangi and Schlette, (1995:930), explained their opinion on this point as follows:

> *Many teachers, faced with more students, more lectures but fewer resources, are unhappy about the future. We believe positive developments in these areas are now taking place throughout the world for we may note the increasing introduction of teaching and learning improvement centers with in schools, together with various staff development initiatives and international programs directed at improving teaching and learning. At the same time, however, better recognition and rewards for good teaching together with the provision of adequate resources are necessary.*

Regarding good teaching, the above educators stated the following points:The significant influence is the research into student learning which has resulted in new developments in educational technology including;

- More active and student centered teaching method requiring less teacher talk.
- More dialogue and positive action to help students exchange action, their passive listening role for more active, participative and independent learning (Ibid: 1995:160).

To effects - good teaching an understanding of teaching methods and instructors' willingness to update them will help. Based on this opinion, instructor trainers are required to take

inventory of their own performance and try to improve then after. And as suggested by Matiru, Mwangi, and Schlette, (1995) here is some question to be answered, by teachers. These are:

1. Do you relay mainly on the lecture method or are you approaches more active and student centered?
2. Do your students listen passively or participate actively and even engage in independent learning?
3. What changes have you made in your teaching in recent years? What further changes do you need to make?

CHAPTER THREE

3. The Research Design and Methodology

3.1. Research Design

The major purpose of this study is to examine the major problems encountered and current practices of utilizing visual instructional materials in Addis Ababa City government and private TVET colleges. A quantitative research design is employed; nevertheless, some qualitative aspects are also considered to complement the quantitative aspects. The colleges were selected because of offering of wider range of fields, their newly organization, experience in TVET and near by location that would help the researcher to save time and other cost constraints and also availability of their staff members.

3.2. Research Methodology

The research method employed was descriptive survey method because it is appropriate to collect adequate information on the issue raised in the study. As previously mentioned, the aim of this study is to investigate the major problems that affect utilizing of visual instructional materials in the process of training in Misrak and Selam TVET colleges and to give some suggestions that would help the respective trainers, the trainees and the colleges to improve their current trend of utilizing visual instructional materials.

In Addis Ababa, currently there are five government and thirty-eight different types of private TVET colleges offering training in twenty-six different trades. Since the study focuses on industrial and business fields, most of the private TVET colleges have no integrated fields of these types except six colleges. Thus, the two colleges were selected randomly (one of which is a governmental and the other is private TVET colleges) and are located near by in the same sub city called Yeka.

3.3. Source of Data

In order to examine the performance, the different categories of respondents were involved in the study. The categories of respondents included the instructors, the trainees, and the Deans.

3.4. Instruments of Data Collection

The researcher employed questionnaires, structured interview as well as focus group discussion and observation as instruments of data collection.

Accordingly, two sets of questionnaires were employed to collect data from instructors and trainees and interviews were conducted with deans of the respective TVET colleges. Moreover, to obtain information that couldn't have been gathered through questionnaires, focus group discussion, observation checklist and document analysis were carried out.

3.5. Sample Population and Sampling Techniques.

Two TVET colleges were selected out of five government and "six private" TVET colleges by their availability and the number of fields they have incorporated using simple random sampling technique. Out of the total 287 respondents, 48 instructors and 239 trainees were used as a sample population out of 92 instructors and 902 trainees respectively. Out of the questionnaires distributed, 91.8 percent was achieved. In addition to this 13 interview and focus group discussion respondents were interviewed and discussion was conducted on the issue.

CHAPTER FOUR

4. Presentation, Analysis and Interpretation of data

This chapter comprises two major parts. The first part presents about the characteristics of respondents and part two deals with the analysis and discussion of the data collected from subjects to seek answers for the basic questions raised in the statement of the problems.

To obtain the related data, the questionnaires were distributed to 48 instructors' and 239 trainees in Misrak (governmental) and selam (private) TVET colleges in Yeka sub city Administration in Addis Ababa. Out of these questionnaires 42 and 237 copies were filled and returned by instructors and trainees respectively. The information obtained through interview and focus group discussion was used as a complementary data for the analysis.

4.1. Characteristics of Instructor, Trainee, Interview and focus group discussion participants

The characteristics of the subjects were examined in terms of sex, age, experience in teaching, qualification and grade level as indicated in table 1, below.

Table 1: Respondents Characteristics

No	Items		No. of instructor respondents				No. of trainee respondents				Interviews and focus group Discussion Respondents			
			Misrak TVET College	%	Selam TVET College	%	Misrak TVET College	%	Selam TVET College	%	Misrak TVET College	%	Selam TVET College	%
1	Sex	Male	17	44.73	3	75	91	53.21	62	93.94	8	80	2	66.7
		Female	21	55.26	1	25	80	46.76	4	6.06	2	20	1	33.3
		Total	**38**	**100.00**	**4**	**100**	**171**	**100**	**66**	**100**	**10**	**100**	**3**	**100**
2	Age	15-20	-	-	-	-	167	97.66	39	59.1	-	-	-	-
		21-25	5	13.18	2	50	-	-	24	36.4	-	-	1	33
		26-30	10	26.32	1	25	4	2.34	3	4.5	4	40	2	67
		31-35	3	7.89	1	25	-	-	-	-	2	20	-	-
		36-40	3	7.89	-	-	-	-	-	-	3	30	-	-
		41-45	5	13.16	-	-	-	-	-	-	1	10	-	-
		46-50	7	18.42	-	-	-	-	-	-	-	-	-	-
		Above 50	5	13.16	-	-	-	-	-	-	-	-	-	-
		Total	**38**	**100**	**4**	**100**	**171**	**100**	**66**	**100**	**10**	**100**	**3**	**100**
3	Qualification	BA/BSC	8	21.06	2	50	-	-	-	-	3	30	2	67
		BED	2	5.26	-	-	-	-	-	-	1	10	-	-
		DIPLOMA	28	73.68	2	50	-	-	-	-	6	60	1	33
		Total	**38**	**100**	**4**	**100**	-	-	-	-	**10**	**100**	**3**	**100**
4	Service year	0-5	6	15.79	1	25	-	-	-	-	-	-	-	-
		6-10	5	13.15	1	25	-	-	-	-	-	-	-	-
		11-15	2	5.26	2	50	-	-	-	-	2	20	2	67
		16-20	3	7.92	-	-	-	-	-	-	1	10	1	33
		21-25	4	10.52	-	-	-	-	-	-	2	20	-	-
		26-30	13	34.21	-	-	-	-	-	-	4	40	-	-
		31-35	5	13.15	-	-	-	-	-	-	1	10	-	-
		Total	**38**	**100**	**4**	**100**	-	-	-	-	**10**	**100**	**3**	**100**
5	Grade level	10+1	Year -	-	-	-	23	14	-	-				
		10+2	1 -	-	-	-	43	25.15	2	3.03	-	-	-	-
			2 -	-	-	-	85	50	37	56.06	-	-	-	-
		10+3	1 -	-	-	-	16	9.36	-	-				
			2 -	-	-	-	-	-	10	15.15	-	-	-	-
			3 -	-	-	-	4	2.34	17	25.76	-	-	-	-
		Total					**171**	**100**	**66**	**100**				

As shown on table 1, item 1, there is by far gender in balance between male and female instructors and trainees in the private college than the government college. Regarding sexes that of the female respondents were by far few than the male respondents in both categories in the private college.

In regard to sex, when we see the respondents of interview and focus group discussion that of the government college, 8(80percent) and 2(20 percent) were male and female respectively. Where as in the private college, 2(66.6 percent) and 1(33.3 percent were male and female respectively. In age wise, majority of the instructor respondents 10(26 percent) in the government TVET College were in the age range of 26 to 30 and in contrast to this, 2 (50 percent) of the same category of respondents in the private college were between age ranges of 21 to 25. In general, the age range of instructors in government TVET College is 26 to 50 or above and that of the private TVET College is between 21 and 35 respectively.

From this, it is possible to conclude that the instructor respondents in the private college are younger and are active in participating age range than the government TVET College.

As to the trainees, majority of the respondents, 167 (98 percent) and 39 (59.1 percent) in the government and private TVET colleges respectively, were between age ranges of 15 to 20. The rest 24(36.4percent) in private college were between age range of 21 to 25 while that of the government college is null in this range. Others 4(2.34 percent) and 3(4.5percent) both in the government and private colleges respectively were between age range of 26 and 30. Therefore, from the discussion presented above, it is possible to conclude that the age range of the trainee respondents in the private college is much wider and are matured to provide responses to the questions presented to them than the trainee respondents in the government college.

As it can be seen on the table 1, another category is the interview and focuses group respondents. In this category, 4(40 percent) and 2 (67 percent) of the respondents fall between 26 to 30-age range. The respondents in this category in the government college spread over age range of 26 and 45, while the respondents in private college were between age range of 21 and 30. Therefore, it is possible to conclude that majority of the respondents in the government college are aged than the respondents in the private college.

The third item on the table 1 is the service years of the respondents. On the table, the majority of instructor respondents, 13 (34 percent) in the government college have 26 to 30 years service and 2 (50 percent) of the same category of respondents in the private college have service years in between 11 and 15. At the same time, when we see the service years of the instructors in the government

college, they are highly experienced in teaching than the same category of respondents in the private college. Regarding the service years, majority, 4 (40 percent) of the interview and focus group discussion respondents, in the government college have 26 to 40 and that of the private college have 11 to 15. The service years of respondents of this category in the government college is between 11 and 35 and of the private college is between 11 and 20.

From this, we can conclude that the interview and focus group respondents in the government college are experienced in their profession than the respondents of the same category in the private college. Concerning the qualification, majority, 28 (74 percent) of the instructor respondents in the government college are diploma holders and the rest 10 (26 percent) with BA/BSC and BED degree. In contrast to this, 2 (50 percent) of the respondents in the private college are diploma holders and the rest 2 (50 percent) have BA/BSC degree.

The other category on the table 1 is the interview and focuses group respondents. Out of the ten respondents in the government college, 6 (60 percent) are diploma and the rest 4 (40 percent) with BA/BSC and BED degree. At the same time the respondents of the same category in the private college, 2(67 percent) and 1(33 percent) are with BA/BSC degree and diploma respectively.

Based on the explanation presented above, it is possible to conclude that the majority of instructor respondents in the government college are diploma holders and in contrast to this, the instructors in the private college have equal combination in qualification that is in Diploma and Degree.

The last item on the table 1 is the grade level of the trainees. Out of the total, 171 (100 percent) trainee respondents in the government TVET college, 85 (50 percent) are currently attending in 10+2, year two, the rest 43 (25.15 percent) were attending in 10+2, year one, 23 (14 percent) in 10+1, 16(9.36 percent) in 10+3, year one and 4 (2.34 percent) in 10+3, year three. When we see the same category of the respondents in the private college, out of the total, 66 (100 percent), 37 (56.06 percent) were attending their training in 10+2, year two, 17 (25.76 percent) and 10 (15.15 percent) in 10+3, year three and two respectively and the rest 2 (3.03 percent) in 10+2, year one.

From the discussion presented above, it is possible to conclude that the trainees in both colleges have adequate knowledge to respond to the questions rose to them regarding utilization of visual instructional materials in their respective college.

4.2. Utilizing Visual Instructional Materials

To be effective in training, materials based instruction requires active mental engagement by learners. An attempt was made to investigate utilizing VIMs in the process of training in Misrak (government TVET College) and Selam (private TVET College) and the research is basically focused on experiences of instructors and trainee respondents in utilizing VIMs in TVET process. Having selected, modified or designed VIMs, the instructors' then must plan how the materials will be used to implement their methods.

Table 2: Selecting and Utilizing VIMs

No	Items	Misrak TVET Collage		Selam TVET College	
		No	%	No	%
1	Do you utilize the available visual aids effectively?				
	Yes	34	89.47	4	00
	No	4	10.53	-	-
	No response	-	-	-	-
	Total				
2	do you select visual instructional materials?				
	Among the available materials	18	47.3	2	
	Modify the existing materials	8	21	1	
	Design new materials	9	23.7	1	
	No response	3	8	-	
	Total	**38**	**00**	**4**	**00**
3	When selecting VIM what criteria do you apply to fit your lesson?				
	Fitness to the curriculum	10	26.31	2	50
	Trainees interest and motivation to the material	8	21.05	1	25
	Trainees participation to learn from the material	9	23.68	-	-
	Trainees bias and advertisement of a material	1	2.63	1	25
	No response	8	21.05	-	-
	Total	**38**	**00**	**4**	**00**

N= Number of respondents

On the table 2, item 1, instructor respondents were asked to respond on utilizing VIMs in the process of training. In response to this, of the respondents 34 (89.47 percent) in the government and 4(100 percent) in private colleges assured that they were utilizing VIMs effectively and the rest 4 (10.53 percent) in the government college were not utilizing VIMs.

Selection of VIMs should be done with course objective in mind and in conjunction with the learning methods. For selecting a technique is to look at the training aspect and the material selected should fit the lesson. In this regard, 10(26.3 percent) of the instructor respondents in the government and 2 (50 percent) in the private colleges were used the criteria such as fitness to the curriculum. On the other hand, 9 (23.7 percent) in the government and 1(25 percent) in private colleges preferred using trainees participation to learn from the material. And some others, 8(23.7 percent) and 1(25 percent) of the same category of the respondents in government and in private colleges respectively showed their preference of using motivation and interest of trainees to the material. From the above explanation, most of the instructor respondents in the two colleges preferred selecting VIMs using the selection criteria's such as mentioned below:

- Fitness to the curriculum
- Trainee's participation to learn from the materials and
- Trainee's motivation and interest to the material.

Where as, the other significant number of instructor respondents in the government college showed their opinion of using the users guide or other documentation included in the material. Still others, very few numbers of respondents were using the criteria 'trainees bias and advertisement of a material'.

Therefore, from the explanation presented above it is possible to conclude that majority of the instructor respondents in the government and the entire category in the private college were utilizing VIMs that are selected using the appropriate criteria.

4.3.The Trainees Willingness to Participate in the process of VIMs.

As instructors changed their views about teaching and learning as well as utilizing more and more visual instructional materials, the trainees also had to adjust their thinking about their roles in the process of TVET. The table below presents how well the trainers initiated their trainees to participate in the process of creating VIMs.

Table 3: Trainee's willingness to Design, Prepare, Collect and Evaluate Visual Instructional Materials.

No	ITEMS	Misrak TVET collage (Instructors' Response)						Selam TVET collage (Instructors' Response)					
		Yes	%	No	%	NR	%	Yes	%	No	%	NR	%
1	Do the trainees are willing to: -												
	a) Design VIMs	28	73.6	5	13.2	5	13.2	4	100	-	-	-	-
	b) Prepare VIMs	30	78.9	3	7.9	5	13.2	4	100	-	-	-	-
	c) Collect VIMs	19	50	8	21.0	11	29.0	3	75	1	25	-	-
	d) Evaluate VIMs	20	52.6	7	18.4	11	29.0	4	100	-	-	-	-
		TRAINEES RESPONSE											
2	Do trainers motivate trainees to participate in areas of:												
	a) Preparing plans	127	74.3	40	23.4	4	2.3	40	60.61	25	37.87	1	1.52
	b) Preparing VIMs	116	67.8	49	28.7	6	3.5	53	80.3	12	18.18	1	1.52
	c) Designing VIMs	105	61.4	60	35.1	6	3.5	39	59.09	23	34.85	4	6.06
	d) Collecting VIMs from community sources	89	52.0	72	42.1	10	5.9	20	30.30	41	62.12	5	7.58
	e) Evaluating the effectiveness of VIMs	93	54.4	66	38.6	12	7.0	27	40.91	35	53.03	4	6.06

NR= No response

On table 3, item 1, of the instructors were asked the willingness of their trainees to design, prepare, collect and evaluate the effectiveness of visual instructional materials used, the respondents, in the government college 28(73.6 percent), 30(78.9 percent), 19(50 percent) and 20(52.6 percent) responded 'yes' for the issue raised above. In contrast to the government college, 4(100 percent) in the private college showed their opinion that the trainees were willing to design, prepare and evaluate the effectiveness of VIMs 3(75 percent) to collect such materials from the community sources out side their colleges. Others 5(13.15percent), 3(7.9percent), 8(21.05percent) and 7(18.42 percent) of the instructor respondents in the government college and 1(25 percent) of the same category in the private college replied that their trainees were not willing to participate in designing, preparing and evaluating and the rest 1(25 percent) in collecting VIMs. For the same issue the rest of the respondents in the government college showed 'no response'

According to the instructors response explained above the following can be concluded. Majority of them in government and almost all in the private colleges agreed that their trainees are willing to participate in designing, preparing, collecting, and evaluating of VIMs. But significant numbers of the instructor respondents in the government college do not agree to the above opinion.

On table 3, item 2, the trainee respondents were asked to give their response whether their instructors were motivated them to participate in planning, preparing designing, collecting and evaluating the effectiveness of VIMs or not. In response to the question, of the respondents 127(74.27 percent), 116(67.84 percent) 105(61.4 percent), 89(52.05 percent) and 93(54.39 percent) in the government college and 40(60.61 percent), 52(80.3 percent), 39(59.09 percent), 20(30.30 percent) and 27(40.91 percent) in the private college agreed that they were motivated by their instructors to participate in those areas accordingly. Others 40(23.39 percent), 49(28.65 percent), 60(35.09 percent), 72(42.1 percent) and 66(38.6 percent) in the government and 25(37.87 percent), 12(18.18 percent), 23(34.85 percent), 41(62.12 percent) and 35(53.03 percent) in the private colleges replied 'no'. The rest 4(2.34 percent), 6(3.51 percent), 6(3.51 percent), 10(5.85 percent) and 12(7.01 percent) in the government college and 1(1.52 percent), 1(1.52 percent), 4(6.06 percent), 5(7.58 percent) and 4(6.06 percent) in private colleges showed no stand to the question.

Thus, according to the trainees response, majority of the instructors in both colleges were motivated them to participate in the process of creating and utilizing VIMs, but significant number of the respondents complained the instructors because they weren't motivated them to participate in the process of VIMs.

4.4. The Instructional Materials' Centers and their Role

The teaching learning and training process needs much visual instructional materials development and support. The direct participation of trainees in the process of VIMs, can help them express their ideas, exchange their thought, encourages to learn, to share experiences among themselves, and it can widen their concept towards research activities and creative work. To over come such activities, the TVET pedagogical and other material centers can play much role in these areas.

Table 4: The Instructional Material centers

No.	Items	Instructor respondents				Trainees Respondents			
		Misrak		Selam		Misrak		Selam	
		N	%	N	%	N	%	N	%
1	In your college is there pedagogical center?								
	a) Yes	5	13	-	-	62	36	37	56
	b) No	31	82	4	100	105	62	27	41
	c) No response	2	5	-	-	4	2	2	3
	TOTAL	**38**	**100**	**4**	**100**	**171**	**100**	**66**	100
2	If your response for the question number 1 above is 'yes' who is the head person?								
	a) Pedagogical center's head	2	5.3	-	-	-	-	-	-
	b) One of the Instructors'	1	2.6	-	-	-	-	-	-
	c) No response	35	92.1	-	-	-	-	-	-
	TOTAL	**38**	**100**						
3	What support do you get from the Instructional Material centers?								
	a) Provide selecting appropriate teaching aids	5	13.15	-	-	50	29	24	36
	b) Locate where to get teaching aids	2	5.26	-	-	23	13	7	11
	c) Get technical advice	4	10.53	-	-	18	11	-	-
	d) Guide trainees to study on the material	4	10.53	-	-	10	6	2	3
	e) Borrow the necessary materials	4	10.53	-	-	4	2	-	-
	f) No response	19	50.0	4	100	66	39	33	50
	TOTAL	**38**	**100**	**4**	**100**	**171**	**100**	**66**	**100**
4	Does the pedagogical center's head have training in the area?								
	a) Yes	3	8	-	-	-	-	-	-
	b) No	7	18	-	-	-	-	-	-
	c) No response	28	74	4	100	-	-	-	-
	TOTAL	**38**	**100**	**4**	**100**	-	-	-	-

N= Number of responses

The knowledge and skill building activities of trainees must not end with privately held constructions. Trainee's paraphrases, new ideas, preparing models and drawings compositions need to be shared among them selves in a critical light. The need to be reviewed by peers, explained to parents, presented to expert panels, considered for entry in to personal portfolios, and reviewed and assessed against rigorous standards. Based on this points, the pedagogical and other materials centers allow the trainees to discover and correct

misconceptions. The condition and performance of these centers from the respondents' point of view in these two colleges is summarized in table 4 above. On the table 4, item 1, the instructors and trainee respondents were asked to give their response to the question. In response to this 31 (82 percent) and 4 (100 percent) of the instructor respondents both in the government and private colleges respectively responded that there is no pedagogical center in their college and others 5 (13.15 percent) of the same category of respondents only in the government college replied that there is pedagogical center in their college. To add more on this, 105 (62 percent) and 27 (41 percent) of the trainee respondents both in government and private colleges respectively answered that there is no pedagogical center in their respective college. And the rest 62 (36 percent) and 37 (56 percent) of the trainee respondents both in the government and private colleges respectively responded that there is pedagogical center in their college. The rest 4 (2 percent) in the government, and 2 (3 percent) in the private colleges were provided no response.

According to the instructors' response, there is no pedagogical center in their colleges. Another category of the respondents, called the trainees in the government college agreed to this idea where as the majority of the trainee respondents in private college said there is pedagogical center in their college. Related to this, using the open-ended question, the respondents were also asked to give their response on what other options were being used in the absence of pedagogical center in their respective colleges and some of the instructor and trainee respondents said 'the department shops' were used as a substitute to the pedagogical center. Regarding this the interview and focus group respondents also gave the same response as to the instructors. According to the researcher's observation with out having adequate information, significant number of trainee respondents in both collages responded that there is pedagogical center in their colleges. Therefore, it is possible to conclude that there is no pedagogical center in both colleges and in its absence some of the instructors and trainees were used department shops as a substitute to it. The absence of pedagogical center in both colleges highly affected the transformation of knowledge and skill and more than this it affected the quality of TVET performance.

On the same table, item 2, was asked by seeking a response on the lead person of the pedagogical center. In response to this, majority of instructors 35(92.1 percent) in the government college gave no response and others 2(5.3 percent) and 1(2.6 percent) in the

same college replied that this center is headed by permanent personnel and by one of the instructors assigned respectively.

Item 3, on the table 4 was intended to check the type of support provided to the instructors and trainees by the instructional materials center. In response to this, 19(50 percent) and 4(100 percent) of the instructor respondents in the government and private colleges respectively gave no response. The rest of the same category of respondents in the government college 5(13.15 percent) and 2(5.26 percent) responded that the centers provided help in selecting appropriate teaching aids and locate places where to get the aids respectively. The rest of respondents in the same college 4(10.53 percent) responded that they get technical advice, guidance to trainees to study on the material and borrow the necessary materials. Another category, the trainee respondents, 66(39 percent) and 33(50 percent) both in the government and private colleges respectively gave 'no response'. Others, 50(29 percent) and 24(36 percent), 23(13 percent) and 7(11 percent), 18(11 percent) and none, 10(6 percent) and 2(3 percent) and 4(2 percent) and none in the government and in the private colleges respectively and sequentially replied that they get help in selecting appropriate teaching aids, locate the places where to get the aids, technical advice, guide trainees to study on the materials and borrow the necessary materials.

From this explanation and observation made by the researcher using the checklist it is possible to conclude that there is no pedagogical center in these collages, and also the pedagogical centers head. In absence of this center, the department shops were used as a VIMs center. In addition to this, the support provided by the instructional materials centers in both colleges to the instructors and trainees' regarding VIMs was not adequate.

4. 5. Utilizing Visual Instructional Materials

A training plan is helpful in that it lists the proper tools, materials and visual aids needed for each lesson. To conduct training effectively, instructors should utilize several materials. The table below shows the type of visual instructional materials utilized by instructor respondents.

Table 5: The type of Visual Instructional Materials Utilized

No	Items	Misrak TVET collage								SELAM TVET Collage							
		Yes		No		NO		Total		Yes		No		NO		Total	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1	Do you utilize VIMs of the following types?																
	a) Real objects	32	84.2	2	5.3	4	10.5	38	100	4	100	-	-	-	-	4	100
	b) Models	21	55.3	9	23.7	8	21.0	38	100	4	100	-	-	-	-	4	100
	c) Overhead projectors	21	55.3	8	21.0	9	23.7	38	100	4	100	-	-	-	-	4	100
	d) Drawings	23	60.5	8	21.1	7	18.4	38	100	4	100	-	-	-	-	4	100
	e) Pictures	24	63.1	5	13.2	9	23.7	38	100	4	100	-	-	-	-	4	100
	f) Charts	26	68.4	5	13.2	7	18.4	38	100	4	100	-	-	-	-	4	100
	g) Reference books	34	89.4	2	5.3	2	5.3	38	100	4	100	-	-	-	-	4	100
	h) Textbooks	31	81.6	3	7.9	4	10.5	38	100	1	25	3	75	-	-	4	100
	i) Other printed materials	29	76.3	3	7.9	6	15.8	38	100	4	100	-	-	-	-	4	100

N=Number of respondents

As can be seen from the table 5, majority of the instructor respondents 32(84.2 percent) and 4(100 percent), 21(55.3 percent) and 4(100 percent), 21(55.3 percent) and 4(100 percent), 23(60.5 percent) and 4(100 percent), 24(63.1 percent) and 4(100 percent), 26(68.4 percent) and 4(100 percent), 34(89.4 percent) and 4(100 percent), 31(81.6 percent) and 1(25 percent), and 29(76.3percent) and 4(100 percent) both in the government and private colleges respectively and sequentially responded that they were utilizing VIMs such as real objects, models, overhead projectors, drawings, pictures, charts, reference books, text books, and other printed materials in the order of the percentage explained above. Others 2(5.3 percent), 9(23.7 percent), 8(21.0 percent), 8(21.0 percent), 5(13.2 percent), 5(13.2 percent) 2(5.3 percent) all in the government and 3(7.9 percent) and 3(75 percent) both in the government and private colleges respectively and sequentially responded that they were utilizing VIMs that are mentioned above. The rest 4(10.5 percent), 8(21.0 percent), 9(23.7 percent), 7(18.4 percent), 9(23.7 percent), 7(18.4 percent), 2(5.3 percent), 4(10.5 percent) and 6(15.8 percent) of all the respondents in the government college gave 'no response'.

The over all result of this investigation and observation made using the check list revealed that majority of the respondents in the two colleges were utilizing the variety of visual instructional materials in the process of training but the rest below one fourth of the respondents in both colleges were not utilizing such materials in the process of training.

4.6. Steps Used in the Process of VIMs

Instructors' plan varied tremendously in scope and focus. Some instructors planned small lesson, while others planned month long interdisciplinary, project based units (Dwyer, 1997). Having this fact, in order to value the instructors' performance, they were asked to rate the steps they were used in the process of utilizing VIMs using the rating scales 'very high', 'high', 'medium', 'low' and 'very low' and the following table presents their response accordingly.

Table 6: Using Steps in the Process of VIMs

No	Items	Ranks														
		Name of TVET college	VH (5)	%	H (4)	%	M (3)	%	L (2)	%	VL (1)	%	No R.	%	Total	%
1	Steps in the process of utilizing VIMs															
	. Analyze the learner against the materials you are planning to use.	Misrak	14	36.8	13	34.2	7	18.4	2	5.3	-	-	2	5.3	38	100
		Selam	-	-	2	50	2	50	-	-	-	-	-	-	4	100
	. State objectives	Misrak	11	28.9	18	47.4	4	10.5	2	5.3	-	-	3	7.9	38	100
		Selam	4	100	-	-	-	-	-	-	-	-	-	-	4	100
	. Select appropriate visual aids	Misrak	19	50	14	36.8	2	5.3	1	2.63	1	2.63	1	2.63	38	100
		Selam	-	-	2	50	1	25	1	25	-	-	-	-	4	100
	. Utilize visual aids	Misrak	15	39.45	15	39.45	4	10.5	2	5.3	-	-	2	5.3	38	100
		Selam	1	25	2	50	1	25	-	-	-	-	-	-	4	100
	. Require active learner participation	Misrak	18	47.37	11	28.9	4	10.5	2	5.3	1	2.63	2	5.3	38	100
		Selam	-	-	3	75	-	-	1	25	-	-	-	-	4	100
	. Evaluate and revise the material used	Misrak	15	39.45	11	28.9	7	18.4	2	5.3	1	2.63	2	5.3	38	100
		Selam	-	-	2	50	1	25	1	25	-	-	-	-	4	100

VH= very high, H=high, G=good, F=fair, L=low, and No R=no response

In this part of the questionnaire, the instructor respondents were asked to rate the steps they used in the process of VIMs in their respective colleges. The majority of respondents in the government college 14(36.8 percent), 13(34.2 percent), 7(18.4 percent) and 2(5.3 percent) rated 'very high' to 'low' and both 2(50 percent) in the private college rated 'high' and

'medium' respectively and that these respondents analyzed the learners against the materials they were planning to use where as the rest 2(5.3 percent) of the respondents in the government college showed 'no response' on this point. Others 11(28.9 percent, 18(47.4 percent), 4(10.5 percent) and 2(5.3 percent) in the government college orderly rated from 'very high' to 'low' and 4(100 percent) of the respondents in the private college rated 'very high' and that they were analyzed VIMs utilized against the objectives they were intending to meet. The rest 3(7.9 percent) of the respondents in the government college gave 'no response' on this point.

The next item presented to them was selecting of an appropriate visual aids and of the respondents 19(50 percent), 14(36.8 percent), 2(5.3 percent), 1(2.63 percent) and 1(2.63 percent) in the government college rated from 'very high' to 'very low' and 2(50 percent) and both 1(25 percent) in the private college rated 'high', 'medium' and 'low' respectively. Regarding utilization of VIMs, 15(39.45 percent), 15(39.45 percent), 4(10.5 percent) and 2(5.3 percent) of the respondents in the government college rated from 'very high' to 'low' and 1(25 percent), 2(50 percent) and 19(25 percent) of the same category of respondents in the private college rated starting from 'very high' to 'medium' respectively. On the same table next to the last item is selecting VIMs by requiring active learner participation and of the total 38 respondents in the government college, 18(47.37 percent), 11(28.9 percent), 4(10.5 percent), 2(5.3 percent) and 1(2.63 percent) rated 'very high' to 'very low' and 3(75 percent) and 1(25 percent) of the same category in the private college rated 'high' and 'low' respectively.

The last item, the respondents asked about evaluation and revision of the material utilized in the process of training. In response to this, 15(39.45 percent), 11(28.9 percent), 7(18.42 percent), 2(5.3 percent) and 1(2.63 percent) in the government college rated 'very high' to 'very low' and on the other hand 2(50 percent) and both 1(25 percent) of the respondents in the private college rated 'high' to 'low' respectively.

The overall result of this investigation revealed that majority of the instructor respondents in the government college rated 'very high', and 'high' and almost but not all of the same category of respondents in the private college rated 'high' and 'medium' were used the appropriate steps in utilizing VIMs. When compared the performance of the instructors in the two colleges, the instructors in the government college follow these steps appropriately

than the private college. But in general these steps were inadequately utilized in both colleges.

4.7. Materials used in preparing visual aids and training offered to instructors.

To improve the quality of TVET performance, instructors because of many reasons are expected to prepare VIMs from materials that have low cost, this in turn require the instructors' knowledge and skill enriched through training. The table below shows the type of materials used in preparing visual aids and whether the instructors have training on VIMs or not.

Table 7: Materials Used to Prepare Visual Aids and Training offered to the Instructors

No	Items	Misrak TVET collage		Selam TVET college	
		N	%	N	%
1	Do you prepare visual aids from:				
	a) Salvage materials	10	26.3	3	75
	b) New materials	16	42.1	1	25
	c) Other sources	4	10.5	-	-
	d) No response	8	21.1	-	-
	Total	**38**	**100**	**4**	**100**
2	Do you have training in the area of VIMs?				
	a) Yes	17	45	4	100
	b) No	16	42	-	-
	c) No response	5	13	-	-
	Total	**38**	**100**	**4**	**100**

N= number of responses

In response to the item 1 on table 7, of the respondents 10(26.3 percent) and 3(75 percent) and 16(42 percent) and 1(25 percent) in the government and private colleges used salvage and new materials respectively to prepare VIMs. Others 4(10.5 percent) in the government college used other sources of materials and the rest 8(21.1 percent) of them in this college gave 'no response'.

So from the above explanation we can conclude that most but not all of the instructor respondents in the private college used salvage materials to prepare VIMs, while the majority of the respondents in the government college used new materials. The rest significant number of respondents in the government college used salvage and other materials.

Teaching staff, which receives high quality training, technical assistance, consultation and opportunities for professional development through various menses feel they are being treated as professionals and motivated to perform their work as effectively as possible.

On the table 7, item 2 depicts, 17(45 percent) of the respondents in the government, 4(100 percent) of the same category in the private college, and the interview and focus group respondents in both colleges responded that the instructors have taken training. The rest of respondents 16(42 percent) in the government college replied 'no', where as others 5(13 percent) showed 'No response' on this point.

Therefore, regarding short-term training, as seen from the responses presented above, that of the private college done its duties effectively than the government college because, more than half of the respondents in the government college were not exposed to get training on utilization of visual instructional materials.

4.8. Sources of visual instructional materials

There are many sources where trainees and instructors may get visual aids and some of the sources are, the community, the school library, the department shops, and business organizations. In addition to these, there are also other sources of VIMs. These are; by making one's own instructional materials, asking assistance from fellow trainer(s) or professional person(s), inviting guest speakers, and curriculum guide (Henich, 1993).

The following table presents the possible sources of VIMs and the responses obtained using the rating scales applied from 'very high' to 'very low'.

Table 8: Sources of VIMs

No	Items	Name of the college	VH	%	H (4)	%	M (3)	%	L (2)	%	VL (1)	%	No Res.		Total	%
													N	%		
1	Sources of VIMs a) Department shop	Misrak	16	42.1	10	26.3	1	2.63	1	2.63	2	5.3	8	21.1	38	100
		Selam	1	25	3	75	-	-	-	-	-	-	-	-	4	100
	b) Other departments in the college	Misrak	1	2.63	4	10.5	13	34.2	4	10.5	6	15.8	10	26.3	38	100
		Selam	1	25	1	25	2	50	-	-	-	-	-	-	4	100
	c) Pedagogical center	Misrak	1	2.63	3	7.9	-	-	1	2.63	13	34.21	20	52.63	38	100
		Selam	--	-	-	-	1	25	2	50	1	25	-	-	4	100
	d) The library	Misrak	13	34.2	9	23.7	9	23.7	2	5.3	1	2.63	4	10.5	38	100
		Selam	2	50	2	50	-	-	-	-	-	-	-	-	4	100
	e) Business organizations	Misrak	4	10.52	5	13.10	3	7.9	2	5.3	9	23.7	15	39.5	38	100
		Selam	1	25	3	75	-	-	-	-	-	-	-	-	4	100
	f) Private sources	Misrak	9	23.7	6	15.8	2	5.3	1	2.63	11	28.94	9	23.7	38	100
		Selam	2	50	1	25	1	25	-	-	-	-	-	-	4	100
	g) Community sources	Misrak	2	5.3	2	5.3	5	13.1	-	-	15	39.5	14	36.8	38	100
		Selam	-	-	1	25	3	75	-	-	-	-	-	-	4	100
	h) By preparing One's own	Misrak	12	31.57	6	15.78	4	10.5	3	7.9	5	13.15	8	21.1	38	100
		Selam	-	-	2	50	2	50	-	-	-	-	-	-	4	100
	i) Inviting guest lecturer	Misrak	-	-	2	5.3	6	15.78	4	10.52	14	36.8	12	31.6	38	100
		Selam	-	-	1	25	1	25	2	50	-	-	-	-	4	100
	j) The curriculum guide	Misrak	13	34.2	9	23.7	4	10.5	2	5.3	3	7.9	7	18.4	38	100
		Selam	1	25	3	75	-	-	-	-	-	-	-	-	4	100

VH= very high, H=high, G=good, F=fair, L=low, N=number of responses

When asked about using the department shops as a source of VIMs, of the instructor respondents 16(42.1 percent), 10(263 percent), 1(2.63 percent) and 2(5.3 percent) in the government college rated from 'very high' to 'very low' and the same category in the private college 1(25 percent) and 3(7 percent 5) rated 'very high' and 'high' respectively.

The next item on the same table presents VIMs borrowed from other departments and utilized and of the respondents in the government college, 1(2.63 percent), 4(10.52 percent), 13(34.21 percent), 4(10.52 percent), and 6(15.8 percent) rated from 'very high' to 'very low' and the same category of respondents in private college both 1(25 percent) and 2(50 percent) rated 'very high' 'high' and 'medium' respectively.

Another item on table 8 was pedagogical center and of the respondents 1(2.63 percent), 3(7.9 percent), 1(2.63 percent) and 13(34.21 percent) in the government college rated 'very high' 'high', 'low' and 'very low' respectively while other over 50 percent gave 'no response'. For the same source of VIMs, the same category of respondents in the private college 1(25 percent), 2(50 percent) and 1(25 percent) rated 'medium', 'low' and 'very low' respectively.

Regarding using the library as a source VIMs the respondents in the government college 13(34.21 percent), 9(23.68 percent), 9(23.68 percent), 2(5.3 percent) and 1(2.63 percent) rated 'very high' to 'very low' respectively, and similar respondents in the private college rated 2(50 percent) for both 'very high' and 'high'.

For business organizations as a source of VIMs, of the respondents in the government college 4(10.52 percent), 5(13.1 percent), 3(7.9 percent), 2(5.3 percent) and 9(23.68 percent), rated 'very high' 'high', 'low' and 'very low' respectively. While similar category of the respondents in the private college 1(25 percent) and 3(75 percent) rated 'very high' and 'high' respectively.

The next item on the same table shows private source of VIMs. In response to this, of the respondents in the government college 9(23.68 percent), 6(15.78 percent), 2(5.3 percent), 1(2.63 percent) and 11(28.94 percent), rated 'very high' to 'very low' respectively and similar category in the private college 2(50 percent) both 1(25 percent) rated 'very high' 'high' and 'medium' respectively. Of the respondents in the government college that used community source of VIMs, 2(5.3 percent), 2(5.3 percent) 5(13.1 percent) and 15(39.5 percent) rated 'very high' 'high', 'medium' and 'very low' respectively and similar category of the respondents in the private college 1(25 percent) and 3(75 percent) rated 'high' and 'medium' respectively. Others who prepared and utilized their own sources, 12(31.57 percent), 6(15.78 percent), 4(10.5 percent), 3(7.9 percent) and 5(13.15 percent) in the

government college rated 'very high' to 'very low' respectively and that of the private college 2(50 percent) both rated 'high' and 'medium'. The next to the last of the sources used was inviting guest lectures and of the respondents in the government college 2(5.3 percent), 6(15.78 percent), 4(10.52 percent) and 14(36.8 percent) in the government rated 'high' 'medium' 'low' and 'very low' and similar category in the private college both 1(25 percent), and 2(50 percent) rated 'high' 'medium' and 'low' respectively.

The last source of VIMs used was the curriculum guide and of the respondents in the government college 13(34.2 percent), 9(23.7 percent), 4(10.5 percent), 2(5.3 percent) and 3(7.9 percent) rated 'very high' to 'very low' and the same category in the private college 1(25 percent) and 3(75 percent) rated 'very high' and ' high' respectively.

Summing up we find majority of the respondents who rated 'very high', 'high' and 'medium' were used different types of sources of VIMs and among the sources 31(81.6 percent) and 4(100 percent) of the respondents in the government and in the private colleges respectively utilized library. Secondly, the department shops and curriculum guide were both equally used by the respondents 27(71.1 percent) and 4(100 percent) in the government and the private colleges respectively. Thirdly, of the respondents 22(57.9 percent) and 4(100 percent) in the government and in the private colleges respectively utilized the materials prepared by themselves and others 18(47.4 percent) and 4(100 percent) in the government and private colleges respectively were used other departments to get VIMs. Others 17(144.7 percent) and 4(100 percent) in the government and private colleges respectively used private sources. The rest all in the government and in the private colleges used community sources, invited guest lecturers. The last and the list 4(10.5 percent) and 1(25 percent) of the respondents in the government and in private colleges were used pedagogical center. Another category, the interview and focus group respondents were asked the same question to mention the available sources of VIMs and the respondents in both colleges replied that they got by buying from the market and donation form NGO's.

Thus, from the opinion of interview and focus group discussion and the instructor respondents, majority of the respondents in the government and almost the entire same category of the respondents in the private colleges were used the support materials gathered from different sources. But when we compare the utilization of VIMs of the two colleges, the performance of the private TVET College was better than the other college thus; the instructors in the Government College are expected to do much on this. But all of these sources weren't utilized adequately.

4.9. Trainees participation in creation of VIMs

At all of the sites, students began helping their peers and their teachers by providing technical assistance and tutoring on the use of the new technology. At first student role as a "teacher" was sporadic, spontaneous, and unstructured. Rather than sitting quietly and watching for their teacher to help them with the technology, trainees must take initiative and ask each other for assistance of volunteer information to one another. Besides increased interest, trainees exhibited more pride in their work (Dwyer, 1997:71). So it has of great value for instructors if peer group(s) participates in creating visual instructional materials and the table 8 below presents some of the activities required participating the peer group.

Table 9: Trainees participation in creation of VIMs

No	Items	Name of the college	VH (5)	%	H (4)	%	M (3)	%	L (2)	%	VL (1)	%	No Res.		Total	%
													N	%		
1	Areas of participation: a) Planning for VIMs	Misrak	7	18.42	12	31.6	6	15.78	6	18.78	3	7.9	4	10.52	38	100
		Selam	2	25	2	50	-	-	-	-	--	--	-	-	4	100
	b) Designing for VIMs	Misrak	7	18.4	12	31.6	8	21.1	4	10.5	3	7.9	4	10.5	38	100
		Selam	2	50	2	50	-	-	-	-	-	-	-	-	4	100
	c) Prepare VIMs	Misrak	12	31.57	14	36.7	7	18.4	2	5.3	1	2.63	2	5.3	38	100
		Selam	1	25	2	50	1	25	-	-	-	-	-	-	4	100
	d) Collect from community, business and other sources	Misrak	7	18.42	9	23.7	5	13.16	4	10.52	6	15.78	7	18.42	38	100
		Selam	-	-	1	25	3	75	-	-	-	-	-	-	4	100

VH=very high, H=high, M=medium, L=low, P=poor, and N=number of responses.

When asked regarding the extent of participation of the trainees' in the process of creating visual instructional materials, instructors in the two colleges were responded as follows: Of the respondents, in planning 7(18.42 percent), 12(31.6 percent), 6(15.78 percent), 6(15.78 percent), and 3(7.9 percent) in the government college rated 'very high' to 'very low' and similar category in the private college both 2(50 percent) rated 'very high' and 'high' respectively, in designing of VIMs, of the respondents in the government college 7(18.42 percent), 12(31.6 percent), 8(21.1 percent), 4(10.5 percent), and 3(7.9 percent), rated 'very

high' to 'very low' respectively, and similar category in the private college rated 2(50 percent) for both 'very high' and 'high'. In preparing VIMs, of the respondents in the government college 12(31.6 percent), 14(36.8 percent), 7(18.4 percent), 2(5.3 percent) and 1(2.63 percent) rated 'very high' to 'very low' respectively, and the same category of respondents in the private college 1(25 percent), 2(50 percent) and 1(25 percent) rated 'very high', 'high' and 'medium' respectively, in collecting VIMs from community sources 7(18.42 percent), 9(23.7 percent), 5(13.16 percent), 4(10.52 percent), and 6(15.78 percent) in the government college rated 'very high' to' very low' and of the respondents in private college 1(25 percent) and 3(75 percent) rated 'high' and 'medium' respectively.

On the other hand, the interview and focus group respondents were asked to respond if the instructors and trainees were participated in creating VIMs and they responded as follow: In the government TVET college participation of instructors in the area is very low and some of them were also observed preparing teaching aids like charts by themselves, while others preferred utilizing the existing materials and the rest few of them designed and created new aids. The same category of the respondents in private college responded as follows: many of the instructors were seen using the materials available, while others very few were tried to create new materials. At last the interview and focus group respondents suggested that 'to improve the rate of participation of the trainees in the process of VIMs, the current trend must be improved and only then the quality of training can be attained'. From the instructors response presented above, we can infer that the majority 25(65.8 percent), 27(71.1 percent), 33(86.8 percent), and 21(55.3 percent) in the government and all of the same category in private colleges rated 'very high', 'high' and 'medium' were proved that both of them were participated in the process of planning, designing, preparing, and collecting VIMs respectively. But when we compare the accomplishment of the two colleges, that of the government college needs to be improved.

4.10. Factors Affecting the Training

As many educators in TVET system and other professionals believes, the performance of TVET may be affected by many factors such as lack of training provided to instructors, budget constraint, poor coordination, shortage in supply of visual instructional materials and lack of facilities. By seeking to know the factors affecting TVET performance the table below presents the data (the responses) obtained from instructors in the two colleges.

Table 10. Factors Affecting TVET Performance

No	Items	Name of the college	VH (5)	%	H (4)	%	M (3)	%	L (2)	%	VL (1)	%	No Res.		Total	%
													N	%		
1	a) Giving short term training on difficult topics	Misrak	11	28.9	7	18.4	6	15.8	3	7.9	7	18.4	4	10.5	38	100
		Selam	-	-	3	75	1	25	-	-	-	-	-	-	4	100
	b) Budget constraint to purchase VIMs	Misrak	13	34.2	5	13.1	7	18.4	4	10.5	3	7.9	6	15.8	38	100
		Selam	-	-	2	50	2	50	-	-	-	-	-	-	4	100
	c) Community support	Misrak	3	7.9	4	10.5	4	10.5	8	21.1	11	28.9	8	21.1	38	100
		Selam	-	-	1	25	2	50	1	25	-	-	-	-	4	100
	d) Supply of VIMs	Misrak	8	21.1	6	15.8	7	18.4	7	18.4	3	7.9	7	18.4	38	100
		Selam	-	-	-	-	3	75	1	25	-	-	-	-	4	100
	e) Deans willingness to: Coordinate, control, and facilitate the process of VIMs.	Misrak	12	31.6	8	21	5	13.1	2	5.3	6	15.8	5	13.2	38	100
		Selam	-	-	1	25	2	50	1	25	-	-	-	-	4	100
	f) The Deans effort to support and motivate instructors to utilize VIMs	Misrak	7	18.4	12	31.6	9	23.7	3	7.9	3	7.9	4	10.5	38	100
		Selam	-	1	25	2	50	1	25	-	-	-	-	-	4	100
	g) Support and organization of the pedagogical center and library	Misrak	5	13.2	5	13.2	1	2.5	2	5.3	12	31.6	13	34.2	38	100
		Selam	-	-	1	25	2	50	1	25	-	-	-	-	4	100
	l) Organization and effectiveness of the department shops	Misrak	13	31.6	11	28.9	7	18.5	1	2.5	3	8.0	4	10.5	38	100
		Selam	-	-	3	75	1	25	-	-	-	-	-	-	4	100

4.11. Barriers to Conduct Effective Training

The table 10 presents about the factors affecting TVET performance. In regard to this, item 1 summarizes the trainers' response related to the short term training offered to them and of the

respondents in the government college 11(28.9 percent), 7(18.4percent), 6(15.8 percent), 3(7.9 percent) and 7(18.4 percent) rated 'very high' to 'very low' and similar category of the respondents in private college 3(75 percent) and 1(25 percent) rated 'high' and 'medium' respectively. As can be seen on the table, the short-term training is highly crucial to instructors in the government college than in private college because they were not adequately exposed to get short-term training and they believed that this in turn put great impact on their performance.

Regarding budget constraint, of the respondents in the government college 13(34.2 percent), 5(13.1 percent), 7(18.4 percent), 4(10.5 percent) and 3(7.9 percent) rated 'very high' to 'very low' respectively and that of the private college 2(50 percent) both rated 'high' and 'medium'. Therefore, budget constraint was created barrier to training in both colleges but that of the government was rather crucial than the private college.

4.11.1. Community Support

Since the community can provide much support to the TVET centers in many ways such as financial support, experience sharing, material and labor support. So, the TVET centers must work with community to get such support from it. Concerning this, of the respondents in the government college 3(7.9 percent) rated 'very high', 4(10.5 percent) both rated 'high' and 'medium', 8(21.1 percent) rated 'low', and 11(28. 9 percent) rated 'very low' and of the same category in the private college 1(25 percent), 2(50 percent) and 1(25 percent) rated 'high', 'medium' and 'low' respectively. As it is explained above, the government college was obtained better support from the community than the private college under the consideration.

4.11.2. Supply of VIMs

The concept of resources refers to the materials, supplies, and equipments that have VIMs in nature provide the trainees with opportunities to learn and this idea is clearly supported by Gagne, Briggs and Wager (1992). Adequate and sufficient supply of instructional aids help to maintain quality training, and the respondents were asked to show their opinion whether the supply of VIMs was affected the quality of training or not. Thus item 4, on the table presents supply of VIMs, and of the respondents in the government college 8(21.1 percent), 6(15.8 percent), 7(18.4 percent), 7(18.4 percent), and 3(7.9 percent) rated 'very high' to 'very low' and of similar category in the government college 3(75 percent) and 1(25 percent) rated

'medium' and 'low' respectively. Thus, the responses shows that in both colleges there was shortage of visual instructional materials and when we compare activities of the two colleges, that of the government college needs more attention to be given.

4.11.3. The Role of Principals

The strong link in practice between management and instruction warrants a similar connection in preparing teachers use of technology (Dwayer, 1997:74). It is the school administrator's responsibility to facilitate the necessary materials, which would be used in the teaching learning and training process.

As to the case of deans' willingness to coordinate, control and facilitate VIMs, 2(31.6 percent), 8(21 percent), 5(13.1 percent) and 6(15.8 percent) of the respondents in the government college rated 'very high', to 'very low' and the same category in the private college 1(25 percent), 2(50 percent) and 1(25 percent) rated 'high' 'medium' and 'low' respectively. Regarding giving support and motivation to the instructors to utilize VIMs by their respective deans 7(18.4 percent), 12(31.6 percent), 9(23.7 percent), 3(7.9 percent) and 3(7.9 percent) of the respondents in the government college rated 'very high', to 'very low' and in the private college 1(25 percent), 2(50 percent) and 1(25 percent) rated 'high' 'medium' and 'low' respectively.

In the above discussion, the majority of the respondents in both colleges rated from 'high' to 'medium' were not satisfied by the support and motivation given to them by their respective 'deans'. When we compare the effort of the deans in the two colleges, the support and motivation provided to the instructors, in the government college was unsatisfactory.

4.11.4. The Material Sources

There are places where trainees may do reference work the college library, the shop and at home. The library, according to Neal, (1958:96) "should provide a collection of reference materials on all phases of the curriculum---". He also added, "The library is a part of instructional materials center and it is used by teacher and pupils to locate, gather, and use materials". Having this fact, the researcher asked the respondents to respond on the performance of their respective library, pedagogical center and other material sources regarding their organization, efficiency in delivery of services, and support provided to the community members in the colleges. Of the respondents in the government college 5(13.2 percent) both rated 'very high' and 'high' 1(2.5 percent) rated 'medium', 2(5.3 percent) rated

'low' and 12(31.6 percent) rated 'very low' and of similar category in the private college only 1(25 percent) both rated 'high' and 'medium'.

Thus, following the above explanation, we can conclude that the organization and efficiency in delivering their duties the libraries in both colleges were worked unsatisfactorily and this affected quality of the training in these colleges. But, when compare the organization and releasing of their duties, the library of the private TVET College discharged its duties adequately than the library in the government TVET College. In regard to the department shops as it affects the TVET performance, of the respondents in the government college 12(31.6 percent), 11(28.9 percent), 7(18.4 percent), 1(2.5 percent) and 3(8 percent) rated 'very high' to 'very low' and of the similar category in the private college 3(75 percent) and 1(25 percent) rated 'high' and 'medium' respectively.

As seen from the response to the organization and performance of the department shops that of the private college is much better than the organization and performance of the same types of shops in the government college. But in any case the organization and efficiency of the department shops in the two TVET colleges was found to be insufficient.

4.11.5. Methods used in delivering Training

Beliefs about customers' answer the question, whom are we trying to serve, and whose loyalties and commitment are we trying to gain? In school terms, we want to know whom the school intended to serve directly and product for this are the school customers (Schlechty, 1997:67). In this regard, the trainees are the direct customers of any college and thus, they should be the center of focus of the trainers and the college activity.

Table 11: Methods used to Deliver Training in TVET

No	Items	Misrak TVET collage		Selam TVET college	
		N	%	N	%
1	Currently what method(s) do you use to conduct the training?				
	a) Rely mainly on the lecture	3	7.9	-	-
	b) Use less trainer talk.	2	5.3	1	25
	c) Conduct more active and trainee centered training.	23	60.5	3	75
	d) Conduct trainees' independent learning.	10	26.3	-	-
	Total	**38**	**100**	**4**	**100**

N=number of trainer respondents

In this regard, the respondents in both colleges were asked to give their response on the type of method they employed to conduct the training and of the trainer respondents, more than half, 23(60.5 percent) in the government and 3(75 percent) in the private colleges rated conducting more active and trainee centered training while others 10(26.3 percent) in the government college rated that they 'conduct participative and trainee independent learning'. The other respondents 2(5.3 percent) in the government and 1(25 percent) in the private colleges rated using less trainer talk and 3(7.9 percent) of the respondents only in the government college, rated that they relay on lecture.

From the above explanation it is possible to conclude that the majority of the respondents used different methods to discharge their training. And the methods used reflect that the trainers applied the trainee-centered method of training. In this regard, when we see the performance of the two colleges, the trainers in the government college were used the variety of training methods than the same category of the respondents in the private college. So the instructors in the government college used variety of the methods than similar category in the private college.

4.12. Time needed to Discharge the Duties.

Table 12: Availability of time to participate in the Process of VIMs

No	Items	Misrak TVET collage NTI= 190, NTT= 171								SELAM TVET Collage NTI= 20, NTT= 66						**Total**	
		Yes		No		No RES.		**Total**		Yes		No		No Res			
		N	%	N	%	N	%	**N**	**%**	N	%	N	%	N	%	**N**	**%**
1	Trainers' Response Do you have adequate time to plan, design, prepare, utilize and evaluate VIMs?																
	1.1 Plan	32	16.8	3	1.57	3	1.57	38	100	4	100	-	-	-	-	**4**	**100**
	1.2 Design	30	15.8	4	2.1	4	2.1	38	100	3	75	1	25	-	-	**4**	**100**
	1.3 Prepare	30	15.8	6	3.16	2	1.05	38	100	3	75	1	25	-	-	**4**	**100**
	1.4 Utilize	31	16.3	4	2.1	3	1.57	38	100	4	100	-	-	-		**4**	**100**
	1.5 Evaluate	30	15.	5	2.6	3	1.5	38	100	3	75	1	25	-	-	**4**	**100**
2	Trainees response Do you have time to prepare and collect VIMs?	86	50.3	80	46.8	5	2.9	171	100	21	31.8	42	63.6	3	4.6	**66**	**100**

NTI= Total Number of Instructor Respondents, NTT= Total Number of Trainees Respondents, N= number of responses.

To accomplish duties effectively, the instructors must take time, sit down and think about the task they are intending to perform and so as the trainees. Based on this fact, the instructor respondents were asked whether they have adequate time to plan, design, prepare, utilize and evaluate VIMs or not. In this regard, on the table 12, majority of the instructor respondents 32(84.2 percent), 30(78.94 percent), 30(78.94 percent), 31(81.58 percent) and 30(78.94 percent) in the government and 4(100 percent), 3(75 percent), 3(75 percent), 4(100 percent) and 3(75 percent) in the private colleges replied 'Yes' respectively and sequencially to all the entities stated above. The rest significant number of respondents 3(7.9 percent), 4(10.52 percent), 6(15.79 percent), 4(10.52 percent) and 5(13.15 percent) in the government college replied 'no' for planning, designing, preparing, utilizing and evaluating and the same category of the respondents in the private college replied 'no' for the entries designing, preparing and evaluating respectively.

From the discussion presented above, it is possible to conclude that majority of the respondents in the government and most but not the entire same category in the private

colleges has adequate time to plan, design, prepare, utilize and evaluate VIMs. For the same question another category, the trainee respondents 86(50.3 percent) in the government and 21(31.8 percent) in the private colleges replied 'yes', where as 80(46.8 percent) in the government and 42(63.6 percent) in the private colleges responded 'no'.

This shows that nearly half of the respondents in the Government College and majority of similar category in the private college responded that they have no time to prepare and collect VIMs. So the instructors' should insist the trainees to share their time to prepare and collect VIMs.

4.13. Trends in Planning, Evaluating and Storing VIMs

Table 13: Trainers' Opinion in Planning, Evaluating and Storing VIMs.

No	Items	Misrak TVET collage NTR= 38		Selam TVET college NTR= 4	
		N	%	N	%
1	Do you plan for visual instructional aids to fit to the lesson?				
	a) Yes	33	86.9	4	100
	b) No	1	2.6	-	-
	c) No response	4	10.5	-	-
	TOTAL	**38**	**100**	**4**	**100**
2	Do you evaluate the effectiveness of VIMs used at the end of the training?				
	a) Yes	21	55	4	100
	b) Some times	12	32	-	-
	c) No	2	5	-	-
	d) No response	3	8	-	-
	Total	**38**	**100**	**4**	**100**
3	Do you store VIMs in good places after conducting the lesson (task) for the latter reference?				
	a) Yes	28	74	4	100
	b) No	6	15.5	-	-
	c) No response	4	10.5	-	-
	TOTAL	**38**	**100**	**4**	**100**

N= number of trainer respondents, NTR= Total number of trainer respondents.

4.13.1. Planning for VIMs

Developing a plan is the starting point to conduct effective training on the course of TVET actions. So the trainers were asked whether they have experienced developing suitable plans for VIMs used in the process of training or not. Of the respondents (86.9 percent) in the government and (100 percent) in the private colleges replied 'Yes', the rest (2.6 percent) and (10.5 percent) only in the government college answered 'No' and 'No response' respectively. Thus, it can be concluded that majority of the respondents in both colleges experience in planning for VIMs but other significant number of respondents in the government college were not.

4.13.2. Evaluating VIMs

Trainers and trainees together are required to provide an intensive period to diagnosis. In this regard, it is important to review previous strengths and weaknesses in knowledge, skill and experience gained from using VIMs in the process of training. Following this practices, the respondents were asked whether they have evaluated the effectiveness of VIMs used in the process of training or not; and of the instructor respondents, 21(55 percent) in the government and 4(100 percent) in the private colleges replied 'Yes'. Others, less than half, 12(32 percent) in the government college were not doing the activity regularly. The rest 2(5 percent) in the same college replied 'No'. Other significant number of respondents in the government college showed 'no response' to the same issue. From this it is possible to conclude that the majority of the respondents in the government college and the entire same category of the respondents in the private college evaluated the effectiveness of VIMs after using in the process of training. But when we see the responses given for evaluation, significant numbers of respondents in the government college were identified doing such work sometimes or even not. So it is important to the trainers to see deeply the matter and such inconsistent nature in evaluation should be changed or improved. If not, the trend will continue affecting the quality of TVET achievement. In contrast, when we see the performance of that of the private college it is better than the government college but still it requires them to work hard on it.

4.13.3. Storing VIMs

The resourceful instructor must be considerate of all the visual aids made in the college shops, instructional materials center or even purchased items; they should be stored in good places. Schultz and Curry (1953:90) state about storage of instructional materials as follows:

While a teacher and students are designing a new teaching aid, they should determine where it is going to be stored when it is not being used. If a teacher fails to think this problem through, he will probably ends up with an aid that cannot be properly stored or displayed.

As far as item 3 of table 13 is considered, 28(74 percent) and 4(100 percent) of the instructor respondents in the government and private colleges respectively proved that they stored VIMs in good places where they can get back for later use or reference work. And, only 6(15.5percent) of the respondents in the government college were not considerate to perform such a task and the rest 4(10.5percent) of the respondents in the same college gave 'no response' on this. According to the explanation presented above, majority of the respondents in these colleges stored visual aids in good places where they can be secured. But when we see their performance, some of the instructors in the government college were negligent in accomplishing this particular duty where as all of the respondents in the private college are good at performing this duty.

CHAPTER FIVE

5. Summary of the Findings, Conclusions and Recommendations

This final part of the study deals with the summary of the findings, conclusions reached at, and the recommendations forwarded based on the findings.

5. 1. Summary of the findings

The major purpose of this study was to examine the utilization of visual instructional materials in the government and private colleges, Yeka sub city, in Addis Ababa city Administration. To this end, basic questions were raised which addressed areas such as planning, designing, selecting, utilizing, and evaluating VIMs, the deans role, willingness and motivation to participants in creation of VIMs, services provided from pedagogical center and the problems encountered in utilizing visual instructional materials.

The study was conducted in two colleges (one government and one private colleges) that are selected on purposive sampling technique to compare their performance in the same area. The study sample consisted of 42 instructors, 237 trainees and 13 interview and focus group discussion respondents. Hence, information was obtained from the sampled respondents through questionnaire, interview and focus group discussion.

Major findings of the study;

1. The study revealed that majority of the instructor respondents in the government and all of the same respondents in the private college plan, design, prepare, utilize, and evaluate VIMs, but some of the respondents in the government college do not perform such duties.
2. It was also found out that instructors' select VIMs from different sources using the selection criteria such as fitness to the curriculum, trainees' participation to learn from the material, and trainees motivation and interest to the material.
3. The study depicted that the majority of the trainees in both colleges are willing to participate in planning, designing, and collecting VIMs and evaluating the effectiveness of the materials used in the process of training.

4. The majority of the trainees in these colleges proved that their instructors in the colleges were motivating them to prepare, plan, design new materials, and collect VIMs from the community and other sources.
5. The study also showed that the majority of the instructors, trainees and interview and focus group discussion respondents, there is no pedagogical center in these colleges. But in the absence of the pedagogical center, the department shops serve as the visual instructional materials center as a substitute.
6. Most of the instructor respondents in these colleges create VIMs using the steps such as analyzing the trainees against the material to be learned, state objective(s), selecting the appropriate VIMs, and evaluating the material used.
7. Concerning raw materials used in preparing VIMs, majority of the trainers in the government college preferred using new materials while that of the private colleges using salvage materials. However, the instructors in both colleges preferred using salvage and new materials to prepare VIMs.
8. The study indicated that majority of the trainers in the government college have got no training related to VIMs and on the other hand all of the same category of the respondents in the private college have got training in the area.
9. The study also indicated that trainers in both colleges were participated in the process of creating VIMs, but as also proved by the interview and focus group discussion respondents, the participation of the trainers in the government college is very low.
10. Concerning the willingness and effectiveness in coordinating, controlling, and facilitating VIM, the deans' performance in the government college is much less and created problem more than the deans' performance in the private college. In addition to this, the majority of the respondents in both colleges were complaining the support and motivation given to instructors to utilize VIMs from their respective deans is very low.
11. The majority of respondents, that is 57.7% and 80.3% of respondents from government and private college respectively were listed the following problems: These are; lack of short term training given to the trainers, shortage of the budget which created in poor supply of VIMs, poor support from the community outside the college, lack of willingness of the deans to coordinate, control, facilitate VIMs, and weak support and motivation given to the trainers by their respective deans, absence of the pedagogical center, poor organization and inefficiency of the library and department shops, and the trainers willingness to utilize the available materials are some of the major problems encountered in the process of VIMs.

The problems mentioned above are more critical in the government college than in the private one.

12. The majority of instructors in both colleges were using variety of training methods such as active and trainee centered training, less trainer talk when delivering training and some of the respondents in the government college rely only on the lecture and others in the same college conduct participative and trainees independent learning.
13. The study disclosed that instructors in both colleges and trainees in the government college have time to plan, design, prepare, utilize and evaluate visual instructional materials to be used in the process of training where as the majority of the trainees in the private college have no time to do such works.
14. The study indicated that because of many problems encountered, Visual Instructional Materials that support to maintain the quality of training were not sufficiently utilized in the process of training and this trend at large affected the quality of TVET program.

5. 2. Conclusions:

- The purpose and value of VIMs in the process of TVET is not given due consideration by some of the trainers in the government college because these trainers left aside the duties such as planning, designing, preparing, utilizing VIMs and evaluating the effectiveness of the materials used in the process of training.
- Their respective trainers do not adequately motivate the trainees and as a result significant number of trainees were not exposed to get experience in planning, designing, preparing, utilizing VIMs, and evaluating the effectiveness of those materials used in the process of training and the trend affected the knowledge and skill to be acquired by the trainees.
- The support and motivation given by the deans to their respective instructors to utilize VIMs is unsatisfactory and such an action affects the quality of training in both colleges.
- The absence of pedagogical center, insufficient facilities of the library and department shops created little or no chance for the trainees to participate in the process of VIMs, to learn from the materials, to develop and share experiences, to exchange ideas and they couldn't get the necessary support that the center is expected to provide.

5.3. Recommendations

Based on the major findings and conclusions the researcher has made the following recommendations:

1. The instructors of the colleges under consideration are expected to give more attention to plan, design, prepare, and apply VIMs that would help them to expose their trainees in to real knowledge, skill and world of work and they should also evaluate together with their trainees the effectiveness of the materials learned in the process of training.
2. The instructors of the colleges should motivate and put the high interest of the trainees into practice by involving them in the process of planning, designing, preparing, collecting the materials available in their localities, utilizing VIMs and evaluating the effectiveness of the materials used in the process.
3. The deans of respective colleges should coordinate the work of the instructors, control the process of training related to utilizing VIMs effectively and facilitate the necessary materials that can be helpful in maintaining the quality of training and they also should give the necessary support to the instructors in all aspects of the process of VIMs and motivate them to utilize the teaching aids as effectively as possible.
4. Attention should be given to establish the pedagogical center and by then furnish this center with the necessary materials and equipments. The department shops and libraries in these colleges should be adequately facilitated and the services they provide to the community members in these colleges should be improved.
5. To improve the existing condition, the problems related to utilizing visual instructional materials, should be solved. Therefore, more attention should be given to train instructors frequently to help them tackle the progress in technology related to the area, to improve the budget allocation, and supply of the necessary materials,
6. All the recommended bodies in both colleges should give more support to instructors and trainees in the areas of Industrial Technology and Business fields so that they develop their knowledge and skill of utilizing Visual Instructional Materials.

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APPENDIX-A

Addis Ababa University

School of Graduate Studies

Department of Business Education

Addis Ababa

Questionnaire to be filled in by Instructors of Addis Ababa city Administration of TVET Colleges:

Dear Instructors:

A graduate student in the department of Business Education is conducting this study as part of a master's thesis.

The purpose of this questionnaire is to collect basic data for the study of utilization of visual instructional materials while conducting training in industrial technology and business areas in the colleges of Addis Ababa city Administration.

Since the success of this study entirely depends upon the responses, your sincerity (honesty and frankness) is of great value. The information to be obtained will undoubtedly be used for academic purposes. Certainly, your responses will be kept confidential.

Please read the instructions and each item carefully so as to provide your responses accurately. When you feel that you should change your responses, make sure that you have cancelled the previous ones.

Finally, please check that you have treated all the pages.

It is not required to write your name in any part of the questionnaire.

Thank you in advance for your time and concern.

Part one

Instruction: please complete this part of the questionnaire by putting "X" mark against your response and for items that required open answers, write down in the blank spaces corresponding to the questions.

General Information

1. Name of the college _____
2. Name of sub-city _____

Personal Data:

1. Sex a) male ☐ b) Female ☐
2. Age ☐
3. Positions: a) Instructor ☐ b) other ☐
4. Total year of experience in teaching _____
5. Educational qualification:
   a) College diploma ☐
   b) BA/BSC degree ☐ c) MA/ MSc ☐ d) other (specify) _____
6. What is your area of undergraduate specialization?
   a) Industrial Technology, Auto, ☐ Electricity, ☐ General mechanics ☐ others ☐
   b) Business, Accounting ☐ Secretarial Science ☐ Information Technology ☐ sales ☐ marketing ☐ purchasing ☐ c) other (specify) _____
7. If you have a master's degree, what was your area of specialization? _____

PART TWO

1. Do you utilize the available visual instructional aids effectively?
   a) Yes ☐ b) No. ☐
2. How do you select the visual instructional aids?
   a) Select available material ☐
   b) Modify the existing materials ☐
   c) Design new material ☐
   d) Others _____

3. When selecting visual instructional aids what criteria do you apply to fit your lesson?

a) Fitness to the curriculum ☐

b) Trainees motivation and interest to the material ☐

c) Trainees participation to learn from the material ☐

d) Trainees bias and advertisement of a material ☐

e) User guide or other documentation included in the material ☐

f) Other(s)_____

4) Are the trainees willing to_____?

	Yes	No.
a) Design visual aids?	☐	☐
b) Prepare visual instructional materials?	☐	☐
c) Collect VIMs from outside sources?	☐	☐
d) Evaluate visual instructional materials?	☐	☐

If your response for the above question is "No", what do you think is the reason?

_____

_____

_____

5) In your college, is there pedagogical center (PC)?

a) Yes ☐ b) No. ☐

6) If your response for the question No. 5 above is "Yes", who is the head person?

a) Pedagogical center head ☐

b) Teaches- Trainer ☐

c) Specify if other _____

7) If the college doesn't have pedagogical center, what do you think is the reason? _____

_____

8) If there is no pedagogical center what other substitute/mechanism be used? _____

_____

9) What services do you get from pedagogical center?

a) Provide support in selection appropriate teaching aids ☐

b) Locate where to get teaching aids ☐

c) Get technical advice ☐

d) Guide trainees to study on a material ☐

e) Borrow materials both to the instructors' and trainees' ☐

f) Specify if others _____

10) Does the pedagogical center's head is a trained personnel in the area?

a) Yes ☐ b) No ☐

11. Do you utilize visual instructional aids of the following types?

	Yes	No
a) Real objects such as tools, machines and equipments	☐	☐
b) Models of real objects	☐	☐
c) Overhead projectors and transferences	☐	☐
d) Drawings	☐	☐
e) Pictures	☐	☐
f) Charts	☐	☐
g) Reference books	☐	☐
h) Textbooks	☐	☐
i) Other printed materials	☐	☐

12. Rate how well you are using steps in the process of visual instructional in aids.

No	Steps in the process of utilizing instructional materials	Very high 5	High 4	Medium 3	Low 2	Very low 1
1	Analyze learners against the material you are planning to use.					
2	State objectives					
3	Select appropriate visual aids					
4	Utilize visual aids					
5	Require active learner participation					
6	Evaluate and revise the materials used in the process of training.					

13. Do you prepare visual instructional aids from_?

a) Salvage materials ☐

b) New material ☐

c) Other sources ☐

14. Have you got training in the areas of visual instructional materials?

a) Yes ☐ b) No ☐

15 Rate the following available source from where you get visual instructional materials.

No	Sources	Very high 5	High 4	Medium 3	Low 2	Very Low 1
1	The department shop					
2	Other departments in the college/or institute					
3	The pedagogical center in the college					
4	The college Library					
5	The business organization					
6	Private sources					
7	The community sources					
8	By preparing once own					
9	Investing guest lecture					
10	Asking assistance from fellow instructor trainers'					
11	The curriculum guile					
12	Specify other(s)					

16) Rate the extent of the trainee's participation or involvement incretion of visual instructional materials together with their trainers.

No	Issue	Very High 5	High 4	Medium 3	Low 2	Very low 1
1	Planning for visual instructional materials					
2	Designing for visual instructional materials					
3	Prepare visual instructional materials					
4	Collect VIMs from community, business and other sources.					
5	Specify if others					

17) Rate the following issues as they are affecting the effectiveness of training.

No	Factors that affect the effectiveness of training	Very high 5	High 4	Medium 3	Low 2	Very low 1
1	Giving short-term training to trainers' on difficult topics included in modules.					
2	Budget constraint to purchase visual instructional aids					
3	Community support in these area					
4	Supply of visual aids					
5	Availability of visual instructional					
6	Dean's willingness and or effectiveness to: a) Coordinate the different source in the process of visual aids b) Control the process of visual aids c) Facilitate visual aids					
7	Deans' effort to support and motivate the trainers' to utilize visual instructional aids effectively.					
8	Support from pedagogical center's head.					
9	The organization of TVET college pedagogical center					
10	Organization and efficiency of the library					
11	Support from the TVET College library					
12	The organization and effectiveness of department's shop as to visual aids					
13	Specify if other(s)					

18. When designing for new materials, what do you consider as a due attention?

a) What do you want your trainees to learn ☐

b) The characteristics of your trainees ☐

c) Amount of your budget to meet the cost of supplies you will need to prepare for the material ☐

d) Technical expertise you have ☐

e) Availability of the necessary equipments and materials to produce the aids you intend to produce ☐

f) Other _____

_____

19. Currently, what method (s) do you use to conduct the training?

a) Really mainly on the lecture ☐

b) Use less trainer talk ☐

c) Conduct more active and trainee centered training ☐

d) Conduct participative and trainees independent learning ☐

e) Others _____

_____

20. Do you have adequate time to plan, to design to prepare, to utilize, prepare and to evaluate the effectiveness of the visual aids learned?

	Yes	No
Plan	☐	☐
Design	☐	☐
Prepare	☐	☐
Utilize	☐	☐
Evaluate	☐	☐

21. If your response for the question number 20 above is "No", what do you think is the problem? _____

_____

_____

22. Do you plan for visual instructional aids to fit to the lesson?

a) Yes ☐ b) No ☐

23. Do you evaluate the effectiveness of VIM used after conducting the training?

a) Yes ☐ b) sometimes ☐ c) No ☐

24. Do you store VIM after conducting the lesson for latter reference (use).

a) Yes ☐ b) No ☐

25. Write weaknesses observed in the process of utilizing VIMs.

_____

_____

_____

26. Write your opinion on how to improve the utilization of instructional Ads?

_____

_____

_____

_____

APPENDIX-B

በአዲስ አበባ ዩኒቨርሲቲ የድህረ ምረቃ ትምህርት ፕሮግራም
የቢዝነስ ኤዱኬሽን ዲፓርትመንት

መጠይቁ የሚሞላው በእንዱስትሪያል እና ቢዝነስ (አውቶ፣ ጄኔራል ሜካኒክስ፣ ማሽን፣ ኤሌክቲሪሲቲ፣ አካውንቲንግ፣ ኢንፎርሜሽን ቴክኖሎጂ፣ ሴክሬተሪያል ሳይንስ፣ ሴልስ፣ ፐርቸዝና ማርኬቲንግ) ሥልጠና ዘርፍ የኮሌጅ ተማሪዎች ነው::

የመጠይቁ ዓላማ:- በቴክኒክና ሙያ ኮሌጆች በሥልጠና ላይ ያለውን ችግር በማጥናት የመፍትሔ ሃሳብ ለመጠቆም ነው::

ለጥናቱ መሳካት ተገቢውን መልስ በመመለስ እንዲተባበሩኝ በትህትና እጠይቃለሁ::

ማሳሰቢያ

1. በመጠይቁ ላይ ስምና አድራሻ መጻፍ አያስፈልግም::
2. ትክክለኛውን ምርጫ በተሰጠው ሣጥን ውስጥ የ«X» ምልክት ያድርጉ
3. በባዶ ቦታዎች ያለዎትን ሀሳብ በአጭሩ ይግለጹ::

ክፍል አንድ:- በግል ሁኔታ ላይ የተመሰረተ ጥያቄ

1. የሚሠለጥኑበት ኮሌጅ ስም _____
2. ኮሌጁ የሚገኝበት ክፍለ ከተማ _____
3. ፆታ:- ወንድ ☐ ሴት ☐
4. ዕድሜ _____
5. የሥልጠናው መስክ _____
6. የክፍል ደረጃ:- ሀ. 10+1 ☐ ለ. 10+2 ☐
7. ሥልጠናው የሚከታተሉ ሀ. በአንደኛ ዓመት☐ ለ. በሁለተኛ ዓመት ☐

ክፍል ሁለት:- አጠቃላይ ጥያቄ

1. በርስዎ እምነት የትምህርት መርጃ መሳሪያዎች ጠቀሜታ ምንድነው ይላሉ?
   ሀ. የሚሠጠው ሥልጠና እንዲሰጠና ሥልጠናውን በጥንቃቄ እንድከታተል ስለሚያደርጉ ☐
   ለ. የተማርኩትን በቀላል እንዳስታውስ ይረዱኛል ☐
   ሐ. ስለሚማረው ነገር ትክክለኛ ሐሳብ እንዲይዝ ይረዱኛል ☐
   መ. ሌላ ካለ ይገለጽ _____
   _____

2. የትምህርት መርጃ መሳሪያዎች ለማቀድ፣ ለማዘጋጀትና ለመቅረጽ ፍቃደኝነትዎ ምን ያህል ነው?

ሀ. በጣም ከፍተኛ ☐ ለ. ከፍተኛ ☐

ሐ. መካከለኛ ☐ መ. ዝቅተኛ ☐

3. በሥልጠና ወቅት የትመህርት መርጃ መሳሪያዎች ጠቀሜታ ምን ያህል ነው ይላሉ?

ሀ. በጣም ከፍተኛ ☐ ለ. ከፍተኛ ☐

ሐ. መካከለኛ ☐ መ. ዝቅተኛ ☐

4. አሠልጣኝ መምህራን በሚከተሉት ተግባራት/ሥራዎች ዙሪያ ተሳትፎ እንዲያደርጉ ሠልጣኞችን ያበረታታሉን?

ተራ ቁጥር	በትምህርት መርጃ መሳሪዎች አጠቃቀም ዙሪያ አሠልጣኞች ሠልጣኞችን የሚያበረታቱት እንዴት ነው?	አዎ	አይደለም
1	ዕቅድ በማዘጋጀት ዙሪያ ነው		
2	የትምህርት መርጃ መሳሪያዎችን በማዘጋጀት		
3	የትምህርት መርጃ ለመፍጠር ጥረት በሚደረግበት ወቅት		
4	ጠቃሚ የሆኑ የትምህርት መርጃ መሳሪያዎች ከአካባቢ ከግልና መንግስታዊ እንዲሁም ከግለሰቦች ለመሰብሰብ ሲያስፈልግ		
5	በሥልጠና ወቅት በጥቅም ላይ የዋሉ የትምህርት መርጃ መሣሪያዎች ብቃት በሚገመገምበት ወቅት		
6	ሌላ ካለ ይግለጹ		

5. ከለይ በተራ ቁጥር «አራት» ለተሰጠው ጥያቄ መልስዎ አይደለም ከሆነ ምክንያቱን ወይም ምክንያቶቹን ቢገልጹ?

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6. በኮሌጅዎ የትምህርት ማበልጸጊያ ማዕከል /Pedagogical Center/ አለ ወይ?

ሀ. አለ ☐ ለ. የለም ☐

7. በኮሌጅዎ የትምህርት ማበልፀጊያ ማዕከል ካለ ከማዕከሉ የሚያገኙት አገልግሎት ምንድን ናቸው?

ሀ. በሥልጠና ጊዜ ለመማሪያ የሚሆኑ የትምህርት መርጃ መሣሪያዎችን ☐

ለ. የትምህርት መርጃ መሣሪያዎችን እንዴት ማጥናት (መጠቀም) እንዳለብኝ የምክር ድጋፍ ☐

ሐ. የትምህርት መርጃ መሳሪያዎችን የት የት ማግኘት እንደምችል የጥቆማ አገልግሎት ☐

መ. የትምህርት መርጃ መሳሪያዎችን አመራረጥ በተመለከተ የምክር ድጋፍ ☐

ሠ. ሌላ ካለ ይገለጽ _____

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8. በኮሌጅዎ ያሉ አሰልጣኝ መምህራን በሥልጠና ወቅት የትምህርት መርጃ መሣሪያ አጠቃቀም ምን ያህል ውጤታማ ነው ይላሉ?

ሀ. በጣም ከፍተኛ ☐ ለ. ከፍተኛ ☐ ሐ. መካከለኛ ☐

መ. ዝቅተኛ ☐ ሠ. ደካማ ☐ ረ. አይጠቀሙም ☐

9. በኮሌጅዎ በቂ የትምህርት መርጃ መሣሪዎች አሉ?

ሀ. አዎ ☐ ለ. የለም ☐

10. በእርስዎ ግምት የትምህርት መርጃ መሳሪያዎችን ለመጠቀም ካጋጠሙ ዋና ዋና ችግሮች መካከል ከፍተኛውን ደረጃ የያዘውን በማስቀደም በቅደም ተከተል ከ«1» ተራ ቁጥር ጀምሮ ያስቀምጡ

ሀ. የበጀት እጥረት ስላለ ገዝቶ ማቅረብ ስላልተቻለ ☐

ለ. አስተዳደሩ ለማመቻቸትም ሆነ ለማቅረብ ፈቃደኛ ስላልሆነ ☐

ሐ. አንዳንድ የመርጃ መሣሪያዎች በጣም ውድ ከመሆናቸው የተነሳ ለመግዛት አቅም የሚጠይቅ በመሆኑ ☐

መ. ያሉትን እንኳ ቢሆን በአግባቡ ለመጠቀም አሠልጣኝ መምህራን ፈቃደኛ ስላልሆኑ/ወይም መጠቀም ስለማይፈልጉ ☐

ሠ. በደንብ ያልተደራጀና አገልግሎቱ ያልተዋጣ ቤተ መፃህፍት ቤት ☐

ረ. በደንብ ያልተደራጀና የአሰራር ብቃት የጎደለው የትምህርት ማበልፀጊያ ማዕከል መኖሩ ☐

ሠ. የትምህርት መርጃ መሣሪያዎችን ለማዘጋጀትና ለማሰባሰብ የሠልጣኞቹ ፍላጎት አናሳ መሆን ☐

ሸ. ሌላ ካላ ይገለጹ _____

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11. የትምህርት መርጃ መሣሪያዎችን የማዘጋጀትና የማሰባሰብ ሥራ ለመሥራት እንደ ሠልጣኝ በቂ ጊዜ አልዎት?

ሀ. አዎ ☐ ለ. የለኝም ☐

12. በሥልጠና ወቅት የትምህርት መርጃ መሣሪያ አጠቃቀም ለማሻሻል ምን ምን እርምጃዎች መወሰድ እንዳለባቸው ሀሳብዎን ነጥብ በነጥብ ቢገልጹ::

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APPENDIX- C

Interview and Focus Group Discussion Question

1. In your opinion, do the instructors in your College Utilize VIMs in the process of TVET training as effectively as possible? If not, why?
2. How do you/ your college support the instructors in utilizing VIMs during the process of instruction/ training?
3. How is the availability or adequacy of VIMs in your College?
4. Is there Pedagogical Center in your College? How is the effectiveness of its performance?
5. How is degree of participation of instructors and trainees in preparation, creation and utilization of VIMs in the process of training in the College?
6. What source(s) do you use to get VIMs?
7. What problems does your college face in the process of utilizing VIMs?
8. What plan do you have to improve the current situation of utilizing VIMs?
9. What is your attitude towards utilizing VIMs?

APPENDIX- D

OBSERVATION CHECK LIST

1. Supply of Visual Instructional Materials, instructors' participation and utilization of VIMs controlling form(s).
2. Support provided by Pedagogical Center.
3. Management support provided to Instructors control form(s)
4. Services provided by the Department Shop.
5. Trainees' participation in creating VIMs control form.

DECLARATION

This thesis is my work and all sources of materials used for this thesis have been duly acknowledged. I formally declare that this thesis is not submitted to any other institution for the award of any academic degree, diploma or certificate.

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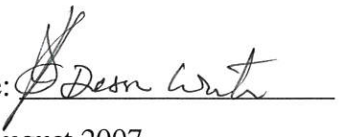
Signature: 

Date: August 2007

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

Name: Dessu Wirtu (Dr.)

Signature: 

Date: August 2007