The Implementation of Outcomes Based Teaching and Learning at Misrak Technical-Vocational Education and Training College

By

Girma Gutema

A Thesis Submitted to
The Institute of Educational Research
in Partial fulfillment of the requirements for the Degree of Master of Arts
(Educational Research and Development)

Addis Ababa University
Addis Ababa, Ethiopia
June, 2013

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ADDIS ABABA UIVERSITY

SCHOOL OF GRADUATE STUDIES

This is to certify that the thesis prepared by Girma Gutema entitled The Implementation of Outcomes Based Teaching and Learning at Misrak Technical-Vocational Education and Training College and submitted in partial fulfillment of the requirements for the Degree of Master of Arts (Educational research and Development) complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Chair of Department or Graduate program coordination

ABSTRACT

The Implementation of Outcomes Based Teaching and Learning at Misrak Technical-Vocational Education and Training College

Girma Gutema
Addis Ababa University, 2013

The main purpose of this study was to assess the implementation of Outcomes Based Teaching and Learning at Misrak Technical-Vocational Education and Training College. In order to meet the objectives of the study, a survey design employed. From the total population of 142 teachers and 698 students (level I-V of second and third year of 2004 E.C entry only), 85 (60%) teachers and 220 (60%) students selected using stratified sampling technique for this study. From 6 department heads,

4 department heads, 4 section heads and the vice dean of the college selected purposefully due to the number of the occupational title they contain under their categories. Questionnaires and interview used for collecting data. The questionnaires piloted and checked for their reliability (Cronbach's Alpha 0.892). Documents were also analyzed to supplement the data. The data obtained through the questionnaires analyzed using frequency, percentages, mean, standard deviations, and t-tests. Cohen's d guidelines for determining the effect size measure used to make the analysis clear. The information obtained through open-ended questions and the interviews were qualitatively analyzed to supplement the quantitative data. The findings revealed the level of teachers' and students' understanding of OBTL is very low. So, it is difficult to determine how the teachers accommodate premises and principles of OBTL in their class room practices. Furthermore, the issue of unsuccessful student's certification and competent on the basis of achieving intended exit graduate outcomes during the Occupational competency assessment resulted from different problems. As the study finding revealed, from Students/trainees themselves, Trainers/teachers, Materials, Managements, Industry, and Assessor need the attention. In addition to these, low understanding of OBTL and practices, Teaching and learning activities, delivery systems, effectiveness of teaching practice, aligned curriculum to students desired outcomes changing in short time, assessment task, lack of good leadership of the college, insufficient of training facility and availability of resource are the core problems for students success and implementation of OBTL .In order to achieve the required knowledge, skills, attitude and demonstrate the intended outcomes during the Occupational competency assessment and at workplace, the trainers need to focus on how well learners achieve the intended learning outcomes(ILO), Teaching and learning activity(TLA) to stimulate, encourage or facilitates the ILO, An Assessment Task (AT) and the alignment of model curriculum they use.

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Table of Contents

Contents Page No.

LIST OF TABLES

Page No.

LIST OF FIGURES

Page No.

ACRONYMS AND ABBREVIATIONS

AT	Assessment Task
CBLM	Competence Based Learning Materials
COC	Center of Competence
ETP	Education and Training Policy
ILO	Intended Learning Outcomes
MOE	Ministry of Education
OBA	Outcomes Based Assessment
OBE	Outcomes Based Education
OBTL	Outcomes Based Teaching and learning
OCA	Occupational Competency Assessment
OCAC	Occupational Competency Assessment & Certification
OS	Occupational Standard
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
SPSS	Statistical Package for Social Science
TLA	Teaching and learning activity
TTLM	Teacher Teaching Materials
TVET	Technical and Vocational Education and Training

CHAPTER ONE

1. INTRODUCTION

In this chapter, the background of the study, statement of the problem, research questions, objectives of the study, significance of the study, delimitation of the study, definition of key terms, and organization of the study have been treated one after the other.

1.1 BACK GROUND OF THE STUDY

The concept of learning outcomes and outcomes based education is high on today's education agenda.

Outcome based education is an instructional process that moves education from focusing on what academics believe graduate need to know (teacher-focused) to what students need to know and able to do in varying and complex situation student and/or work place focused(Biggs 2007).

Therefore, competence based education is focused on outcomes that are linked to workforce needs, as defined by employers and the profession

The essence of teaching and learning is to plan teaching events (contents, Intended learning outcomes, strategies, etc.) and to ascertain to what extent learners have acquired the intended competences (SPT Malan, 2000).

An outcome-based approach to student learning is a student-centered approach to education that focuses on the intended learning outcomes resulting from instruction (Jackson 2002:142). OBE is to equip all students with the knowledge and competencies needed for their future success. This approach calls for the articulation of what we expect our students to learn, and gathering of evidence to determine whether they have learned it. Clear understanding and articulation of intended learning outcomes facilitates the design of an effective curriculum, implementation of relevant and appropriate teaching, learning assessments tasks. The outcome-based approach has been widely adopted in universities across the world. It guides the active learning of students, and the continual improvement of courses and programs.

There are some commonalities in the use of OBE, its theoretical underpinnings and its practical implications, across these different contexts. The increasing calls for educational

accountability, among other countries, led to the rapid spread of various forms of OBE in the United States of America(USA), the United kingdom (UK) and Australia during the 1980s and 1990s(kilen,2000a:1).The stimulus for OBE also comes from socio-economic sources. Key changes that are taking place in society and the economy directly shape educational reforms towards OBE. These changes include the nature of the socio-economy in the information age, the changing demographics of society, emerging new technologies and, consequently, the need to meet the requirements of society, a technologically competent workforce (Hartzenberg, 2001:141)

Some findings show that the countries those successfully implement Outcomes-based Education(OBE) programs saw a dramatic transformation shift in the Learning Paradigm practices in a short period. For example, school in phoenix, Arizona, reported significant improvements in attitude and performance by both students and teachers within the first year(Briggs 1988).And, after four years of OBE, the Sparta School District in Illinois achieved radical gains in grades and test scores in spite of its previous financial and labor problems(Brown 1988).

In Ethiopia,the PASDEP's main thrust is to fight poverty through accelerated economic growth, to be achieved mainly through commercialization of agriculture as well as economic growth and employment creation through private sector development. To this end, TVET is expected to play a key role in building the required motivated and competent workforce. PASDEP envisages TVET to provide the necessary "relevant and demand-driven education and training that corresponds to the needs of economic and social sectors for employment and self-employment". The Strategy stresses the need for an increasing role and involvement of the private sector and non-governmental organisations, as well as community based organizations in the delivery of desired educational services. (TVET,2009)

The TVET revised strategy: The overall objective of the National TVET Strategy is stated as "to create a competent, motivated, adaptable and innovative workforce in Ethiopia contributing to poverty reduction and social and economic development through facilitating demand-driven, high quality technical and vocational education and training, relevant to all sectors of the economy, at all levels and to all people." This is more specifically stated as

the National TVET Strategy aims realizing the need for skilled human power, it has been envisaged that:

> *Technical and Vocational Education and Training (TVET) in Ethiopia seeks to create competent and self-reliant citizens to contribute to the economic and social development of the country, thus improving the livelihoods of all Ethiopians and sustainably reducing poverty. (MOE, 2008)*

This shows that the country needs crafts persons, technicians, training programs that are relevant to workplace reality.

The move towards OBE, learnerships and unit standards has necessitated a change in the views and practices of OBTL

On the other hand, outcomes based teaching and learning (OBTL) is different from traditional teaching and assessment. Traditionally, teaching is conceived as a process of transmitting content to the students, so the methods tend to be expository, and assessment focus on checking how well the message received. The common use of lectures and demonstrations, with tutorials for clarification, and exams rely on reporting back.

As its name suggests, OBTL starts with clearly stating, not what the teacher is going to teach, but what the outcome of that teaching is intended to be in the form of a statement of what the learner is supposed to be able to do and at what standard the intended learning outcome (John Biggs & Catherine Tang,2007).

Currently, Misrak TVET College is implementing OBTL in classroom practices. As far as OBTL is concerned, the College needs to identify whether there is a gap between what teachers know and what they actually do about OBTL to be successful in implementation. Thus why study set the following statements of the problem.

1.2 STATEMENT OF THE PROBLEM

The society and employers need graduates who are well competent and well equipped with knowledge, skill understanding and attitude.

As it is stated in ETP that the main objective of teaching –learning process in our country is to create problem solving citizens (ETP, 1994:7)

MOE (2008) stated also, in the outcomes based TVET system, the goal of the TVET providers is to create the necessary skills, knowledge, and attitudes of trainees, so that learners can perform according to occupational standards. One of the measures by which this quality is assured is through employing appropriate implementation of outcomes based teaching and learning. That is why OBTL is a mandatory key for the development.

The implementation of OBTL needs the appreciation of the stakeholders. Olivier (2002: ii) writes:

> *The success of outcomes-based learning system depends on how well it is understood,…it is essential that those involved in teaching, training and human resources development understand the ways in which traditional education and training approaches must be capitalized on and enriched to effect outcomes-based learning.*

According to Arguelles and Gonczi (2000) examined the implementation of competence-based education and Training in a number of countries. They proved the case studies application of competence based education and training to TVET system in countries including Mexico, Australia, Cost Rica, France and New Zealand. According to Miller(2001),these case studies provided in sight into the implementation of competence based education the various cultural and educational system showed the importance of having the various stake holders(particularly government, industrial bodies, the education profession and enterprises) working together with a common purpose.

Bezwork Meskelu(2010:73),also conducted the case study on the practices and challenges of outcome-Based Training in selected TVET in Arsi Zone. The study revealed outcome-based delivery system was not implemented as intended in the sample selected institution and outcomes based training implementation was largely depend on proper physical and human resource.

Similarly, In 2012, Yohannes' study the status of implementing outcome based TVET system in Major General Mulugeta Buli Technical college. Showed that significant difference on similar employability of teaching and assessment Techniques and the available space for Teaching – learning activity in the college were in sufficient.

As one can see these studies missed to address to measure the exit outcomes and the intended learning outcomes. This is a big gab that needs to be linked outcomes and intended outcomes achievement to proper implementation of outcomes based teaching and learning.

Therefore, the implementation of OBE requirements and the current outcomes based teaching and learning practices of teachers should be examined to determine the extent to which teachers adopt the new outcomes based teaching and learning practices. Misrak TVET implementing outcomes based teaching and learning. And her trainees took Occupational competency Assessment to ensure the intended learning outcomes. However,

As the data of COC National Occupational competency Assessment result show,1243 students took the National Occupational competency assessment 2010-2012 only 138 (11.10%) were competent, while 1105 (88.89%) were not yet competent (source: the 4^{th}, 5^{th}, 6^{th}, 7^{th} round COC National Occupational competency Assessment results from National COC assessment Agency 2010-2012). This indicates that there are some problems which the TVET collide with. This being the case; there is no study conducted to find out /assess/ weakness and strength of the current implementation of outcome-based Teaching and Learning at Misrak TVET college. As one of the practitioners of this approach, the researcher observed that the beneficiaries of the system are not successful on Occupational competency Assessment need to conduct the study.

Thus, it is very essential to examine whether the existing outcomes based teaching and learning (OBTL) practices maintain standard or not.

1.3 BASIC RESEARCH QUESTIONS

The following basic research questions were addressed to guide the investigation.

1. How well do teachers understand Outcome Based Education for class room implementation?
2. To what extent are teachers effective in bringing good practice of outcomes based teaching and learning at Misrak TVET?
3. What are the most commonly teaching methods and assessment methods employed by teachers to practice OBTL implementation at Misrak TVET?
4. To what extent do learners achieve the intended learning outcomes at Misrak TVET?
5. What are the challenges of OBTL practice at Misrak TVET?
6. What is the state of implementation of OBTL at Misrak TVET?

1.4 OBJECTIVES OF THE STUDY

1.4.1GENERALOBJECTIVE

The general objective of this study is to understand OBTL, and the premises and the principles of OBE to determine what teachers understand, and what they do not understand to establish what is required of teachers in an OBE classroom and how teachers go about implementation of outcomes based teaching and learning at Misrak TVET College.

1.4.2 SPECIFIC OBJECTIVES

- To determine what mechanisms teachers put into practice to accommodate their understanding of OBTL.
- To identify whether there is a gap between what teachers know and what they actually do about OBE implementation in classroom practices.
- To determine the extent of learners' achievement of the ILO at Misrak TVET College.
- To identify the most commonly employed teaching methods and assessment by teachers at at Misrak TVET College.
- To identify the challenges those affect the implementation of OBTL and set ways of improving.

1.5 SIGNIFICANCE OF THE STUDY

The study results will have the following significance:

- The study helps to examine the implementation of OBTL at Misrak TVET.
- It will pave way for other researchers who want to conduct in depth study on the implementation of OBTL at training institutions.
- It will identify the problems and challenges for further improvement in outcome based teaching and learning class room practice.

1.6 DELIMITATION OF THE STUDY

This study is delimited to Misrak Technical TVET College in Addis Ababa, City Government, and Yaka sub city. The reason why the researcher selected the TVET institution is due to its capacity in providing the education and the training in several fields of study/the competences.

During this study the researcher addressed the issues related to the understanding of outcomes based teaching and learning practice, Issue related to the effectiveness of teachers teaching practice, assessment methods of outcomes based teaching and learning, students' desired outcomes, the challenges that affect the teaching and learning process. The study is also delimited to assessing, the status of the college from 2010 to 2012.

1.7 LIMITATION OF THE STUDY

As the OBTL implementation is new trend in Ethiopian TVET, there is not much researches conducted on the topic. So there is scarcity of literatures in the country's context. In addition to this, to compare of outcome-based teaching and learning implementation with different colleges might be important for the study however, resource and time constraints have limited to do so.

1.8 OPERATIONAL DEFINITIONS

Assessment: process of collecting evidence and making judgments on whether competence has been achieved.

Competence: sum of interrelated abilities positions and application of knowledge, behavioral patterns and skills, and ability to combine these elements at any time given

Competence based assessment: the gathering and judging of evidence in order to decide whether the person has achieved a standard of competence.

Occupational standards (OS): definition of range of competence that should be achieved through TVET in order to enable a person to perform in a given occupation basis against which an individual's performance is assessed through occupational testing.

Outcomes based Education (OBE): An education which places most emphasis on what the learner should able to do after their graduations.

Outcomes based teaching and learning (OBTL): Is pedagogical process which as the name suggests, focuses on the achievements of certain specified results.

Center of Competence (COC): An autonomous government organization delegated by the Federal TVET Agency to properly and effectively implement Assessment and Certification.

1.9 ORGANIZATION OF THE STUDY

This study consist of five parts. The first chapter includes the introduction of the study; statement of the problem, Significance of the study, Delimitation of the study, definition of the key terms. The second chapter deals with review of related literature. The third chapter contains the research design and Methods. Fourth chapter is the data presentation, analysis and interpretation. The summary of finding, conclusions and Recommendations of the study presented in the fifth chapter followed by references and appendices.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 CONCEPTUAL AND THEORICAL FRAME WORK OF OUTCOMES BASED TEACHING AND LEARNING (OBTL).

The teaching and learning process is not a simple task to practice in the classroom.

As Anbessa (2012) stated, the transmission of worthwhile activities, experiences, findings, achievements, or, in short cultural heritages of one generation to next generations cannot be done haphazardly. That is the skills needed to perform the function or roles of the public (community) come systematically through great effort, commitment and diligence. Such activities, according to Brown and his associates (1992, 12), have to be taught and acquired effectively. This grand reason is the very cause for the emergence and use of term teaching and learning.

The class room practices in outcomes based teaching and learning should be organized around the outcomes. According to Spady and schlebusch (1999), Education in OBTL is defined by outcomes.

Outcomes differ from aims and objectives. In OBTL the outcomes determines the learning process that is the content to be chosen to help students achieve the outcomes, teaching and assessment strategies, but aims and objectives are determined by content.

Outcomes are educational targets. Outcomes must be *Explicit:* known to students and instructors; *Relevant:* to Graduates' professional & civic lives; and *Hierarchical:* move from broad abilities to specific student behavior and Observable.

Spady and Marshall (1994:20) explained the meaning and concept of outcomes as: Outcomes are 'clear, observable demonstrations of student learning that occur after a significant set of learning experiences. They are not values, attitudes, feelings, beliefs, activities, assignments, goals, scores or averages, as many people believe.

Typically these demonstrations reflect three things:

• What the student knows

• What the student can actually do with what he or she knows

• The student's confidence and motivation in carrying out the demonstration.

Outcomes have different types and definition according to different scholars. According to spady (1993:4) there are three kinds of outcomes namely: culminating, enabling, and discrete. Olivier (2002:32-33) mentions three types of outcomes: critical outcomes, specific outcomes and end-product outcomes.

Harden (2002b:151) defines outcomes as broad statements of what is achieved and assessed at the end of a course or study. Lubisi, Wedenkind, parker and Gultig (1998) define outcomes as what students know and can do or an attitude they have learned after a learning experience. Common idea given by these authors is that outcomes are the results of learning. When engaged in the teaching and learning situation, the teacher and students should know clearly what is to be achieved after learning. The student should able to demonstrate the skills, knowledge and attitude and reflect in day to day practices or behavior and action what they learned.

So, what is OBTL? Some basic concepts about OBTL, by Borrowing a definition from the University of Hong Kong (Tony, 2007), OBTL is an approach where teaching and learning activities are developed to support the learning outcomes. OBTL is a student-centered approach for the delivery of educational programs for the curriculum topics in a program and the courses contained in it are expressed as the intended outcomes for students to learn. It is about re aligning intended learning outcomes with teaching assessment, focusing on what graduates know, what they can do and their personal attributes.

The City University of Hong Kong OBTL model, which adopted in its OBE implementation, revolves around three important elements:

1. *The intended learning outcomes (ILOs)* describe what the learners will be able to do when they have completed their course or program. These are statements, written

from the students' perspective, indicating the level of understanding and performance they are expected to achieve as a result of engaging in teaching and learning experience (Biggs and Tang, 2007).

2. *A teaching and learning activity (TLA***)** is any activity which stimulates, encourages or facilitates learning of one or more intended learning outcome.
3. *An assessment task (AT)* can be any method of assessing how well a set of intended learning outcome or ILO has been achieved.

John Biggs (2006), after the series of workshops on what then does OBTL tell us? Stated the important message is that:

(i) The teaching and learning enterprise ought to focus on the learning outcomes, since ultimately what matters is not what is taught but what is learned, and the quality of teaching is to be measured by the quality of learning that takes place;

(ii) What we teach and how we teach, and how we assess, ought to be 'constructively aligned' with the intended learning outcomes, such that they are fully integrated and consistent with each other.

To sum up these concepts and definitions we can understand that, OBTL is an approach where teaching and learning activities are developed to support the learning outcomes. There are three components in OBTL: intended learning outcomes (ILOs), teaching activities, and outcome-based assessment

The move towards implementing outcomes-based education in teaching and learning at TVET level has become an important topic in Ethiopia. Concerns on the fact that the education system widely practiced not adequately prepares graduates to face challenges in life and at work places in the 21st century have prompted people across the word to explore new ways of designing and re-branding academic and educational curriculum.

2.2 CONCEPTS OF OUT COMES BASED EDUCATION

Outcome-based education is a pedagogical process which as the name suggests, focuses on the achievement of certain specified results. Outcome-based teaching and learning (OBTL) therefore is concerned with curriculum design and ensuring that the contents, delivery, activities and assessments are all aligned to help facilitate students to attain those intended learning outcomes (Willis & Kissane, 1995; Brandt, 1993; Towers, 1994).

Outcome-based education, or OBE, is a student-centered approach to education that focuses on the intended learning outcomes resulting from instruction. The three components that comprise an outcome-based approach to learning are:

• An explicit statement of learning intent expressed as outcomes which reflect educational aims, purposes and values;

• The process or strategy to enable the intended learning to be achieved and demonstrated (curriculum, teaching, learning, assessment and support and guidance methods); and

• Criteria for assessing learning which are aligned to the intended outcome. (Jackson, 2002, p. 142)

The OBE has a paradigm which is based on premises and principles. The next titles explain detail about it.

2.3 THE PRIMES OF OUT COMES BASED EDUCATION

When teachers implementing the OBE effectively in the classroom, prepare learning activities that make the outcomes clear for students, ensure facilitate learning so that students actively participate in the learning process they should not see themselves as conveyors of knowledge and the learning process. The students should demonstrate the knowledge, skills; attitudes and values the learned in the school situation based on the primes of outcomes based education they exposed to experience.

Olivier (2002:70) states; “Teacher/Trainers should not teach or train, but rather facilitate learning by stimulating creativity, self-learning, critical thinking, etc. the role of the

facilitator is to enable learners to master: critical cross-field outcomes, the required knowledge and values, and skills."

Also, Van der Horst and McDonld, (1997:4), state: 'OBE aims at developing a thinking problem –solving citizen who will be empowered to participate in the development of the country in active and productive ways.' We have to bear in mind that OBE is based on its premises.

According to Spadys, "OBE Paradigm" (1994) is based on three premises. The premises are:

1. All students can learn and succeed but not on the same day and not inthe same way;

2. Successful learning promotes even more successful learning; and

3. Schools control the conditions that directly affect successfulLearning.

2.4 THE PRINCIPLES OF OUT COMES BASED EDUCATION

According to Spady (1994:10) regard the principles as the heart of OBE; teachers should apply these principles in their class room practices if they implementOBE effectively. Spady (1994:11) argues that OBE practitioners can apply these principles in four ways, 'consistently, systematically, creatively and simultaneously'. Teachers should creatively apply these principles in their teaching. Each principle is discussed below.

According to Spady's "OBE Paradigm" (1994) is based on four principles. The four "power principles" are:

1. Clarity of focus on culminating outcomes of significance;

2. Expanded opportunity and support for learning success;

3. High expectations for all to succeed; and

4. Design down from your ultimate, culminating outcomes.

The first principle, clarity of focus, requires instructors to make deliberate, informed choices when designing instruction in order facilitates students' achievement of the intended

learning outcomes. The second principle, expanded opportunities, "…is based on Spady's first premise that, while all learners can be successful, they may require different instructional strategies and additional learning opportunities in order to do so. Most students can achieve high standards if they are given appropriate opportunities" (Killen, 2000. pp.3-4). This is linked to the third principle, high expectations, according to which success reinforces prior learning, heightens self-confidence and provides motivation. Finally, according to the last principle, designing down, the instructor begins by identifying the exit outcomes, followed by the "building blocks" of learning that enable students to achieve these. In order for an educational system to be described as outcome-based, these four principles must provide its philosophical foundation.

2.5 THE KEYSTONE THEORIES OF OUT COMES BASED EDUCATION

According to wydeman(2002:54) the following theories form the basis for OBE: Behaviorism; social constructivism; critical theories and pragmatic theory. Wydeman (2002:54-55) discusses the link between OBE and the abovementioned theories as follows:

Behaviorism focuses on external human behavior; something which can be observed. OBE is linked to this theory as it (OBE) focuses on achievement of outcomes by learners. Learners should demonstrate achievement through their behavior and actions. They should be able to apply knowledge and skills they gained in the classroom in their daily activities and even outside the classroom situation. Application of knowledge and skill will be reflected in behavior.

Social constructivism is a philosophy that is aimed at social transformation. Learners are encouraged to work together in an OBE classroom.one of the critical outcomes is that learners should able to successfully demonstrate their ability to work effectively as a member of a team. Group, organization and community.

Critical theory encourages critical thinking.one of OBE outcomes is that learners should collect, analyses, organize and critically evaluate information. The learner should pose questions about the learning content. They should not accept anything in the learning process without asking or analyzing it.

Pragmatism is a philosophy that emphasizes usefulness while under playing the value principle.in pragmatists' view whatever works in practice, as wells what is useful, is of the most importance. The emphasis in OBE is on achievement of outcomes by learners. Learners should be able to practically apply what they learn in the classroom.

The other theories such as, theory of value, theory of knowledge, theory of learning, theory of opportunity are also have a connection with OBE.

2.6 THE KEYSTONE CHARACTER OF OUT COMES BASED EDUCATION

The OBE premises, principles and beliefs lead the OBE to the end product always as its' characters. All classroom activities should be geared towards reaching the end product.
According to Van der Horst and McDonald(1997:13),OBE is characterized by the following:

- Clear and un ambiguous outcomes,
- Learner's progress is based on his/her demonstrated achievement. and
- Each learner's needs are catered for by means of a variety of instructional strategies and assessment tools.

SPT Malan (2000) likewise, states there are four main features of the outcomes-based education approach for the success of all students from designed curriculum focused on outcomes. These are the OBE approach is needs-driven, outcomes-driven, a design down approach and the focus shifts from teaching to learning/student-centered learning approach/

2.7 THE OUT COME BASED APPROACH TO TVET

The education and training system should begin and end with the customers' needs. So; the TVET must identify and know *the customer of the system. The below diagram shows the TVET customers*

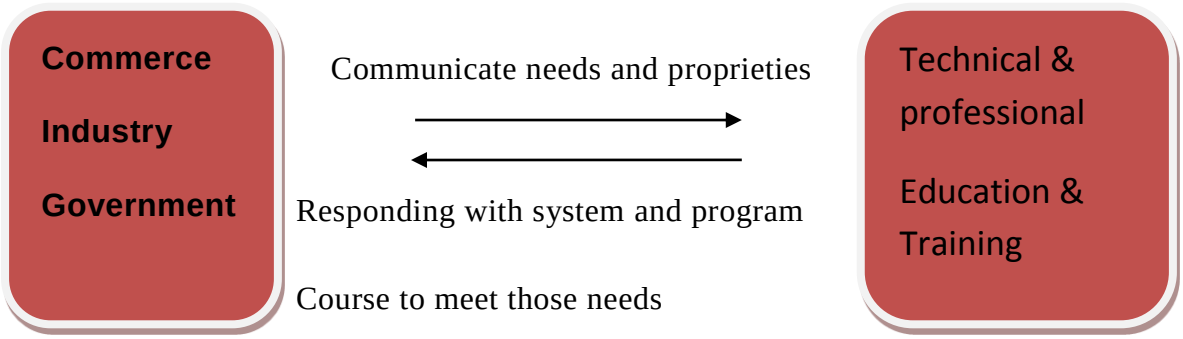


Diagram A. *The TVET customers.*

(Source:Developed from National TVET strategies,MOE 2008)

HOW ARE THESE NEEDS IDENTIFIED AND COMMUNICATED?

Usually through a job analysis process with the development of occupational standards *at* the industry wide level or organization level Producing Industry Manpower Requirements.

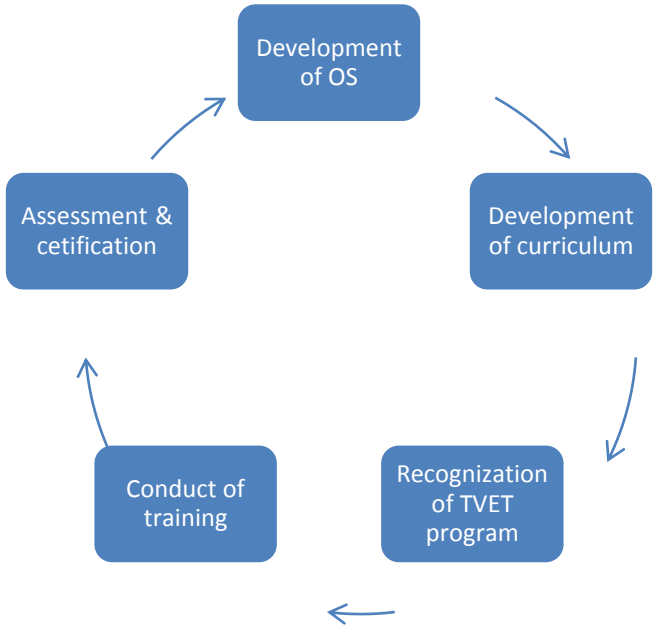


Diagram B. Identifying the needs and communicating processes

(Source: Developed from National TVET strategies, MOE 2008)

Outcome based as an approach to learning places most emphasis on what the learner should be able to do.it is focussed on performance rather than on learning process within specified times and concerned with the demonstration or provision of evidence of Knowledge, Skills and Attitude to a specific level of Competence.

As can be seen from diagram B above, the system and delivery features of outcomes based approach to theTVET program is based on curriculum developed from the occupational standards./at the stage of development of an Occupational standard OS and Curriculum/. Time for starting and completing the course is not within rigid time periods. The system allows for learners to enter and exit program and receive an award for modules attained at any point. Learning is driven by competences written to the national occupational standards.

The recognition of TVET program at Local education and training is benchmarked to international standards.

The conducting of training, the Learning is modular and provides opportunity for right mix of on and off the job. Learning module is defined as an instructional package dealing with single conceptual unit of subject matter and enabling the learner to master one module before entering another.

The TVET Assessment and Certification of learners is based on performing competences required by a specific learning outcome and by the occupational standard as a whole. Training materials are directly related to the units of competence and the curriculum modules.

An outcomes-based approach is characterized by the following features:

- an emphasis on the results of learning (outcomes);
- a focus on learning by doing;
- a focus on what learners can do as well as learning of content;
- opportunities for the recognition of prior learning; and
- An emphasis on the applications of learning in new and different contexts.

Because an outcomes-based curriculum framework emphasizes the outcomes of learning rather than prescribing the means or way of learning, in principle learners should be able to

attain the learning outcomes through a wide range of means in a variety of contexts. Such an approach is therefore supposed to promote access to competence and accreditation by recognizing that there are many different routes to obtaining knowledge and skills, and that the choice of "best route" for an individual will depend on a variety of circumstances, including the experience and learning that have occurred to date.

An outcomes-based approach is also usually characterized by the clear specifications of the outcomes to be achieved by a programme or course. These specifications are usually expressed in terms of measurable competences.

Competencies are descriptions of performance which answer such questions as:

What do people have to be good at doing to be effective in their job?

How does an individual know that she or he is carrying out the job effectively?

Competence can be defined as the application of skills, knowledge and attitudes to tasks or combination of tasks to standards under operational conditions. As such competence does not refer to the unique characteristics of an individual worker, but rather serves as a measure against which individuals may be judged for the purposes of formal or informal evaluation and accreditation. A competency-based approach to training and education will be an integral part of the move towards a broader needs-based and outcomes-based approach to public service training and education.

In understanding an outcomes-based approach to education and training it is important to recognize that the approach is one that emphasizes outcomes. This does not mean that other aspects of education and training – course content and processes for instance – are to be ignored. All good training is necessarily concerned with outcomes

2.8 THE CONCEPTS OF TEACHING AND LEARNING PRACTICE OF OUT COMES BASED EDUCATION.

Teaching, learning and assessment in technical and vocational education and training (TVET) is a broad topic,

Learning activities and teaching methods should be designed so as to be appropriate for the intended outcomes of a program. Teaching/learning strategies should describe how the learning outcomes for the program will be achieved, and refer to the different types of teaching and learning methods that will be used. There should be learning and teaching strategy, which makes explicit and demonstrable the appropriateness of the learning and teaching methods used in relation to the anticipated learning outcomes.(Yohannes,2006)

It is helpful to think about teaching, learning and assessment in TVET as components of an ecosystem of skills, their development and deployment; of the agents who operate within the system, the teachers, learners and administrators of the system; and of the social and industrial contexts in which skills are developed, certified and deployed. David D Curtis (?), According to SyahronLubis (2010), the implementation of vocational pedagogy in vocational education is as a means of creating a learning environment that makes provision for student development of knowledge, manipulative skills, attitudes, and values in simulated and realistic work settings. In order to master the objectives of the course some principles of vocational pedagogy must be applied.

In order to implement teaching and learning practice in outcomes based class room we better have a concept of effective teaching and active learning practices in mind.

Many scholars have different definition and concept about teaching. According to Dunkin (1988:12), to teach is to give information; to show a person how to do something; to give lessons in subject…teaching is imparting knowledge or skill. On the other hand, teaching may be regarded as providing opportunities for a student to learn.it is an interactive process as well as an intentional activity (Brown and Attkins, 1988:13).

Teaching is also defined as act of providing, directing, checking and following-up activities to facilitate formal or informal learning.it is the collection of practical activities aimed at

bringing about learning or understanding. Hence, it is a task word rather than achievement word (Azeb, 1984:74).

In this case, teacher, learner and subject matter or experiences are core element involved in teaching.

According to Azeb (1984:75), teaching is also defined as the aspect of instructional process concerning teachers' activities including all action of a teacher for evoking and leading the process of learning and with it part of the invisible unity of teaching and learning.it carries three main functions namely imparting subject matter and respective activities student helps students in learning assisting and providing techniques of learning interaction of learning.

The purpose of teaching, according to Mckernan (1996:13) is to help students to learn to inquire and to think rationally for themselves critically and reflectively.

In each definition, one may realize that teaching is an attempt or activity so as to help students so that they can acquire/gain/ or change some skills, attitude or charge some skill attitude, knowledge, beliefs, convictions, or appreciation.

So, according to Anbessa (2012), active/effective teaching is now understood to involve a process of facilitating learning rather than being the simple transmission of knowledge from the teacher to learner. The roles that teachers need to take to facilitate learning are outlined below. (Smith and Blake, 2005:2)

- Placing a strong emphasis on the workplace to provide a meaning full context for learning where problems are framed by the context of the workplace.
- Encouraging interactive approaches to learning activities to allow learners to apply and interact equally with the thinking and performing aspect of learning.
- Stabling learning outcomes that are clear in their intent to achieve 'work-readiness' for learners.
- Giving learners the opportunity to collaborate and negotiate in determining their learning and assessment process.
- Understanding the learners as 'co-producers' of new knowledge and skills.
- Recognizing that the prior learning and life experiences of learners are valuable foundations for constructing new knowledge and skill set.
- Valuing the social interactions involved with learning in groups.

On other hand, in addition to effective teaching, having the basic concepts and definition active learning is a basic pivot key in the implementation of outcomes based teaching and learning for the practitioners ,both teachers and students. Then what is learning?

Therefore, according to Morable (2000:49), active learning is an instructional strategy in which students construct meaning, often working in collaboration with other students. In this strategy, knowledge, is directly experienced, constructed, Acted-up on or revised by the learners.

Prince (2004:1) also defined active learning as any instructional method that engages students in learning process. It requires students to do meaning full learning activities and think about what they are doing. The core elements of active learning are student activity and engagement in the learning process.

According to Irene (2009), Current approaches in the way curriculum knowledge is selected, organized, and sequenced led to considerable debates about teaching practices, learning arrangements and assessment methods. This is because the learning outcomes approach to curriculum design has implications in the way the content is taught, the teaching methods are applied, the material is used and the teachers' training is arranged.

The shift from an input based to an outcome oriented education and training provision - in other words to a competence and career oriented education and training - defines new learning objectives that may be only met through new forms of learning. Among these new forms of learning, the guided learning, the experiential learning and the action learning aim to help students and apprentices to develop integrated competences, i.e. to acquire a combination of vocational, generic and learning competences useful both for work and life. Obviously, these ways of learning require dynamic learning environments where students and apprentices should be seen and treated as active learners, as well as appropriately trained teachers and trainers.

Teachers and trainers are changing roles from the more traditional one of instruction to the more complex one of facilitating learning for learners with diverse learning needs and styles.

According to Meyer (1999), in reviewing the characteristics of outcomes-based education, there appears to be a shift towards learning rather than teaching, to providing experience rather than information. There is a move from normative, paper-based examinations towards outcomes-based assessment as reflected in national standards. This change is not only intended to meet the needs of industry more effectively, but also to create 'empowered' individuals who can take control of their own learning and their lives. As such, outcomes-based education has presented an opportunity to widen opportunities for learning and to promote equality.

2.8.1 OUT COME BASED TRAINING DELIVER SYSTEM /METHODS OF TEACHING/

"Teaching methods" are not an end in themselves; they are a means to an end. They are the vehicle(s) we use to lead our students towards particular learning outcomes (Bourner, 1997.344-348).

Objective setting and intended learning/training outcomes will be of considerable assistance to trainers/facilitators in making their choice of training methods or formats. It is clear that some methods are more efficient than others in achieving particular objectives. The choice of training methods should be determined by the intended training outcomes and the design of the actual teaching method by awareness of the variety of formats and other available resources.

It is important to remember learners will be more involved in the training if they can see the relevance of the training and the opportunity to apply the training in practice.

Selecting Training Methods (Instructional Techniques) needs to be wise because of some factors.

Eight (8) factors put into consideration when choosing instructional techniques. These are Learning Objectives, Trainers (Instructors), Content, Participants, Training Techniques, Time, Cost, Space, Equipment, and Materials(Robinson, 1979)

On other hand, different training Techniques is employed in teaching and learning delivery systems. These are: Presentations, Demonstration with Return Demonstration, Audio-Visual

Aids. Group Works, Small group discussion, Brainstorming, Case Studies, Buzz group (2– 3 participants), Reporting back sessions in plenary, Role-Play and Field Visit

Teaching and learning is not requires only the effective methods of teaching but also active learning methods.

According to Biadgelign (2010:153), active learning includes inquiry, discovery, and laboratory methods.

Inquiry methods can be employed to any subject area, most of the time, at the higher institutions and at secondary schools. But the discovery method is the mental assimilation by which the individual grasps a concepts or principle resulting from physical and mental activity. The laboratory method can be defined as "a teaching procedure dealing with first hand experiences regarding materials or facts, obtained from investigation or experimentation.it are experimentation, observation or application by individuals or small groups dealing with actual material. Essentially, it is the experimental method enlarged and expanded"

2.8.2 OUT COME BASED TRAINING INSTRUCTIONAL MATERIAL

Instructional materials are materials that designed for use by students and their teachers as a learning resource and help students acquire facts, skills, or opinions or develop cognitive processes.

Instructional Materials (IM) are considered to be forms of communication and must therefore be delivered in a manner that is effective for the students.

Ema&Ajayi (2004) assert that, "teaching equipment and materials have changed over the years, not only to facilitate teaching learning situation but also to address the instructional needs of individuals and groups".

According to Orakwe (2000:112),

> The Instructional media today are very gradually finding their ways into the classrooms where modern and versatile teachers are exploring new ways of transferring learning to the younger generation the use of prints, visuals and

audios or various combination of these trios make up all we have in instructional media. Instructional media therefore are the information dissemination devices made up of prints radio picture including films, movies, photographs, etc., used in the classroom for an easy transfer of learning.

The types of Instructional materials may be printed or non-printed, and may include textbooks, technology-based materials, other educational materials, and tests". This includes Web-based and electronic textbooks.

A learning module is an organized "packet" of information that includes elements such as objectives, assessments, content, assignments or activities. Typically, learning modules are designed so that students move through the content linearly. However, depending on what content is included in the learning module, instructors or designers may decide that the order in which students encounter the material doesn't matter.

Delivery of learning modules can be in linear sequence, an Order learning activities. In a linear learning module, content is delivered in specific sequence. Pretest, objectives, readings, videos, exercises, discussion, discussions, posttest.
In a non-linear learning module, students interact with the content in the order that they decide Objectives, reading, exercise, Group work, additional resource, assessment, Videos, discussions, reading.
Basic instructional materials are prepared that are focused on a key concept or idea related to the work activity under consideration.The text and illustrations are prepared that are clear, legible and appropriate for the trainees.Language, style and format of the materials are appropriate to the trainee’s characteristics and needs

Bozimo (2002) posited the following criteria in the selection of teaching aids or instructional materials:

(i) Appropriateness of the materials to instructional objectives;

(ii) Freedom of the content from bias,

(iii)Degree of the quality variety of the materials,

(iv)Quality of the format, print, sound or photography,

(v) Availability of the materials to clarify objectives of and how to operate the materials,

(vi)How reasonable the time, effort and expenses are for both the students and the teachers

Kissock (1981:86-87 in Bozimo 2002:39-40) also poses some questions that will assist a teacher in the selection and application of teaching aids or instructional materials. These questions are as follows:

(i) Do the materials fit within the planned rationale and scope of the programme?

(ii) Will there use help ensure alignment of objectives created for this programme?

(iii)Are they compatible within the teaching strategies selected?

(iv)Do they offer the content which is important for achieving the objectives?

(v) Are they languages and vocabularies appropriate for the studies' reading abilities?

(vi)Are there any harmful ethnic, religious, social, sexual or racial biases in the materials?

(vii)Are they well made?

(viii)Is the cost appropriate and affordable?

(ix)Will they be useful for the length of time desired?

(x) Will teachers find the materials easy to use?

(xi)Will students be interested in making use of them?

(xii)Are they factually correct?

A CBLM is a printed instructional aid that: supplement a teacher's oral and visual instruction. CBLM guide student's in learning and allow students to progress at a rate that is comfortable to them (self-instruction)

There two types of CBLM in OBE, *The resource-based Learning Materials* – are structured materials designed to direct the learner to experience learning through a series of learning activities, and to a range of external resources, to achieve specified competencies or learning outcomes.

The Self-contained Learning Materials – integrated resources which are packaged into one complete unit of planned series of learning activities and instructions designed to assist the learner accomplish well defined competencies or outcomes.

*CBLM has four Sections;*Learning Guide, Information Sheet, Operation Sheet and Job Sheet.

2.8.3 OUTCOME BASED TRAINING FACILITY

The outcome based training/teaching/ needs the Organized Learning and Training Resources facility.Resources required for training are checked for availability.Appropriate training locations are identified and arranged.Resource requirements are documented and access is arranged in accordance with organization's procedures and appropriate staff.Training sessions are designed to measure participants progress towards the program goals.Sequence and timing of the training sessions are documented.

Facilities-A place equipped to fulfill a special function. It is an actual worksite as required by the training activity. This is the training location/venue which could be a laboratory, school enterprise, training center, workplace or community

Tools and Equipment-These are devices and machineries needed for specific activity in the conduct of training

*Audio-Visual Materials (multi-media)-the teaching aid and Learning Aids*to help implement training more effective.

*Training Facility-A*training facility must have flexible and technologically-advanced learning environments that are safe, healthy, comfortable, aesthetically-pleasing, and accessible. It must be able to accommodate the specific space and equipment needs of the training program and curriculum.

Training Workshop-The Competency-Based Shop Layout must have the three stations in order to support the competence to achieve the intended outcomes. Learning Station, Practice Station and Assessment Station

2.8.4 OUT COME BASED TRAINING LEARNING MANAGEMENT TOOLS

The outcomes based teaching needs to actual practices use of Learning Management Tools in classroom. The Class Monitoring Tool, Student Progress Monitoring Tool and Student Progress Reporting Tool help teachers for implementation of OBTL in classroom.

2.8.5 OUT COME BASED TRAINING ASSESSMENT

Assessment involves gathering data about the success of the teaching and learning in your classroom. It is a continuous process that provides insight into student learning, gives teachers a basis for making instructional decisions and modifying teaching methods, and helps in assigning grades. The best assessments also serve as learning opportunities for students. In an outcomes focused course, assessments measure the outcomes students have achieved.

The assessment that accompanies OBE is often referred to as outcomes- based assessment. Outcomes-based assessment is also seen as a process, but the information about a learner's achievement is measured against outcomes (Pretorius, 1998:82) and interpreted in terms of competencies and standards (Freysen & Bauer in Otaala & Opali, 2000:206).It determines whether a learner is competent when measured against a set criteria, standards and national agreed outcomes for a particular phase of learning.

Therefore, collecting evidence and making judgments on whether competency has been achieved to confirm that an individual can perform to the standards expected in the workplace as expressed in the relevant competency standards is crucial point in OBE.

According to Van der Horst & McDonald (1997:170), Assessment of learning is an essential element of outcome-based education. Without valid and reliable assessment procedures you will simply not know whether or not your learners have achieved the learning outcomes that were the focus of the programme, unit or lesson, and neither will the learners know whether they have learnt well.

Assessment is also the heart of the whole teaching and learning process in OBE. According to Orsmond and Gildenhuys (2005:134), Assessment is not based on content as it was in the past. Assessment will be broad enough to include attitudes, processes and skills as well as knowledge and concepts. Teaching will be outcomes-based and learners will pay a major role in the teaching and learning process. Assessment will be linked to the outcomes that learner will achieve.

Olivier (2002:70) maintaining that there is a close relationship between the method of assessment and the way learning takes place, hence the focus on teaching and learning assessment practices. Sieborger (2004:5) argues that whenever new ideas about teaching or learning are mentioned now days, it seems that assessment is always part of them.

According to van der Horst and McDonald (1997:5), teachers have to take full responsibility for the careful planning and management of their learners' learning environment. It is evident that good planning in the teaching and learning situation leads to effective teaching. Teachers use good planning to know what she/he is going to do in teaching –learning situation. The learners' roles will also be specified. Teachers can determine whether learners achieve the desired out comes by assessing the learners. According to Lubisi, Wedenkind, Parker and Gultig (1998) assessment forms the integral part of teaching. Macolm (2000:40) argues that assessment uses to guide teaching and as part of teaching.

Stoll and Fink (1996:124) argue that assessment must be seen in concert with shifts in curriculum design and teaching strategies. Thus when a curriculum design changes, teaching and assessment strategies also change OBE, however, highlight continuous and criterion-referenced assessment (Malan, 2000).

As STP Malan (2000) noted that, 'uncertainty about the desired learning out comes and failure to access outcomes properly could end in a situation where learners only attend only pseudo-knowledge, pseudo- skills, pseudo attitudes and pseudo- values. On completion of their studies these learners are awarded certificate inherently implying that they have attained certain competences whereas in fact they have not.'

The learner's evaluation can be formative assessment or the summative assessment.

*Formative Assessment*provides the learners with feedback regarding success or failure in attaining learning outcomes. Formative assessment identify learning errors that need to be corrected and reinforce successful performance provides information to teacher for making instruction and remedial work more effective

*The Summative Assessment*is given mostly when all the modules in the program have been accomplished and determines the extent to which competence have been achieved result is expressed in the term 'competent or not yet competent'.

Assessment is a process of gathering evidence, making judgments and drawing inferences about student achievement and performance. Airasian (1994) and Pellegrino, Chudowsky and Glaser (2001) summarized the purposes of assessment as:

- promoting learning;
- measuring individual achievement; and
- Evaluating programs.

2.9 UNDERSTANDING COMPETENCE OF OUTCOMEBASED TRANING

The key element of the instructional analysis is the formulation of the competencies, both competency standards and basic competencies. To do this correctly, someone should understand what a competency is. Many experts in instructional design have expressed the definition of competency. One of the definitions is presented by the JGN Consulting Denver, USA (2002) as follow: A competency refers to an individual's demonstrated knowledge, skills or abilities (KSAs) performed to a specific standard. Competencies are observable, behavioural acts that require a combination of KSAs to execute. They are demonstrated in a job context and as such, are influenced by an organization's culture and work environment. In other words, competencies consist of a combination of knowledge, skills and abilities that are necessary in order to perform a major task or function in the work setting.

There are some key words or meanings which are very important to take into account in formulating a competency; they are:

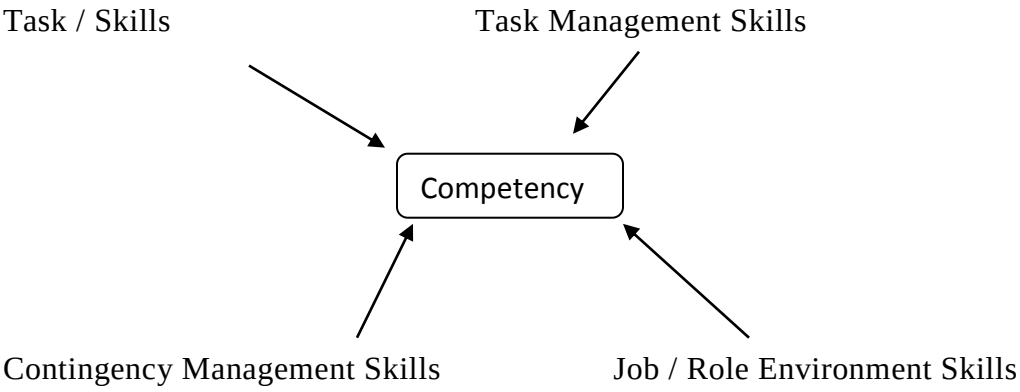
1. A competency consists of knowledge, skills, and abilities (or affective). In this stage of the lesson, it is necessary to explain to students about some concepts of taxonomy of educational objectives. Educational objectives or learning outcomes consist of cognitive domain (knowledge), affective domain (attitude), and psychomotor domain (skills). Each domain has some levels of learning outcomes. The formulation of an educational objective shows the domain and the level of learning outcomes that will be attained.
2. The competencies have specific standards. The standards must be determined, so the mastery of the competencies can be evaluated based on those standards.
3. Competencies are observable and behavioural acts.

A basic competency has three elements:

1. Behavioural change as a learning outcome consists of an action word that connotes an observable student behaviour and content being studied.
2. Criteria that is a statement that specifies how well the student must perform the behaviour, and
3. Condition that is a statement that describes the conditions under which the behaviour is to be performed.

According to MOE (2008), Competency is the possession and application of knowledge, skills and attitudes to perform work activities to the standard expected in the workplace.

Dimensions of competency



Task Skills: This requires performance of the task[s] to the required standard as described in the unit of competency and expected in the workplace.

Assessor needs to collect evidence that the candidate can do the individual actions as well as the whole task.

Task Management Skills: Captures the skills used as people plan and integrate a number of potentially different tasks to achieve a complete work outcome. Candidates should provide evidence that they can work efficiently to meet deadlines, handle a sequence of interrelated tasks and progress smoothly between tasks.

Contingency Management Skills: The requirement to respond to irregularities and breakdowns in routines.

Candidates should show evidence of dealing with contingencies. For example: breakdowns, irregularities, imperfections, and the unknown.

Job/Role Environment Skills: The requirement to deal with the responsibilities and expectations of the work environment.

The capacity to work with others and adapt to different situations is central to successful performance

Key features of competency

- being able to do the job
- knowing how and why things are done
- knowing what to do if things go wrong
- Having the right approach to do a job properly and safely.

2.10 OUT COME BASED CURRICULEM

At the beginning of the launching of the TVET program, the Ministry of Education(MOE,2008), was in charge of identifying the vocational areas and the specific trades offered under each vocation. It was also responsible for developing training materials centrally. It could be said all training centers were using similar materials for the same training areas. It is envisaged that taking existing experiences of other countries could promote the country to the technological and economic development level that others have reached as much as possible within the shortest period. Thus, with the technical support of GTZ experts, the experiences of Australia and Philippines have been adapted and used as a bench mark.

Occupational standards were developed for all the trades being provided in formal TVET institutions with the involvement of stakeholders.

Developing training materials has become a challenge for all TVET institutions. To curve the problem, model training materials have been developed and disseminated. However, training institutions are seen using old materials and the model materials without much change. The government expects all training institutions to develop materials that reflect local needs and environments.

The other major problem observed in curriculum development was the continuous change made in it. At the beginning, all training materials were prepared centrally and used by all institutions with similar inputs and processes. That was changed shortly by occupational

standards which were prepared for 10+1, 10+2 and 10+3 program. Lately the development of the occupational standards has been re-categorized into five levels i.e. Level 1, Level 2, Level 3, Level 4 and Level 5 packages. This has created a feeling of discomfort on both developers and implementers and is seen as wastage of time and other resources.

2.11 OUT COME BASED EDCATION IMPLEMENTATION IN ETHIOPIOAN TVET CONTEXT.

According to Danelson (2002) elaborate in his Practitioner's Implementation Hand book: The Outcome-Based Curriculum, Organizing for Outcome-based Education /implementation /is clearly explained.

Whether a school or district decides to implement outcome-based education abruptly or over a period of years, thorough planning will prove to be a first requirement for success. OBE assumes extensive planning in each of five components; this provides a framework for further, more detailed planning, the assignment of responsibilities, and the analysis of problems when they arise.

Moreover, in order for change of any kind to be systematically and successfully introduced into a school setting, three conditions must already exist. Because they are pre-conditions for any change, they areCalled 'pre-implementation.'

The three pre -implementation conditions, and the five implementation Components are: *Pre-Implementation Conditions*: 1. A professional environment 2. Strong leadership 3.Planning and budgeting system

Implementation Component: 1. an aligned curriculum 2.School organization 3. Instruction

4. Information management 5. Instructional support

The following brief summaries will provide the proper context for the more detailed descriptions that follow.

*A professional environment*s one characterized by decisions based on information and data rather than past practice and tradition. While some past practices and traditions may survive close, critical scrutiny, others may have been benefiting only some, but not all, of the

students. The Professional imperative requires a school to keep all aspects of its Operation under continuous surveillance, and to base all decisions – to Change something, or to continue something else without change – on information and data, the sole criterion for acceptance being the Probable or demonstrated effect on student learning.

A commitment to base decisions on information rather than tradition is the essence of professionalism.

Leadership: The principal sets the tone of any college, and establishes and maintains the culture. Strong principals have high expectations for themselves, their staffs, and their students. They know that the quality of the college can affect the learning of every student, and they are committed to success.

In practical terms, such leadership means that principals have the technical skills to improve the instructional process. They are cable to Model good teaching where that is necessary. In addition, they protect instructional time from non-instructional interruptions; they allocate resources according to clear instructional priorities, and they monitor Curriculum implementation. In short, the instructional program is clearly

Established as the mission of a successful college; a strong leader arranges the resources required to improve and maintain that program.

Planning and Budgeting Systems: In order to implement successfully any change of substantial magnitude, a school or distinct must be capable of mounting a planning effort that will define the proposed change and the decisions that will have to be made as the project proceeds. Such a plan will establish a timetable for such changes and for adoption of each component of the project (with due regard for the budgeting cycle), and arrange for adequate resources to provide such support as the project may require along the way.

A formalized planning process has several distinct advantages over trouble hot decision-making. Primarily, it legitimizes a process. It provides a framework within which to set priorities and allocate resources.

In general, people don't mind waiting in line if they know they are in line and that tire line is moving. An impression of disorder in a process, or the impression that others are 'cutting into lint' following no procedure, quickly saps morale. The challenge in creating a planning and budgeting System is to ensure that the process involves all the appropriate people inappropriate sequence to assure both the quality of the decisions, and their acceptance within the organization. All decisions are easier to implement if they have been part of a process. Even those people who would have preferred another final plan will devote energy to implementing the plan that was adopted if they have been failing of the discussions that led to the decision. The existence of a formal system for decision-making and budgeting obligates all members of an organization to accept whatever decisions emerge from that Process.

Aligned Curriculum: In an outcome based program, the curriculum consists of three distinct elements,the instructional objectives, criterion tests, and materials. The objectives define the content of the school program. The criterion tests are used to assess student mastery of the objectives of the curriculum.

The materials (texts, supplemental, films, etc.) define the resources for teaching. These three elements must match, or lie aligned. This alignment ensures that there will be no mysteries, no surprises, and no trick questions. Everyone will know in advance what the learning objectives are, what materials are to be used, and how success is to be measured.

The curriculum objectives must be organized and sequenced into units of instruction, with any prerequisites identified.

An outcome-based curriculum may be established at any level of cognitive challenge. To say that instructional objectives are defined is not to say that they are at minimum competency, or low-level. The degree of Challenge posed by a given objective is established by the objective, not by the act of defining it. Educators now have techniques for clearly mapping the cognitive level of the curriculum, and upgrading it if they want to do so.

The fact that students learn at different rates has implications for the Organization of the curriculum Sequence of units, through which students move at their optimal rate. It may be

differentiated at different grade levels, with different strands. It may be organized as a grade level curriculum with enrichment opportunities provided within each unit of instruction or as additional units. The decision of how to how to organize the curriculum is one of the first to be made, and will depend on many factors.

School organization: Once a curriculum has been organized, sequenced, and aligned, it is the responsibility of each school in the district to see to it that each student is appropriately challenged within that curriculum .Just how to do that will depend partly on the nature of the curriculum: a single, non-graded curriculum is handled differently from a differentiated curriculum or a grade-level curriculum with enrichment. It will also depend on internal factors within the school, among them the age and special needs of the students, the resources available to the school the physical layout of the school, and the nature and working patterns of the staff.

Instruction: The most important component of the educational process is the actual teaching of students. In an outcome-based instructional program, teachers teach to the carefully defined curriculum objectives. Lesson plans reflect the types of objectives to be taught; higher-order cognitive processes, for example, require a different approach from basic knowledge and skills. In addition, units may be designed around the objectives from several different curricula simultaneously, resulting in a powerful, integrated program.

In an outcome-based program, defining- the specific instructional objectives is most effectively a district-wide process, performed by curriculum committees. Supervising and assisting students towards the mastery of those objectives is the domain of individual teachers. It is each teacher's responsibility to search out and use those teaching strategies which have the highest chance of success for students in their Charge. In general, these strategies will be interactive and direct, with multiple opportunities for learning. In addition, an outcome-based approach mandates that teachers attend to the need for corrective measures, re-teaching students who need more time (and possibly a different approach) to learn the same material.

Information Management: Once students have been assigned to appropriate places in a curriculum and are receiving appropriate instruction, the progress of each student through

the curriculum is measured by the information management system. Such a system may be a simple manual tracking card, or an elaborate computerized monitoring system, or anything in between. Just how this is done is not important; the fact that the monitoring be continuous is crucial. The success of an outcome-based program depends on knowing whether students are actually learning what the teachers are presenting to them.

Monitoring is useful in other ways as well: it provides data for assessing the effectiveness of each segment of the curriculum; it provides the basis for decisions regarding assignment or re-assignment of individual students to instructional groups; it simplifies reporting to parents as to the progress of their children; it is the source of information for transcripts and the record of progress toward the meeting of graduation requirements.

Instructional Support: The instructional support system is that organization within the school and across the district that provides the safety net for student success. It provides additional resources to those students who need more instructional time, for example, or a smaller instructional group, or instructional materials, or Information techniques to achieve success.

The instructional support system, however, is not something separate from the school program. It is a component of the instructional program, and is fully integrated with all of the guide components - one that ensures that every student successfully masters the objectives of the curriculum .For an understanding (if outcome faked education, it is helpful to treat the different components separately. however, they do not function independently of one another, but interact in many ways.

Technical and vocational education and training (TVET) is back on the development agenda of many African countries after years of benign neglect, instigated by a complex set of reasons that included budgetary constraints and criticisms of the World Bank in the early 90's on its direction and focus. (World Bank 1991)

One of the most important features of TVET is its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills. TVET delivery systems are therefore well placed to train the skilled and entrepreneurial workforce that

Africa needs to create wealth and emerge out of poverty. Another important characteristic of TVET is that it can be delivered at different levels of sophistication. This means that TVET can respond, not only to the needs of different types of industries, but also to the different training needs of learners from different socio-economic and academic backgrounds, and prepare them for gainful employment and sustainable livelihoods. A skilled workforce is a basic requirement for driving the engine of industrial and economic growth, and TVET holds the key to building this type of technical and entrepreneurial workforce.
(George Afeti, 2010)

According to MOE (2008), The TVET revised strategy**:** The overall objective of the Ethiopian National TVET Strategy is stated as "to create a competent, motivated, adaptable and innovative workforce in Ethiopia contributing to poverty reduction and social and economic development through facilitating demand-driven, high quality technical and vocational education and training, relevant to all sectors of the economy, at all levels and to all people." This is more specifically stated as the National TVET Strategy aims to:

- Create and further develop a comprehensive, integrated, outcome-based and decentralized TVET system for Ethiopia
- Strengthen TVET institutions in view of making them Centres for Technology Capability, Accumulation & Transfer
- Create a coherent framework for all actors and stakeholders in the TVET system
- Establish and capacitate the necessary institutional set-up to manage and implement TVET in ensuring quality management system (QMS)
- Improve the quality of TVET (formal and non-formal) at all levels and make it responsive to the needs of the labour market
- Facilitate the expansion of relevant TVET offers which are crucial to national development
- Strengthen the private training provision and encourage enterprises to participate in the TVET system
- Empower women and rural people through skills development

- Ensure equal access of women and people with special needs to TVET
- Strengthen the culture of self-employment and support job creation in the economy, in particular in the emerging regions
- Develop a sustainable financing system for TVET with efficient and cost-effective delivery systems and management structures
- Build the necessary human capacities to effectively manage and implement TVET

For guiding the development and implementation of the TVET system, the following guiding principles are also stated in the TVET strategy.

a) Demand orientation i.e. consideration of responding to the competence need s and qualification requirements in the labour market.

b) Quality relevance: Striving for the highest quality and relevance of TVET provisions.

c) Equal access and equal opportunity: Increasing access to learning opportunities for all target groups while ensuring quality.

d) Pathways: Creating the possibilities of career progression and continuation of learners.

e) Flexibility responding to the changing occupational requirement and accommodating different demands of various groups.

f) Lifelong learning: Extending opportunities for all time learning.

g) Gender sensitivity: Providing access to females to all TVET programs.

h) Contributing to fight against HIV/AIDS: Awareness creation and training about preventive measures in all programs.

i) Contributing to environmental protection.

2.12 THE CHALLENGES THAT ENCOUNTER IMPLEMENTATION OF OUT COME BASED EDUCATION.

The implementation of learning outcomes is a massive undertaking to transform all curricula to be expressed in terms of outcomes. The existing curricula may need to be reviewed in line with the outcomes approach and this often takes a long time to accomplish. It will be necessary for the review process to confirm that the curriculum does provide opportunities for the development of the desired learning outcomes and that sufficient provision is made for the outcomes to be demonstrated and assessed(Yohannes,2006)

With the introduction of the new middle level TVET programs, an industrial attachment period has been introduced to formal TVET. However, its implementation has faced a number of problems, mainly due to lack of cooperation of the employers as they were not consulted during the planning process. An internship and cooperative training system based on profound cooperation between TVET institutions and employers and a joint training delivery still needs to be developed in order to increase the quality of TVET and hence the employability of graduates(TVET,2009).

According to Bezawork (2010), quality training programs cannot be delivered without sound technical support. A major technical support function includes:

a) development of skill standards and national qualifications;
b) curriculum and teaching materials development;
c) assessment(testing) of skills and certification;
d) instructor/teacher development;
e) vocational guidance; and
f) Research and development on vocational education and training.

A national vocational training system missing any of this important function will lack consistency and quality (Gasskov, 2000).

CHAPTER THREE

RESEARCH DESIGN AND METHODS

This chapter deals with design of the study, sources of data, sample population and sampling techniques, instruments of data collection, validation of instruments, procedure of data collection and data analysis.

3.1 DESIGN OF THE STUDY.

A descriptive survey design was used to assess the implementation of outcomes based teaching and learning in misrak TVET. The appropriateness of this design for such study was by many scholars. Koul (1996: 405) states that descriptive survey design become useful particularly where one needs to understand some particular information. Best and Khan (1989:18) have noted that a descriptive survey design involves a clear defined problem and definite objectives.

3.2 DATA SOURCES

In this study, both primary and secondary sources were used to gather adequate information about the implementation of outcomes based teaching and learning in misrak TVET.

The primary sources were the students, teachers, and department head and the administrative staff dean of the college. The secondary sources were policy documents, books and journals.

3.3 TARGET POPULATION AND SAMPLING TECHNIQUE

The sample area of the study, Misrak TVET, is found in Yaka sub city, city Government of Addis Ababa. The college has 142 teachers of which 92 males and 50 were females; 698 students (level I, II, III, IV&V of second and third year of 2004 E.C entry only) of which 311 were males and 387 were females; 6 were sectors/departments and 110 were supportive staffs of which50 were males and 60 were females.

The sample must be optimum size.it should neither be excessively large nor too small enough to be economical in term of time, money and complexity of analysis (Best and Khan, 1989:16).

According to Cohen, Manion and Morrison (2005), to stratify random sample is a simple two-stage process. First, identify those characteristics which appear in the sample. divide the wider

population into homogeneous and, if possible, discrete groups (strata). Second, randomly sample within these groups, the size of each group being determined by the judgment of the researcher or by reference to determining the size of a random sample or sample size, confidence levels and sample error.

Therefore, for this study, from 142 teachers, 85 (60%) teachers were selected using stratified sampling technique

From 366 (level II, III, IV & V students), 220 (60%) students were selected using stratified sampling technique based on occupational title they learn which are categorized under similar sectors.

From 6 departments heads, 4 department heads, 4 section heads and the vice dean of the college were selected purposefully due to the number of the occupational title they contain under their categories

3.4 INSTRUMENTS AND PROCEDURES OF DATA COLLECTION.

Questionnaires, an interview, document analysis and observation ware the main data gathering instruments for adequate data and for triangulation purpose. Therefore, employing multiple data collection instruments helps the researcher to combine, strengthen and amend some of the inadequacies of the data and for triangulating it (Creswell, 2003; 62).

To assess the implementation of Outcomes Based Teaching and learning in study area, the questionnaires, structured interview and observation were developed. The questionnaires were designed and administered by the researcher to teachers and students. The questionnaires distributed to teachers in order to complete during their own time within a week. But students are completed the questionnaire in their class room immediately after their class sessions and break times.

Interview were conducted through relating the purpose of study based on the permission and willingness of the participants, the department heads and vice dean of the college by the researcher. Finally, document analyses were done by the researcher.

3.4.1 QUESTIONNAIRES

Questionnaires were used to collected relevant and first –hand information from the key participants such as teachers and students. The items of the questionnaires were close-end questions and accompanied by some open ended ones. The reason why the questionnaires were used that it is easier to handle and is simple for the respondents to answer within a short period of time (Koul, 2008:146)

The two questionnaires were prepared based on literature reviewed and experience. The questionnaires (revised and refined) contained seven parts and equal number items (questions) for both teachers and students.

The questionnaires mainly dealt with the understanding of OBTL practices, the effectiveness of teacher teaching practices, the teacher methods of teaching, students' desired outcomes, factors affecting implementation of OBTL practices and issue related to availability of resources. All questionnaires were in English.

3.4.2 AN INTERVIEW

The structured interviews were used to collect data from department heads and vice-dean of the college. The reason why structured interview were employed that procedure to be used is standardized and determined in answers to carefully phrased Questions. (Koul, 2008:176).using this instrument is important to get thick data about the issue under study. Patton (1990:278) writes, 'the purpose of interview is to find out what is in or someone's mind.' Patton (1990) argues that people are interviewed in order to determine from them those things which cannot be directly observed as everything cannot be observed.

The nature of interview was structured interview and with propping question which has 8 items. The researcher conducted 10 sessions.4 with section heads, 4 with department heads, 1 with students and 1 with vice dean of the college. During the interviews the researcher took the field notice.

3.4.3 OBSERVATION

In addition to the interviews, questionnaires, and document analysis; observations were conducted to determine the implementation of outcomes based teaching and learning in Misrak TVET. According to Tuck man (1994:378), what should be, is the event or phenomenon in action. Tuckman (1994:378) further highlights that in qualitative educational research this often means sitting in the classroom in an unobtrusive manner as possible and watching teachers deliver a programme to students. Observation was planned in order to confirm or disprove the researcher's interpretations of their opinions. Observation was also useful to help the researcher to get some information department heads and vice dean might not have supplied during interviews.

Marshall and Ross man (1995) indicate that if interviews are combined with observation, they allow the researcher to understand the meanings people hold for their everyday activities.

The following criteria were used during observations:

- Number of learners in a classroom
- Classroom setting,
- Workshop, hand tools and machines arrangements.
- The use of resources
- Teaching strategies followed
- Assessment strategies followed
- Learner participation
- Incorporation of OBE principles and practices.

Based on these criteria some observation checklist prepared to follow during observation.(see Appendix –D attached)

3.5 VALIDATION OF DATA COLLECTION INSTRUMETS

To ensure common understanding of words used in the instrument content validity were addressed in this study. Cohen, Manion and Morrison (2000) argue that to insure content validity the instrument must show that it fairly and comprehensively covers the domain or items that it supports to cover. For this study, three experts who have deep knowledge and experience related to the field were made to examine the instrument before the pilot study. Then questions were pretested (piloted) being administered to 5 teachers and 10 students of Misrak TVET in different

fields of study and its reliability level of Cronbach's Alpha was 0.892. After that modification was adjusted. Finally the instruments were used for the main data collection phase.

3.6 DATA ANALYSIS

Different statistical techniques were used on the basis of the nature of the data collected. Consequently, the data collected from the respondents were analyzed quantitatively and qualitatively. In analyzing quantitative data, responses were categorized. Percentage and frequency counts were used to analyze the characteristics of the population as it helps to determine the relative standing of the respondents. Moreover, mean scores, standard deviations, and independent t-tests were used to analyze the questions with five point likert scales to assess the implementation of outcomes based teaching and learning at Misrak TVET College. The data gathered in this Quantitative method were analyzed using the Statistical Package for the Social Sciences (SPSS) version 19, a computer program used for statistical analysis.

There is an effect size measure which was in conjunction with the t-test is called Cohen's d. As Cohen suggests, there are some guidelines for determining whether our effect size is Strong. These are: 0–0.20 = weak effect (low), 0.21–0.50 = modest effect (medium), 0.51–1.00 = moderate effect (high), >1.00 = strong effect (very high), were used to make the analysis clear.

In analyzing the qualitative data obtained through an interview, first summary sheets were prepared and field notes were written and the content of the responses were analyzed. The documents such as journals, books, and articles were also used in data analysis. During the document analyzed attention is given to basic research question to guide what to refer. To this end, analysis and interpretations were made on the data obtained through open end questionnaires, interview, observation and document Analysis. Document analysis was used to gather necessary information about the implementation of outcomes based teaching and learning. This was strengthening the data that obtained through questionnaire and interview. Supporting this, Best and Khan (1989:25) have noted that documents analysis is important and relevant resource of data in yielding information and exploring educational practice.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This Chapter deals with the presentation, analysis and interpretation of the data collected through questionnaires, interview, observation and document analysis. The Chapter consists of two parts. The first part is concerned with the description of the background characteristics of the respondents of the sample population. The second part is concerned with the analysis and interpretation of the main data.

4.1. Background Characteristics of the Respondents

The questionnaires were administered to 366 students and 85 teachers. From these 231 students and 76 teachers returned, of which 231 and 76 papers were used for analysis and representing an overall response rate of 63% and 89.4% respectively. The background information of teachers (n = 76) and students (n = 231) who completed properly and returned the questionnaires were indicated here under.

Table 1: Background information of sample participants

Variables	Categories	N	Percent (%)
Participants	Teachers	76	24.8
	Students	231	75.2
	Total	307	100.0

The information in Table 1 reveals that 24.8% and 75.2 % of the participants were teachers and students. From these participant respondents 48.8 % males and 51.2 % females respectively were involved in this study. The numbers of teachers are fewer than that of students' participants and the numbers of male participants are also fewer than that of female participants.

Hence, this indicates that the great majority of the participants in the sample areas of the Study were female showing that the work environment was female dominated.

Regarding the age of the respondents, 75.6 % of the participants' respondents were between 21 and 25 years and 13.7% of the participants respondents were between 26 and 30 years. The rest

of the participants respondents 1.6%, 1.6% and 5.5% were between 31 and 35 years, 36 and 40 years and above 40 years respectively and 2% of the participant respondents are not need to tell their age. This shows that the vast majority of the participants were very young.

4.2. Analysis of the Data

4.2.1. The Understanding of Outcomes Based Teaching and learning Practices

This part deals with the discussion of the data gathered from respondents on the Understanding of Outcomes Based Teaching and learning practice. The extent to which teachers understood to apply the day to day practices of outcomes based teaching and learning premises and principles in teaching Practice, and students learning was presented to respondents through questionnaires that they were required to rate the level of teachers' accomplishment on the basis of a five point Likert scale. These five point Scales range from strongly agree (= 5) to strongly disagree (= 1). Mean scores, standard deviations and t-test results were calculated from the responses.

There is an effect size measure which was in conjunction with the t-test is called Cohen's d. As Cohen suggests, there are some guidelines for determining whether our effect size is Strong. These are: 0–0.20 = weak effect (low), 0.21–0.50 = modest effect (medium), 0.51–1.00 = moderate effect (high), >1.00 = strong effect (very high), were used to make the analysis clear.

Responses from the interview were summarized to validate the findings during the process of presentation and analysis of all data in each close-ended item as necessary.

Table 2: Teachers' and Students' Mean Scores on the understanding of Outcomes Based Teaching and learning Practices

Items	Participants	N	Mean	Std. Deviation	Mean Difference	t-Value	p-value
1. All learners can learn and succeed, but not all the same time in the same way.	Teachers	75	3.98	1.03			
	Students	228	3.61	1.14	0.37	2.63	0.01*
2. Schools control the conditions that directly affect successful learning.	Teachers	76	3.43	1.33			
	Students	228	3.50	1.18	-0.07	-0.46	0.63
3. Successful learning promotes even more successful learning.	Teachers	75	4.20	.71			
	Students	224	3.87	1.15	0.32	2.90	0.00*
4. Clarity of focus is to facilitate students'...	Teachers	75	3.78	.85			
	Students	223	3.44	1.21	0.34	2.67	0.01*
5. The instructor begins design down to teach by identifying the exit outcomes	Teachers	74	3.95	.99			
	Students	226	3.76	1.15	0.19	1.42	0.15
6. High expectation to success for all students succeeds….	Teachers	74	3.95	.86			
	Students	224	3.58	1.24	0.37	2.90	0.00*
7. Expanded opportunities and supports to allow learning success (outcomes) in a variety ways.	Teachers	75	3.96	.77			
	Students	221	3.73	1.11	0.22	1.89	0.05*
8. Teachers understood well OBTL …	Teachers	75	4.08	.92			
	Students	223	3.60	1.13	0.47	3.61	0.00*

*Denotes significant at α 0.05 level, $p \leq 0.05$, t-critical value (1.96)

Table 2 items 1 illustrates that the teachers' and students' mean scores were 3.98 and 3.61 respectively, with mean difference of 0.37. The t-test result with p –value of 0.01< 0.05 proves that there is statistically significant difference between the two groups of respondents towards the item. The t-value (2.63) which is greater than the t-critical value (1.96) shows that the two

groups of respondents significantly differ in their agreement on the item. This shows that teachers' believe differently and practice all learners can learn and succeed, but not all the same time in the same way. Their beliefs were modest (medium) even though the level of agreement by the teacher respondents was greater than that of the student respondents.

Similarly, the data obtained from the interviews made with the one of section head said that, *''Yes, all can learn but not all can succeed because of the different factors. If materials, Human resource and professional competent / possess knowledge, skill and attitude person put in charge or practice can be succeed. Unless, it is a great loss or crisis'' (Interview #1, April 15, 2013)*

One of the department heads also said, *''when modern teaching methodology Approach put in practices it can be succeed. Materials, CBLM, TTLM, continued training system applied. But not the same time based on students' status. Because of the individual difference back grounds'' (Interview #3, April 16, 2013)*

Concerning item 2 in Table 2, the mean scores of the teachers and the students were 3.43 and 3.50 respectively, with mean difference of -0.07. The computed t-test result with p-value of 0.63> 0.05 shows that the teacher respondents and student respondents do not significantly differ in their average ratings. This can also be proved by the t-value (-0.46) which is less than the t critical value (1.96). This clearly showed Schools control the conditions that directly affect successful learning were with modest relationship.

As one of department heads reveals during an interview that, ''Yes, *when the college management, trainers, learners' family and trainee make good condition. By providing materials, resource, machine, tools and completed competence. By using progress chart to control'' (Interview #2, April 15, 2013)*

From the data in Table 2 item3, the mean scores of teacher and student respondents were 4.20 and 3.87, with mean difference of 0.32. The t-test result with p-value of 0.00< 0.05 indicates that the two groups of respondents significantly differ in their average agreement towards the item. In the same way, the calculated t-value (2.90) which is greater than the t-critical value (1.96) confirms that there is statistically significant difference between the responses of the two groups of respondents. This shows that Successful learning promotes even more successful learning was high to teacher respondents and was moderate to student respondents.one of the teachers said

that, *"By motivation success can be increased. Motivation and bench mark encourage trainees. But in our college there is no such activity."(Interview#2, April 15, 2013)*

From the data in Table 2 item4, the mean scores of teacher and student respondents were 3.78 and 3.44, with mean difference of 0.34. The t-test result with p-value of 0.01< 0.05 indicates that the two groups of respondents significantly differ in their average agreement towards the item. In the similar way, the calculated t-value (2.67) which is greater than the t-critical value (1.96) confirms that there is statistically significant difference between the responses of the two groups of respondents. This shows that Clarity of focus is to facilitate students' achievement of the intended learning outcomes/teachers informed choice of students when design exit outcomes/was modest understood by teachers than the students.

As one of the respondents said, *"There is less clarity of focus; the clarity of focusing must start from the KG to higher college. Focused on industry not the need of students in order to based on OS and curriculum is not only the way. The trainees placing to competence they want to need the consideration" (Interview#5, April 17, 2013)*

Regarding item 5 in Table 2, the mean scores of both the teachers and students were 3.95 and 3.76 respectively, with mean difference of 0.19. The t-test result with p-value of 0.15 > 0.05 indicates that both groups of respondents do not significantly differ in their average agreement towards the instructor begins design down to teach by identifying the exit outcomes(curriculum content flow from general outcomes to specific out comes to class room activities).Similarly, the calculated t-value (1.42) which is less than the t-critical value (1.96) confirms that there is no statistically significant difference between the responses of the two groups of respondents. This confirms that the instructor begins design down to teach by identifying the exit outcomes(Curriculum content flow from general outcomes to specific out comes to class room activities) was weak.

As one interviewed department head said about design down exit outcomes activities,

> *Industry prepares OS, model curriculum then gives to TVET, however, there is no orientation and no awareness is given to stake holders. The issue of Curriculum is a burden for teachers. The teachers add their own contributions, but there is scarcity of books, modules, the curriculum itself is not contextual to our country, even no edited, need to revise. Because of the shortage of materials there is no implementation of curriculum, ratio of materials, machines to*

number of students not fitted. This leads the training to theory only. and bringing curriculum into logical order of practicing is not simple for teachers means break to daily activities from Occupational standards(OS) to model curriculum and curriculum guide to learning outcomes(LO) to information sheet then lab test.(Interview #3, April 16, 2013)

Table 2 items 6 depicts that the teachers' and students' mean scores were 3.95 and 3.58 respectively, with mean difference of 0.37. The t-test result with p –value of 0.00< 0.05 proves that there is statistically significant difference between the two groups of respondents towards the item. The t-value (2.90) which is greater than the t-critical value (1.96) shows that the two groups of respondents significantly differ in their agreement on the item. This shows that high expectation to success for all students succeed reinforces and provides motivation was different. Their beliefs were modest (medium) even though the level of agreement by the teacher respondents was greater than that of the student respondents.

As one participant of interviewed responded that, *"No motivation, no reinforcement work even no support and work cooperative as a team.so from where high expectation comes?"*
(Interview #1, April 15, 2013)

As it is indicated on item 7 in Table 2, the computed mean scores of teachers and students on expanded opportunities and supports to allow learning success (outcomes) in a variety ways were 3.96 and 3.73 respectively, with mean difference of 0.22. The t-test result with p-value of 0.05 indicates that there is statistically significant difference between the responses of the two groups of respondents towards the item. In the same way, the calculated t-value (1.89) which is greater than the t-critical value (1.96) confirms that there is statistically significant difference between the responses of the two groups of respondents. This indicates, the responses of teachers expanded opportunities and a support to allow learning success (outcomes) differently in a variety ways was modest size level of agreement to the item was higher than that of the students.

From an interview conducted with section head trainers, one said that, "*Many opportunities are there. Until the trainee becomes competent .The support and trials, Opportunities are available but less expanded. From one level to other Levels are available but not implementing by college." (Interview #8, April 18, 2013)*

Table 2 items 8 depicts that the teachers' and students' mean scores were 4.08 and 3.60 respectively, with mean difference of 0.47. The t-test result with p –value of 0.00< 0.05 proves that there is statistically significant difference between the two groups of respondents towards the item. The t-value (3.61) which is greater than the t-critical value (1.96) shows that the two groups of respondents significantly differ in their agreement on the item.

This shows that teachers understood well differently way outcome based teaching & learning/OBTL / and know how to implement. Their beliefs were modest (medium) even though the level of agreement by the teacher respondents was greater than that of the student respondents.

Similarly, 65.5% respondents agreed that teachers understood well differently outcome based teaching & learning/OBTL / and know how to implement while 14.4% of students disagree. On the other hand, during an interview question, the researcher asked, if there is any challenge you are facing during implementation of outcomes-based teaching and learning? Some respondents reflected their views; "*OBTL is as foundation setting only not fit totally and could not able to apply the OBTL properly. Lacks of understanding about OBTL also present"*
(Interview #4, April 17, 2013)

From this data one can understand status of OBTL implementation in the Misrak TVET College. The computed responses of the respondents on the understanding of outcomes based teaching and learning premises and principles in teaching Practices, items resulted in item2 and item 5, and have no difference on the agreement. This indicates that, there is no statistically significant difference between the two groups of respondents in the agreement for the overall outcomes based teaching and learning premises and principles in teaching Practice. The two groups of respondents significantly differ in their agreement on the item2 and item 5 only. This indicates that the results are not statically significant. On the other hand, the understanding of Outcomes Based Teaching and learning Practices both groups of respondents had different modest level of agreement to the overall the understanding of Outcomes Based Teaching and learning Practices even though teacher respondents have higher level agreement to the item.
Similarly, the data obtained from the interviews made with to what extent the section head and department head the understanding Outcomes Based Teaching and learning Practices generally, their views as follow,

An Outcome Based Teaching and learning is not time bounded but focused on industry needs teaching and learning processes. Based on competence and end result is level based sequentially to fill knowledge, skills and Attitudes of the trainee. (Interview #3, April 16, 2013)

Outcomes Based Teaching and learning is how the learning outcomes, knowledge, skill and attitude possessed and applied based on work after graduate. This means, Producing competent man power that fit the markets demand. Its standard is prepared by industry. The occupational standards OS, unit of competence is totally from industry, so it is output organ training method. (Interview #9, April 19, 2013)

Finally, from this data one can understand that, the level of teachers' and students' understanding of OBTL is very low. They do not know about the OBTL premises and principles because of this little understanding of OBTL. So, it is difficult to determine how the teachers accommodate this premises and principles of OBTL in their class room practices.

4.2.2: **Items related to the effectiveness of teaching practice.**

This part deals with the discussion of the data gathered from respondents on the items related to the effectiveness of teachers' teaching practice. The extent to which teachers apply the day to day practices of outcomes based teaching and learning in teaching Practice. Both teachers and students were presented to respond through questionnaires. They were required to rate the Level of teachers' accomplishment on the basis of a five point Likert scale. These five point Scales range from strongly agree (= 5) to strongly disagree (= 1). Mean scores, standard deviations and t-test results were calculated from the responses. There an effect size measure which was in conjunction with the t-test is called Cohen's d. As Cohen suggests, there are some guidelines for determining whether our effect size is Strong.

These are: 0–0.20 = weak effect (low), 0.21–0.50 = modest effect (medium), 0.51–1.00 = moderate effect (high), >1.00 = strong effect (very high), were used to make the analysis clear. Besides, responses from the interview were summarized to validate the findings during the process of presentation and analysis of all data in each close-ended item as necessary.

Table 3: Items related to the effectiveness of teacher's teaching practice.

Items	Participants	N	Mean	Std. Deviation	Mean Difference	t-Value	p-value
1. Teacher prepares information sheet, job sheet, operation sheet for each of students.	Teachers	76	4.02	1.09			
	Students	228	4.01	1.24	0.01	0.05	0.95
2. Teacher has arranged consultation hours for all students.	Teachers	75	4.08	1.11			
	Students	228	3.66	1.30	0.41	2.69	0.00*
3. Teacher uses examples, illustrations … to explain and clarify the lesson or content he/she teaches.	Teachers	76	4.48	0.70			
	Students	227	3.87	1.23	0.61	5.33	0.00*
4. Teacher informs his students the intended learning out comes.	Teachers	74	4.36	0.82			
	Students	227	4.05	2.22	0.31	1.17	0.23
5. Teacher uses attention gain activities, ideas, .. while teaching.	Teachers	74	4.22	0.88			
	Students	226	4.10	1.13	0.12	0.88	0.37
Average	Teachers	75	4.23	0.92			
	Students	228	3.93	1.42	0.29	2.02	0.31

*Denotes significant at α 0.05 level, $p \leq 0.05$, t-critical value (1.96)

With regard to item 1 in Table 3 above, the mean scores of teachers and students were 4.02 and 4.01, with mean difference of0.01. The t-test result with p-value of 0.95> 0.05 Indicates that there is no statistically significant difference between the responses of the two groups of respondents. The calculated t-value (0.05) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. That is both groups agree that there are not significant difference on teacher prepares information sheet, job sheet, operation sheet for each of students.

This shows that, teacher prepares information sheet, job sheet, operation sheet for each of student's level of agreements was weak effect size.

Similarly, during the observations, the researcher observed that the teachers distribute the information sheets to the learners in groups or a single to have their own copy instead of providing for learners individually.

Table 3 item 2 shows that, teachers and students were asked to give their agreement or disagreement regarding teacher has arranged consultation hours for all students. The mean scores of the teacher respondents and student respondents were 4.08 and 3.66 respectively, with mean difference of 0.41. The t-test result with p-value of $0.00 < 0.05$ shows that there is statistically significant real difference between the responses of the two groups of respondents towards the item. The calculated t-value (2.69) which is greater than the t-critical value (1.96) also proves that the two groups of respondents significantly differ in their agreement on the item. This indicates that teachers have higher level of agreement different way and students have moderate level of agreement to the item. Therefore, teachers have to arrange consultation hours for all students effectively.

As to the use of examples, illustrations and demonstrations by teachers to explain and clarify the lessons or contents they teach, Table 3 item 3 depicts that the teachers' and students' mean scores were 4.48 and 3.87 respectively, with mean difference of 0.61. The t-test result with p-value of $0.00 < 0.05$ proves that there is statistically significant difference between the two groups of respondents towards the item. The t-value (5.33) which is greater than the t-critical value (1.96) shows that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers' use of examples, illustrations and demonstrations to explain and clarify the lessons or contents they teach was high significance difference even though the level of agreement by the teacher respondents was greater than that of the student respondents. This clearly indicates there is no use of examples, illustrations and demonstrations by teachers to explain and clarify the lessons or contents they teach properly as needed by pedagogy of teaching and learning.

Similarly, as one of section head reflected her feeling; "*giving training without OB-training methodology and not implementing training methodology as required is one of the problems we are facing in our college."(Interview #7, April 18, 2013)*

Therefore, the effectiveness of teaching practice with such trainers/teachers/ skill gab is real matters on achieving the intended outcomes. Regarding this, Gurney (2007:1) state that effective teacher is the one who engages with the students in the class by using examples and demonstrations in a way that highlights mutual respect and an acknowledgement of the learning process that is taking place.

Item 4 in Table 3 above, the mean scores of teachers and students were 4.36 and 4.05, with mean difference of 0.31. The t-test result with p-value of 0.23 > 0.05 indicates that there is no statistically significant difference between the responses of the two groups of respondents. The calculated t-value (1.17) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. That is both groups agree that teacher informs his students the intended learning out comes. Though, the results are not statistically significant, teachers and students had different agreement on item was weak. This, therefore, reveals that teacher informs his student the intended learning out comesthey are expected to achieve at the end of the lesson for better learning. This means students well know the performance they are expected to achieve as the result of engaging in teaching and learning experience.

Item 5 in Table 3 above, the mean scores of teachers and students were 4.22 and 4.10, with mean difference of 0.12. The t-test result with p-value of 0.37> 0.05 Indicates that there is no statistically significant difference between the responses of the two groups of respondents. The calculated t-value (0.88) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. That is both groups agree that there are not significant difference on that teacher uses of attention gain activities, ideas, concepts and devises while teaching was weak. This, therefore, there is insufficient evidence to conclude that teacher differs uses of attention gain activities, ideas, concepts and devises while teaching. In addition to this data collected during observation, show that in many class room trainers use the projector during they give lecture.

Totally, the items related to the effectiveness of teachers' teaching practice Computed by aggregating the responses of the items related to the effectiveness of teachers' teaching practice resulted in average mean scores of 4.23 and 3.93 by teachers and students respectively with

mean difference of 0.29. This indicates that, there is no statistically significant difference between the two groups of respondents (p-value of 0.31 > 0.05) in the computed average agreement for the overall the effectiveness of teachers' teaching practice. The t-value (2.02) which is greater than the t-critical value (1.96) proves that the two groups of respondents no significantly differ in their agreement on the items except item2 and item 3. This indicates that the results are not statically significant. Although the both groups of respondents had different modest level of agreement to the overall the effectiveness of teachers' teaching practice, teacher respondents have higher level agreement to the item.

Table 4: Creating the situations in which learning outcomes will be achieved

	Participants	N	Mean	Std. Deviation	Mean Difference	t-Value	p-value
3.6. Do your teachers create situations in which intended learning outcomes will be achieved?	Teachers	57	1.36	0.58	-0.03	-0.30	0.76
	Students	158	1.39	0.66			

In Table 4 above, the mean scores of teachers and students were 1.36 and 1.39, with mean difference of -0.3. The t-test result with p-value of 0.76> 0.05 Indicates that there is no statistically significant difference between the responses of the two groups of respondents. The calculated t-value (-0.03) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. That is, there is no sufficient evidence to conclude that both groups agree significance difference on teachers create the situations in which learning outcomes will be achieved was weak.

Similarly, the data collected from respondents frequency counted shows 67.9% agreed that teachers create the situations in which learning outcomes will be achieved while 32.1% respondents are not support that teachers create the situations in which learning outcomes will be achieved.

4.2.3: Items related to teachers' methods of teaching.

This part deals with the discussion of the data gathered from respondents on the teachers' methods of teaching. The teachers' methods of teaching were presented to respondents through questionnaires that they were required to rate the level of accomplishment of the teachers on the basis of a five point Likert scale. These five point scales range from strongly agree (= 5) to strongly disagree (= 1). Mean scores, standard deviations and t-test results were calculated from the responses. There an effect size measure which was in conjunction with the t-test is called Cohen's d. As Cohen suggests, there are some guidelines for determining whether our effect size is Strong. These are: 0–0.20 = weak effect (low), 0.21–0.50 = modest effect (medium), 0.51–1.00 = moderate effect (high), >1.00 = strong effect (very high), were used to make the analysis clear.

Responses from the interview were summarized to validate the findings during the process of presentation and analysis of all data in each close-ended item as necessary.

To assess teachers' method of teaching both respondent groups were asked to give their ratings regarding nine (9) methods of teaching items as presented in Table 5 below. In this table, the average agreement level given by the two respondent groups regarding each item is computed and presented with statistical t-test results

Table 5: Items related to teachers' methods of teaching.

Items	Participants	N	Mean	Std. Deviation	Mean Difference	t-Value	P- value
1. Teacher's way of teaching creates learners' interests, …	Teachers	74	4.05	0.87			
	Students	223	3.62	1.21	0.42	3.27	0.00*
2. Teacher encourages students' involvement and success in their learning.	Teachers	75	4.38	0.76			
	Students	224	3.95	1.10	0.42	3.68	0.00*
3. Teacher enhances student critical thinking and skills of scientific investigations.	Teachers	76	3.94	.86			
	Students	225	3.80	1.12	0.14	1.15	0.25
4. Teacher uses information sheet, job sheet, operation sheet ….	Teachers	76	4.42	.85			
	Students	225	3.89	1.28	0.52	4.05	0.00*
5. Teacher uses audio tapes, video tapes, …	Teachers	74	3.68	1.16			
	Students	224	3.73	1.33	-0.04	-0.27	0.78
6. Teacher gives individual assignment and practical project work to his students	Teachers	74	4.41	.86			
	Students	222	4.12	1.06	0.29	2.37	.01*
7. Teacher encourages his/her student to develop group learning skills ….	Teachers	75	4.42	.73			
	Students	221	4.27	.88	0.15	1.32	0.18
8. Teacher considers learning outcomes to be achieved.	Teachers	74	4.24	.87			
	Students	217	3.86	1.20	0.38	2.92	0.00*
9. Teacher commonly uses observation, written tests, …	Teachers	75	4.24	.88			
	Students	219	3.77	1.17	0.46	3.62	0.00*
Average	Teachers	76	4.19	0.87			
	Students	225	3.90	1.14	0.30	2.45	0.13

*Denotes significant at α 0.05 level, $p \leq 0.05$, t-critical value (1.96)

As it can be observed from Table 5items 1 above, the teacher's way of teaching creates learners' interests, enthusiasm and appreciation, Table 5item 1 depicts that the teachers' and students' mean scores were 4.05 and 3.62 respectively, with mean difference of 0.42. The t-test result with p-value of 0.00 < 0.05 proves that there is statistically significant difference between the two groups of respondents towards the item. The t-value (3.27) which is greater than the t-critical value (1.96) shows that the two groups of respondents significantly differ in their agreement on the item. This shows that teacher's way of teaching creates learners' interests, enthusiasm and appreciation had real difference between the teachers and students was high even though the level of agreement by the teacher respondents was greater than that of the student respondents. The students are not satisfied the teacher's way of teaching.

It can be seen from Table 5item 2 that teachers and students were asked to rate that teacher encourages students' involvement and success in their learning. The mean scores of the teacher and student respondents were 4.38 and 3.95 respectively, with mean difference of 0.42. The t-test result with p-value of 0.00 < 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (3.68) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement to encourage students' involvement and success differently in their learning level of their students than the students who support moderate effect size.

Table 5item 3 shows that, teachers and students were asked to give their agreement or disagreement regarding teacher enhances student critical thinking and skills of scientific investigations. The mean scores of the teacher respondents and student respondents were 3.94and 3.80 respectively, with mean difference of 0.14. The t-test result with p-value of 0.25 >0.05 shows that there is no statistically significant real difference between the responses of the two groups of respondents towards the item. The calculated t-value (1.15) which is less than the t-critical value (1.96) also proves that the two groups of respondents no significantly differ in their agreement on the item. This indicates that there is no significant evidence to conclude teachers and students have difference level of agreement with weak effect sizes.

As it can be observed from Table 5item 4 above, as to teacher uses information sheet, job sheet, operation sheet and other printed materials to teach students. Table 5item4 depicts that the teachers' and students' mean scores were 4.42 and 3.89 respectively, with mean difference of 0.52. The t-test result with p-value of 0.00 < 0.05 proves that there is statistically significant difference between the two groups of respondents towards the item. The t-value (4.05) which is greater than the t-critical value (1.96) shows that the two groups of respondents significantly differ in their agreement on the item. This shows that Teacher uses information sheet, job sheet, operation sheet and other printed materials to teach students had real difference between the teachers and students were medium effect sizes even though the level of agreement by the teacher respondents were greater than that of the student respondents.

The data obtained from the interviews made with one of department head revealed that, "Still some teachers are mixing traditional way of delivery system with modern one. *Even though they had methodology training, no change. They do not use information sheet, job sheet, operation sheet and according to the unit of competence." (Interview #3, April 16, 2013)*

Table 5item 5 shows that, teachers and students were asked to give their agreement or disagreement regarding teacher uses audio tapes, video tapes, slide sequence photographs, models, practical kits, tools, and printed materials in his /her own classroom. The mean scores of the teacher respondents and student respondents were 3.68 and 3.73 respectively, with mean difference of -0.04. The t-test result with p-value of 0.78 >0.05 shows that there is no statistically significant real difference between the responses of the two groups of respondents towards the item. The calculated t-value (-0.27) which is less than the t-critical value (1.96) also proves that the two groups of respondents no significantly differ in their agreement on the item. This indicates that there is no significant evidence to conclude teacher uses audio tapes, video tapes, slide sequence photographs, models, practical kits, tools, and printed materials in his /her own classroom have difference level of agreement with weak effect sizes.

It can be seen from Table 5item 6 that teachers and students were asked to rate to what extent teacher gives individual assignment and practical project work to his students. The mean scores of the teacher and student respondents were 4.41 and 4.12 respectively, with mean difference of 0.29. The t-test result with p-value of 0.01 < 0.05 indicates that there is statistically significant

difference between the two groups of respondents towards the item. The t-value (2.37) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement that they give individual assignment and practical project work to his students differently in their learning level of their students than the students who support moderate effect size.

The data obtained from the interview made with one of department head revealed that, *"Look at the numbers of students! Forget about practical work individual even there is no materials, no resource. Their ratio of their number to machine, class size, and workshop is not good enough."* (Interview #5, April 17, 2013)

Table 5item 7 shows that, teachers and students were asked to give their agreement or disagreement regarding that teacher encourages his/her student to develop group learning skills such as discussion and interpersonal skills. The mean scores of the teacher respondents and student respondents were 4.42 and 4.27 respectively, with mean difference of 0.15. The t-test result with p-value of 0.18>0.05 shows that there is no statistically significant real difference between the responses of the two groups of respondents towards the item. The calculated t-value (1.32) which is less than the t-critical value (1.96) also proves that the two groups of respondents no significantly differ in their agreement on the item. This indicates that there is no significant evidence to conclude teachers and students have difference level of agreement and was weak effect sizes.

It can be seen from Table 5item 8 that teachers and students were asked to rate teacher considers learning outcomes to be achieved. The mean scores of the teacher and student respondents were 4.24 and 3.86 respectively, with mean difference of 0.38. The t-test result with p-value of 0.00 < 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (2.92) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement to teacher considers learning outcomes to be achieved differently in their learning level of their students than the students who support with moderate effect size.

It can be seen from Table 5item 9 that teachers and students were asked to rate the what extent teacher commonly uses observation, written tests, port polio, and actual demonstration of performance methods to assess his/her students' master of intended learning outcomes. The mean scores of the teacher and student respondents were 4.24 and 3.77 respectively, with mean difference of 0.46. The t-test result with p-value of 0.00 < 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (3.62) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement to the teacher commonly uses observation, written tests, port polio, and actual demonstration of performance methods to assess his/her students' master of intended learning outcomes differently in their learning level of their students than the students who support with moderate effect size. Thus teachers need to improve the methods to assess his/her students' master of intended learning

Overall, the items related to teachers' methods of teaching practice Computed by aggregating the responses of Items related to teachers' methods of teaching practice resulted in average mean scores of 4.19 and 3.90 by teachers and students respectively with mean difference of 0.30. This indicates that, there is no statistically significant difference between the two groups of respondents (p-value of 0.13 > 0.05) in the computed average agreement for the overall the effectiveness of teachers' teaching practice. The t-value (2.45) which is greater than the t-critical value (1.96) proves that the two groups of respondents no significantly differ in their agreement on the items 3, 5 & 7. This indicates that the results are not statically significant. Although the both groups of respondents had different modest level of agreement to the overall Items related to teachers' methods of teaching practice even though teacher respondents have higher level agreement to the items 3, 5 & 7. The other items have statistically significant difference.

4.2.4: The rank analysis on items related to teachers' methods of teaching.

Teachers and students presented to rank in order eight teaching methods from 1st to 8th for the most to the least employed method of teaching by teachers. The table below presents the number of respondents rated each method of teaching in rank from the most employed to the least employed. Each group of respondent is computed for each method of teaching frequently employed by teachers/from more frequency to less frequency/ then their frequency is ranked then high Average Rank frequency count has taken as it is the most implemented in the class room.

Table 6: The rank of eight methods of teaching as per their utilization in the classroom as frequently Employed by teachers

Methods of teaching	Ranks																
	1		2		3		4		5		6		7		8		Aveg.Rank %
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	
Lecture method	113	44.8	38	15.4	25	10.3	28	11.6	23	9.5	31	12.6	66	26.5	46	18.5	18.65*
Demonstration Method	32	12.7	48	19.4	12	5.0	16	6.6	16	6.6	11	4.5	65	26.1	51	20.6	12.69
Inquiry Method	19	7.5	41	16.6	23	9.5	14	5.8	17	7.0	45	18.3	40	16.1	28	11.3	11.51
Discovery Method	10	4.0	28	11.3	20	8.3	21	8.7	43	17.8	53	21.5	24	9.6	35	14.1	11.91
Laboratory Method	21	8.3	25	10.1	27	11.2	28	11.6	35	14.5	37	15.0	23	9.2	30	12.1	11.5
Individualized Method	16	6.3	15	6.1	44	18.2	35	14.5	38	15.7	29	11.8	13	5.2	12	4.8	10.33
Discussion Method	19	7.5	29	11.7	40	16.5	57	23.7	22	9.1	17	6.9	4	1.6	21	8.5	10.69
Project based Method	22	8.7	23	9.3	51	21.1	42	17.4	48	19.8	23	9.3	14	5.6	25	10.1	12.66

*ranked as 1st most frequency used in Average Rank column.

As it is indicated in Table 6, all the respondents stated they employed the various method of teaching. However, Table 6 showed that the most widely, used the lecture method (18.65%) dominated the rest and ranked as 1st most frequency used in Average Rank column. The demonstration method (12.69%), project based method (12.66%), discovery method (11.91%),inquire method (11.51%), laboratory method (11.50%), Discussions method (10.69%), and Individualized method (10.33%) are 2nd,3rd ,4th,5th , 6th and 8th respectively ,ranked .

During an interview with the one of the section head said, *"I use the method which fit to strategy. For example, I use the demonstration methods rather than lecture method for practical. Observation, discussion and project based are used according to the competence."*
(Interview #4, April 17, 2013)

4.2.5: **Items related to students' desired outcomes.**

This part deals with the discussion of the data gathered from respondents on the students' desired outcomes. Items related to students' desired outcomes to what extent students and teachers achieve desired outcomes in teaching and learning process were presented to respondents through questionnaires that they were required to rate the level of accomplishment of the teachers on the basis of a five point Likert scale. These five point scales range from strongly agree (= 5) to strongly disagree (= 1). Mean scores, standard deviations and t-test results were calculated from the responses. There an effect size measure which was in conjunction with the t-test is called Cohen's d. As Cohen suggests, there are some guidelines for determining whether our effect size is Strong. These are: 0–0.20 = weak effect (low), 0.21–0.50 = modest effect (medium), 0.51–1.00 = moderate effect (high), >1.00 = strong effect (very high), were used to make the analysis clear.

Responses from the interview were summarized to validate the findings during the process of presentation and analysis of all data in each close-ended item as necessary.
To assess students' desired outcomes both respondent groups were asked to give their ratings regarding ten (10) desired outcomes items as presented in table 9 below. In this table, the average agreement level given by the two respondent groups regarding each item is computed and presented with statistical t-test result.

Table 7: Items related to students' desired outcomes.

Items	Participants	N	Mean	Std. Deviation	Mean Difference	t-Value	p-value
1. Teacher encourages students to think independently work out …	Teachers	76	4.09	0.86			
	Students	219	3.79	1.13	0.29	2.33	0.02*
2. Students debate, discuss, reflect in the class by their own judgments …	Teachers	76	3.94	0.86			
	Students	217	3.54	1.30	0.40	3.04	0.00*
3. Teacher encourages students to do practical work and highly adapted to it.	Teachers	75	4.44	0.77			
	Students	211	3.80	1.17	0.63	5.30	0.00*
4. Students demonstrate their communication skills during the class and team-work.	Teachers	76	4.11	0.96			
	Students	211	3.91	1.09	0.20	1.43	.15
5. Students show higher-order intellectual capability, …	Teachers	75	3.90	1.02			
	Students	217	3.82	1.13	0.07	0.52	0.60
6. Students achieve learning outcomes, skills, knowledge, and attitude by intended learning activities.	Teachers	76	4.05	0.92			
	Students	213	3.85	1.08	0.19	1.39	0.16
7. The curriculum, competence that teachers use is aligned with desired graduate outcome.	Teachers	76	3.71	1.18			
	Students	205	3.56	1.20	0.14	0.92	0.35
8. Teacher adjusts the unit of competence to the industry needs…	Teachers	73	3.91	0.96			
	Students	215	3.57	1.27	0.34	2.42	0.01*
9. The students well understood the intended learning outcomes, …	Teachers	73	3.94	0.95			
	Students	218	3.75	1.14	0.19	1.41	0.15
10. Students contribute to create new technology, …	Teachers	73	3.42	1.24			
	Students	218	3.54	1.32	-0.11	-0.66	0.51

*Denotes significant at α 0.05 level, $p \leq 0.05$, t-critical value (1.96)

It can be seen from Table 7 item1 that teachers and students were asked to rate regarding teacher encourages students to think independently work out problems, and self-managed learning. The mean scores of the teacher and student respondents were 4.09 and 3.79 respectively, with mean difference of 0.29. The t-test result with p-value of 0.02 < 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (2.33) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement to teacher encourages students to think independently work out problems, and self-managed learning differently in their learning level of their students than the students who support moderate effect size.

By encouraging students to think independently, to develop the skill or competence needed to learn on their own and to work out the problems, rather than just telling them a solution enhance the training learner- centered approaches is trainer the responsibility as well as learners way of self-managed learning. The learners need to nurture themselves to self –managed learning, independently thinking and problem solving through practice.

As it is indicated in Table 7 item 2, teachers and students were asked to rate regarding Students debate, discuss, and reflect in the class by their own judgments and interpretation. The mean scores of the teacher and student respondents were 3.94 and 3.54 respectively, with mean difference of 0.40. The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (3.04) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement to encourage Students debate, discuss, and reflect in the class by their own judgments and interpretation differently in their learning level of their students than the students who support moderate effect size.

The students need to be skilled by presenting their own view point and defending it against the challenges of others, students thus engage in critical thinking debate and discussion. The ability to make their own judgments and interpretation and not necessary accept the perspective of the teacher.

The Table 7 item 3 above revealed that that teachers and students were asked to rate regarding teacher encourages students to do practical work and highly adapted to it. The mean scores of the teacher and student respondents were 4.44 and 3.80 respectively, with mean difference of 0.63.The t-test result with p-value of 0.00 < 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (5.30) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement to encourage students to do practical work and highly adapted to it differently in their learning level of students than the students who support with moderate effect size.

Teachers argue the issue of Adaptability to practical work differently it appeared to be seen as something which would develop as a consequence of heightening the other capabilities while students as just do practical work.

Regarding item 4 in Table 7, Students demonstrate their communication skills during the class and team-work rated by each group of the respondents. The mean scores of the teacher and student respondents were 4.11 and 3.91 respectively, with mean difference of 0.20.The p-value 0.15>0.05 shows that there is no statistically significant difference between the two groups of respondents towards the item. Similarly, the t-value (1.43) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. This, therefore, shows Students demonstrate their communication skills during the class and team-work with weak effect sizes agreement of the teachers and students. This means, the interpersonal skills of the team work recognized as an important capability between the groups.

Regarding item 5 in Table 7, Students show higher-order intellectual capability, ability to work together and independently during assessment and succeed competent rated by each group of the respondents. The mean scores of the teacher and student respondents were 3.90 and 3.82 respectively, with mean difference of 0.07.The p-value 0.60>0.05 shows that there is no statistically significant difference between the two groups of respondents towards the item. Similarly, the t-value (0.52) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. This, therefore,

shows Students show higher-order intellectual capability, ability to work together and independently during assessment and succeed competent with weak effect sizes agreement of the teachers and students.

Regarding item 6 in Table 7, Students achieve learning outcomes, skills, knowledge, and attitude by intended learning activities rated by each group of the respondents. The mean scores of the teacher and student respondents were 4.05 and 3.85respectively, with mean difference of 0.19. The p-value 0.16>0.05 shows that there is no statistically significant difference between the two groups of respondents towards the item. Similarly, the t-value (1.39) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. This, therefore, shows Students achieve learning outcomes, skills, knowledge, and attitude by intended learning activities with weak effect sizes agreement of the teachers and students.

Regarding item 7 in Table 7, the curriculum, competence that teachers use is aligned with desired graduate outcome rated by each group of the respondents. The mean scores of the teacher and student respondents were 3.71 and 3.56 respectively, with mean difference of 0.14.The p-value 0.35>0.05 shows that there is no statistically significant difference between the two groups of respondents towards the item. Similarly, the t-value (0.92) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. This, therefore, shows the curriculum, competence that teachers use is aligned with desired graduate outcome with weak effect sizes agreement of the teachers and students.

In addition to this as one of the participants said; *"Yes, but teachers need to adjust the curriculum to exit graduate outcomes based on OS. Sometimes curriculum is not fit country context. There is fluctuating curriculum. Even though, curriculum is dynamic, curriculum must be time boundary to change."(*Interview #6, April 17, 2013)

As it was indicated above in Table 7 item 8, that teachers and students were asked to rate regarding teacher adjusts the unit of competence to the industry needs during his/her students on company training and supervises them on company training. The mean scores of the teacher and

student respondents were 3.91and 3.57 respectively, with mean difference of 0.34 . The t-test result with p-value of 0.01< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (2.42) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement that teacher adjusts the unit of competence to the industry needs during his/her students on company training and supervises them on company training significantly differ than the students who support with weak effect sizes.

The data recorded during the time of observation, students on cooperative training places, suggested that:

> *There is no unit of competence we learn in the college and what we see here very different and there is no resources, materials.no one know where we are, our teacher gave us the mark list format, memorandum of agreement and competence list then told as to go and find then start the company training.*
>
> (Interview #10, April 16, 2013)

As one can understand from above data and respondent responses there is no regular basis of supervise the students on company training.

Regarding item 9 in Table 7, the students well understood the intended learning outcomes, teaching activities and outcomes based Assessment rated by each group of the respondents. The mean scores of the teacher and student respondents were 3.94 and 3.75 respectively; with mean difference of 0.19.The p-value 0.15>0.05 shows that there is no statistically significant difference between the two groups of respondents towards the item.

Similarly, the t-value (1.41) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item.

This, therefore, shows the students well understood the intended learning outcomes, teaching activities and outcomes based Assessment with weak effect sizes agreement of the teachers and students.

Regarding item 10 in Table 7, Students contribute to create new technology, adaptation, accumulation and transferring technology to micro and small enterprise as well as industry extension to maximize the productions rated by each group of the respondents. The mean scores of the teacher and student respondents were 3.42 and 3.54 respectively, with mean difference of -0.11.The p-value 0.51>0.05 shows that there is no statistically significant difference between the two groups of respondents towards the item. Similarly, the t-value (-0.66) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. This, therefore, shows Students contribute to create new technology, adaptation, accumulation and transferring technology to micro and small enterprise as well as industry extension to maximize the productions with weak effect sizes agreement of the teachers and students.

In addition to this, the researcher observed that, the trainers are more tied in training micro and small enterprises as well as industry extension work than creating new technology, adaptation, accumulation and transferring technology.

Also, one of the respondents said that, *"Our College is now a day more focused on informal training than regular the formal one. Peoples also prefer short term training than the formal regular learning as the best option. Because, they certified simply with in short time"*

(Interview #8, April 18, 2013)

As one can conclude from Table 7 above, except item 1, item 2, item 3, and item 8 have significance difference between the groups, toward students' desired outcomes achieved. However, item4, item5, item6, item7, item9, anditem10 show there is no difference on the points.

4.2.6: The rank analysis on Assessment methods of outcomes based teaching & learning,

Teachers and students presented to rank in order seven Assessment methods of outcomes based teaching & learning from 1st to 7th for the most to the least employed Assessment methods by teachers. The table below presents the number of respondents rated each Assessment methods in rank from the most employed to the least employed. Each group of respondent responses is computed for each Assessment methods of frequently employed by teachers/from more frequency to less frequency/ then their frequency is ranked .then high frequency count has taken as if the most implemented in the class room Assessment methods.

Table 8: Assessment Methods frequently employed by teachers

Assessment Methods	Rank														
	1		2		3		4		5		6		7		Rank order
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	
Observation based Assessment	47	17.3	31	11.5	34	12.8	47	17.6	94	34.9	39	14.5	60	22.1	2nd
Standardized-led Assessments	28	10.3	29	10.8	37	14.0	21	7.9	32	11.9	55	20.4	60	22.1	6th
Summative Assessment	32	11.8	25	9.3	30	11.3	21	7.9	50	18.6	76	28.3	30	11.1	5th
Formative Assessment	62	22.9	38	14.1	21	7.9	61	22.8	20	7.4	32	11.9	28	10.3	1st
Continuous Assessment	41	15.1	46	17.1	53	20.0	42	15.7	39	14.5	26	9.7	24	8.9	4th
Individualized Assessment	15	5.5	65	24.2	47	17.7	33	12.4	10	3.7	25	9.3	33	12.2	7th
project based practical Assessment	43	15.9	31	11.5	39	14.7	39	14.6	22	8.2	12	4.5	35	12.9	3rd

As it is indicated in the Table 8, all the respondents stated they employed the various Assessment Methods. However, table 10 showed that the most widely, used Formative Assessment method (22.9%) dominated the rest and ranked as 1st in rank.

The Observation based Assessment method (17.3%), project based practical Assessment method (15.9%), Continuous Assessment method (15.1%), Summative Assessment method (11.8%), Standardized-led Assessments method (10.3%), and Individualized Assessment method (5.5%) are 2nd ,3rd ,4th ,5th , 6th and 7th respectively ,ranked .

During an interview one of the section head said,

> *Formative (continuous), at each learning out comes and Summative at end of each competence of all Learning out comes are used for assessing the knowledge, skills and attitude the trainees acquired, practically. The work assessment of the outcomes assessed by observation, oral, knowledge test.*

Then Evidence guide and Check list based on OS to curriculum used to measure the outcomes results.

(Interview #7, April 18, 2013)

Assessment has strong influence on learning outcomes which enforce to support the learners. Supporting the learner in the learning process is directing learners in the learning process.

According to Bound (2000:155), Formative assessment refers to assessment that takes place during the process of learning and teaching with the aiding learning. Formative assessment promotes by helping learners to obtain knowledge of what they know. Understand and can do. More importantly, it tells learners how well they are progressing in the learning process. It informs the next step of a learner's development and encourages learners to reflect on what they do (Huddleston &Unwin, 1997:11)

Assessment practices have to be balanced and appropriate for the situation at hand. Summative assessment has to be used in moderation with formative assessment. An assessment task/AT/ need to be collaborating apply in the way that an intended learning outcome achieves.

4.2.7: **Items related to factors affecting the implementation of outcomes based teaching and learning.**

This part deals with the discussion of the data gathered from respondents on Items related to factors affecting the implementation of outcomes based teaching and learning. The extent to which the following factors can affect the implementation of outcomes-based teaching and learning process were presented to respondents through questionnaires that they were required to rate the level of accomplishment of the teachers on the basis of a five point Likert scale. These five point scales range from strongly agree (= 5) to strongly disagree (= 1). Mean scores, standard deviations and t-test results were calculated from the responses. There an effect size measure which was in conjunction with the t-test is called Cohen's d. As Cohen suggests, there are some guidelines for determining whether our effect size is Strong. These are: 0–0.20 = weak effect (low), 0.21–0.50 = modest effect (medium), 0.51–1.00 = moderate effect (high), >1.00 = strong effect (very high), were used to make the analysis clear.

Open-ended questions were also analyzed to strengthen the close-ended ones separately. Besides, responses from the interview were summarized to validate the findings during the process of presentation and analysis of all data in each close-ended item as necessary.

To assess the extent to which the following factors can affect the implementation of outcomes-based teaching and learning both respondent groups were asked to give their ratings regarding nine (9) factors that affect the implementation of outcomes-based teaching and learning items as presented in Table 9 below. In this table, the average agreement level given by the two respondent groups regarding each item is computed and presented with statistical t-test results.

As it is indicated in Table 9item 1, teachers and students were asked to rate regarding insufficiency of teaching facilities; like raw materials. The mean scores of the teacher and student respondents were 4.27 and 3.43 respectively, with mean difference of 0.84. The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (6.28) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have high/moderate level of agreement that insufficiency of teaching facilities ; like raw materials significantly differ than high level of agreement of the students who also support with moderate effect sizes /relationships. This means the sufficient teaching facilities; like raw materials need to be provided.

Table 9: Items related to factors affecting the implementation of outcomes based teaching and learning.

Items	Participants	N	Mean	Std. Deviation	Mean Difference	t-Value	p-value
1.Insufficiency of teaching facilities; like raw materials	Teachers	76	4.27	0.90			
	Students	223	3.43	1.28	0.84	6.28	0.00*
2.Traditional shop lay out/arrangements/ and old machines	Teachers	75	4.00	1.02			
	Students	221	3.41	1.27	0.58	3.98	0.00*
3.Lack of convenient learning station/class room for theory class/	Teachers	75	3.88	1.12			
	Students	219	3.37	1.35	0.50	3.15	0.00*
4.Lack of convenient practical station and assessment	Teachers	75	4.10	1.03			
	Students	222	3.34	1.32	0.75	5.09	0.00*
5. Lack of competence and curriculum related books in library.	Teachers	75	3.94	1.12			
	Students	222	3.49	1.33	0.45	2.88	0.00*
6. Lack of good management of the College.	Teachers	76	4.07	1.02			
	Students	222	3.38	1.36	0.69	4.65	0.00*
7. Lack of place for cooperative training and facilities.	Teachers	76	4.14	0.98			
	Students	218	3.47	1.26	0.66	4.69	0.00*
8. The outcomes based teaching and learning curriculum is not differently designed from traditional curriculum.	Teachers	76	3.57	1.18			
	Students	223	3.36	1.33	0.21	1.22	0.22
9. There is low access for new technology via internet for both teachers and students.	Teachers	75	4.00	1.20			
	Students	223	3.60	1.35	0.39	2.37	0.01*
Average	Teachers	76	3.99	1.06			
	Students	223	3.42	1.31	0.56	3.81	0.02*

*Denotes significant at α 0.05 level, $p \leq 0.05$, t-critical value (1.96)

From Table 9 item 2, teachers and students were asked to rate regarding traditional shop lay out/arrangements/ and old machines. The mean scores of the teacher and student respondents were 4.00 and 3.41 respectively, with mean difference of 0.58. The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (3.98) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have high/moderate level of agreement that traditional shop lay out/arrangements/ and old machines significantly differ than high level of agreement of the students who also support with moderate effect sizes /relationships. The shop lay out need to be modernized arrangement and machines need be replaced by the new one.

From Table 9 item 3, teachers and students were asked to rate regarding lack of convenient learning station/class room for theory class/ .The mean scores of the teacher and student respondents were 3.88 and 3.37respectively, with mean difference of 0 .50.The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (3.15) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have high/moderate level of agreement that lack of convenient learning station/class room for theory class/significantly differ than high level of agreement of the students who also support with moderate effect sizes /relationships.

In Table 9 item 4, teachers and students were asked to rate regarding lack of convenient practical station and assessment. The mean scores of the teacher and student respondents were 4.10 and 3.34 respectively, with mean difference of 0.75.The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (5.09) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have high/moderate level of agreement that lack of convenient practical station and assessment significantly differ than high level of agreement of the students who also support with moderate effect sizes /relationships.

As it is indicated in Table 9 item 5, teachers and students were asked to rate regarding lack of competence and curriculum related books in library. The mean scores of the teacher and student respondents were 3.94 and 3.49 respectively, with mean difference of 0.45. The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (2.88) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have high/moderate level of agreement that lack of competence and curriculum related books in library significantly differ than high level of agreement of the students who also support with moderate effect sizes /relationships. This means the competence based books need to be provided in library.

from Table 9 item 6,teachers and students were asked to rate regarding lack of good management of the College .The mean scores of the teacher and student respondents were 4.07and 3.38 respectively, with mean difference of 0 .69. The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (4.65) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have high/moderate level of agreement that lack of good management of the College significantly differ than high level of agreement of the students who also support with moderate effect sizes /relationships. The college needs improved leadership style.

From Table 9 item 7, teachers and students were asked to rate regarding lack of place for cooperative training and facilities .The mean scores of the teacher and student respondents were 4.14 and 3.47respectively, with mean difference of 0.66.The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (4.69) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have high/moderate level of agreement that lack of place for cooperative training and facilities significantly differ than high level of agreement of the students who also support with moderate effect sizes /relationships.

Regarding item 8 in Table 9, Students show the outcomes based teaching and learning curriculum (outcomes-based) is not differently designed from traditional curriculum (content-based). The mean scores of the teacher and student respondents were 3.57 and 3.36 respectively, with mean difference of 0.21.The p-value 0.22>0.05 shows that there is no statistically significant difference between the two groups of respondents towards the item. Similarly, the t-value (1.22) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. This, therefore, shows the outcomes based teaching and learning curriculum (outcomes-based) is not differently designed from traditional curriculum (content-based) with weak effect sizes agreement of the teachers and students.

As it is indicated in Table 9 item 9, those teachers and students were asked to rate regarding there is low access for new technology via internet for both teachers and students. The mean scores of the teacher and student respondents were 4.00 and 3.60 respectively, with mean difference of 0.39. The t-test result with p-value of 0.01< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (2.37) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have high/moderate level of agreement that there is low access for new technology via internet for both teachers and students significantly differ than high level of agreement of the students who also support with moderate effect sizes /relationships.

As it is indicated in Table 9; Items related to the factors affecting the implementation of outcomes based teaching and learning were computed by aggregating the responses of the items resulted in average mean scores of 3.99 and 3.42 by teachers and students respectively, with a mean difference of 0.56.This shows that there is statistically significant difference between the responses of the two groups of respondents (p-value of 0.02< 0.05). The t-value (3.81) which is greater than the t–critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the items. These results indicate that teachers have higher level of agreement to the items than the students. Students, if not as to the level of their teachers' agreement, do have above moderate level of agreement except item8, concerning the item 8; the mean scores of the teacher and student respondents were 3.57 and 3.36 respectively, with mean difference of 0.21.The p-value 0.22>0.05 shows that there is no statistically significant difference

between the two groups of respondents towards the item. Similarly, the t-value (1.22) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. Totally, these factors are affecting in different ways the implementation of the OBTL at Misrak TVET College.

In addition to these factors, there are various challenges that hindering implementation of outcomes-based teaching and learning. The data obtained from open ended question and interview summarized as the following;

- ✓ Less understand of OBTL, lack of awareness.
- ✓ Still traditional way of teaching and learning is going on / Chalk and talk. /
- ✓ Fluctuating of curriculum.
- ✓ Lack of commitments.
- ✓ Purchased materials, resources, delayed in port.
- ✓ OBTL is as foundation setting only not fit totally.
- ✓ Less material provision.
- ✓ Low availability of materials, during training students are work in groups because of scarcity of materials. But this lead to not enough equips the students.
- ✓ No quality materials available to fit outcomes needs.
- ✓ Management persons do not have understanding the outcome based training purpose differently from traditionally teaching.
- ✓ There is no action research based activities in TVET.
- ✓ Stakeholders have lost their responsibility of teaching and learning always meeting, TVET college become politics meeting place.
- ✓ There is no competence related modules and reference books in library.
- ✓ No internet access to students and very low connection internet to teachers.

4.2.8: Issues related to availability of resources.

This part deals with the discussion of the data gathered from respondents on the issues related to availability of resources. Availability of resources, materials and equipment, in outcomes based Teaching and learning process were presented to respondents through questionnaires that they were required to rate the level of accomplishment of the teachers on the basis of a five point Likert scale. These five point scales range from strongly agree (= 5) to strongly disagree (= 1). Mean scores, standard deviations and t-test results were calculated from the responses. There an effect size measure which was in conjunction with the t-test is called Cohen's d. As Cohen suggests, there are some guidelines for determining whether our effect size is Strong. These are: 0–0.20 = weak effect (low), 0.21–0.50 = modest effect (medium), 0.51–1.00 = moderate effect (high), >1.00 = strong effect (very high), were used to make the analysis clear.

Responses from the interview were summarized to validate the findings during the process of presentation and analysis of all data in each close-ended item as necessary.

To assess issues related to availability of resources both respondent groups were asked to give their ratings regarding four (4) issues related to availability of resources as presented in Table 10 below. In this table, the average agreement level given by the two respondent groups regarding each item is computed and presented with statistical t-test results.

Table 10: issues related to availability of resources.

Items	Participants	N	Mean	Std. Deviation	Mean Difference	t-Value	p-value
1. The management of the college has the necessary capacity in providing materials and equipment for training.	Teachers	76	2.68	1.35			
	Students	222	3.26	1.34	-0.58	-3.24	0.00*
2. Training materials, resources positions are adequately supervised.	Teachers	74	2.55	1.30			
	Students	222	3.46	1.23	-0.91	-5.44	0.00*
3. Purchased materials are appropriate for training.	Teachers	76	2.57	1.33			
	Students	219	3.47	1.17	-0.89	-5.17	0.00*
4. There is timeliness of purchasing and distribution process of training materials.	Teachers	76	2.71	1.44			
	Students	221	3.45	1.26	-0.74	-3.99	0.00*
Average	Teachers	76	2.62	1.35			
	Students	222	3.41	1.25	-0.78	-4.46	0.00*

*Denotes significant at α 0.05 level, $p \leq 0.05$, t-critical value (1.96)

As it is indicated in Table 10 item 1, teachers and students were asked to rate regarding the management of the college has the necessary capacity in providing materials and equipment for training. The mean scores of the teacher and student respondents were 2.68 and 3.26 respectively, with mean difference of -0.58. The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (3.24) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have low level of agreement that the management of the college has the necessary capacity in providing materials and equipment for training significantly differ than high level of agreement of the students who support with weak effect sizes /relationships.

One of the respondents commented that,

> *The college has faced the lack of leadership and management at all level of the college.no commitment and not good result is achieved. Because of this the overall teaching and learning activities, are so, weak. You see there is every time complains raised from different angles. Not yet solution has given as necessary as need to solve the root problem.*
>
> (Interview #9, April 19, 2013)

As it is indicated in Table 10 item 2, teachers and students were asked to rate regarding the training materials, resources positions are adequately supervised. The mean scores of the teacher and student respondents were 2.55 and 3.46 respectively, with mean difference of -0.91. The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (5.44) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have low level of agreement that the training materials, resources positions are adequately supervised significantly differ than high level of agreement of the students who support with weak effect sizes /relationships.

In Table 10 item 3 above, teachers and students were asked to rate whether the Purchased materials are appropriate for training. The mean scores of the teacher and student respondents were 2.57 and 3.47respectively, with mean difference of -0.89. The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (5.17) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have low level of agreement that the Purchased materials are appropriate for training significantly differ than high level of agreement of the students who support with weak effect sizes /relationships

One of department head said the following,

> *Purchasing materials and providing on time is unthinkable things, what we ask is other what provided is different. When we ask to purchase material before the training start but the in port materials is after the end*

of the year semester /delayed in port./imagine what can happen to deliver the trining.do you stop training? I do not know what the college is doing? What I can personally do, only trying my best just for the survive live here.

(Interview #2, April 15, 2013)

In Table 10 item 4 above, teachers and students were asked to rate whether there is timeliness of purchasing and distribution process of training materials. The mean scores of the teacher and student respondents were 2.71 and 3.45 respectively, with mean difference of -0.74. The t-test result with p-value of 0.00< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (3.99) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have low level of agreement that the Purchased materials are appropriate for training significantly differ than high level of agreement of the students who support with weak effect sizes /relationships.

As can be observed from Table 10 above, overall issues related to availability of resources Computed by aggregating the responses of respondents groups. Issues related to availability of resources resulted in average mean scores of 2.62 and 3.41 by teachers and students respectively with mean difference of -0.78. The p-value of 0.00< 0.05, this indicates that, there is statistically significant difference between the two groups of respondents in the computed average agreement for the overall issues related to availability of resources. The t-value (4.46) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This indicates that the results are statically significant evidence to conclude that two groups have difference. The both groups of respondents had different weak effect sizes level of agreement to the overall issues related to availability of resources; however, teacher respondents have low level agreement to the item.

similarly, 50.68% students and 67.03% of teachers respondents disagree that there is moderate availability of resources while 49.33% students and 32.98% teachers are agree that there is moderate availability of resources. Therefore, the implementation of outcomes based teaching

and learning in Misrak TVET College encountered challenges with availability of resource for implementation.

4.2.9. Issue related to student's certification.

An interview question asked to assess the students certification and competent on the basis of exit graduate outcomes.

The participants forwarded their opinions why students are not competent during the Occupational competency assessment and certification. The words of the participants are worth quoting here: *"The problems of why students are not yet competent are the sum different problems, the Students/trainee themselves, Trainers/teachers, Materials, Managements, Industry, and Assessor are the core ones." (Interview #3, April 16, 2013)*

From Students/trainee problems

- Less understanding of OBTL, and Lack of motivation.
- Placing of the students is not based on interest of the students.
- Lack of interest, fearing, stress during the Occupational competency assessment.
- Less Communication skills is seen as language barrier to understand.
- Not ready as need to company /market
- Lack of informal practice.
- There is no experience on what learned practices.
- During the cooperative training, they not get enough machines, computers and materials.
- Lack of integrity of theory and practical; less practical work.
- Go for Occupational competency assessment without being equipped.

From Trainers/teachers problems

- Letting students pass without becoming competent.
- Filling the skill gap of the students repeatedly making skill full is less.
- Less understanding of OBTL. Shallow understanding of OBTL.
- Methodology of teaching is weak.

- Giving training without OB-training methodology and not implementing training methodology as required.
- Teachers are not with full attention on teaching and less commitment.

Concerning Materials problems

- Lack of materials, tools, equips, class room chairs.
- Work Shop sizes and arrangement. Example, laundry shop, machine shop, IT, IT and service management automotive shop and wood work…
- Insufficient materials for practical work.
- During national competence assessing the new place and materials are not fit to the class
- Purchasing system is not on timely provided the Training materials during materials during training.
- Ratio of students to material for practical work is not proportion.eg.151 students to 18 circuit's board.
- Providing old materials for exam.

Concerning managements problems

- They do not know about competency based teaching and learning.
- Lacks of understanding on OBTL to provide materials.
- They are not provided resources, materials are on time.
- No support and supervision are implementing as required and very low budget allocating for training.
- Problems solving mechanism and actives are not research based.

Concerning Industry angles problems

- Not ready to teach trainee on company training.
- The Industries have no information about OBTL on company training and material providing for trainers are challenging for them.
- There is a gap between industry and TVET.
- OS is changing in a short pried of time, this lead to gap between what leaded in class and exam. Also teachers need to train to new curriculum timely.

Concerning Assessor problems

- To be competent and not yet competent is depends on the assessors' judgment, less experiences on industry practices. Even the new assessors have less understanding.
- Bench mark trial is not fit the country context and changing bench mark is also has problem. (German dual system to Austrian trial).

The skills of an assessor are critical to the achievement of quality outcomes. Ambler (2001:12) adds that an assessor needs to have the relevant planning, administrative and management skills in order to measure competence in an innovative manner. Assessors are seen as quality control managers for learning and development. Considering OBE, an assessor has to be able to plan and conduct assessment according to the learning outcomes. The result should be consistent and reliable, without bias, while the reporting should be efficient and secure. Documentation, which indicates whether a learner is competent or not yet competent, should be effective and authentic.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

On the basis of the analysis and interpretation of the data gathered through the instruments (questionnaires, interview, document analysis and observation), the following summaries of the major findings, conclusions, and recommendations have been made.

5.1. Summary

The main purpose of the study was to assess the implementation of Outcomes Based teaching and learning at Misrak TVET College. Misrak TVET college teachers, students, and vise dean were the target population of the study. The population is composed of 142 teachers, 698 students (level I, II, III, IV&V of second and third year of 2004 E.C entry only), 6 department heads, and 2 deans. As a result, 85 teachers and 366 (level II, III, IV & V students) were selected from the population by using stratified sampling technique based on occupational title they learn which are categorized under similar sectors. Vise deans were included in the study using availability sampling technique. Descriptive survey design was employed as a design of the study.

Questionnaires and interview were employed to collect the data from the sample. Before conducting the actual study, the questionnaires were piloted to check the reliability of the items. Accordingly, Cronbach's Alpha (0.892) of item reliability was computed and relevant measures were taken on items which have low reliability. Interview was employed mainly to explore important information on the study from the participants to strengthen the data. Document analysis was conducted to supplement the data obtained through questionnaires and the interview.

Quantitative and qualitative methods were used in analyzing the data obtained through the instruments. In the analyses of the quantitative data, percentages, frequencies, mean scores, standard deviations, independent t-test results, and rank were computed. The data gathered in this Quantitative method were analyzed using the Statistical Package for the Social Sciences (SPSS) version 19, a computer program used for statistical analysis.

There an effect size measure which was in conjunction with the t-test is called Cohen's d. As Cohen suggests, there are some guidelines for determining whether our effect size is Strong. These are: 0–0.20 = weak effect (low), 0.21–0.50 = modest effect (medium), 0.51–1.00 = moderate effect (high), >1.00 = strong effect (very high), were used to make the analysis clear.

In the analyses of the qualitative data, descriptive statements were used. As a result, the major findings of the study are discussed hereunder.

5.1.1. Major Findings

The following are the major findings of the study based on the research questions.

Teachers' and Students' Understanding of Outcomes Based Teaching and learning Practices

Concerning the Successful learning promotes even more successful learning, the mean scores of teacher and student respondents were 4.20 and 3.87, with mean difference of 0.32. The t-test result with p-value of 0.00< 0.05 indicates that the two groups of respondents significantly differ in their average agreement towards the item. In the same way, the calculated t-value (2.90) which is greater than the t-critical value (1.96) confirms that there is statistically significant difference between the responses of the two groups of respondents. This shows that Successful learning promotes even more successful learning was high to teacher respondents and was moderate to student respondent at 0.05 level, t (1.96) df=297, p (0.00<0.05), d=0.34. The interview data reveals that by motivation success can be increased. Motivation and bench mark encourage trainees. But in the sample college there is no such activity.

From the analyzed data, the Clarity of focus is to facilitate students' achievement of the intended learning outcomes/teachers informed choice of students when design exit outcomes, the mean scores of teacher and student respondents were 3.78 and 3.44, with mean difference of 0.34. The t-test result with p-value of 0.01< 0.05 indicates that the two groups of respondents significantly differ in their average agreement towards the item. In the similar way, the calculated t-value (2.67) which is greater than the t-critical value (1.96) confirms that there is statistically significant difference between the responses of the two groups of respondents. This shows that Clarity of focus is to facilitate students' achievement of the intended learning

outcomes/teachers informed choice of students when design exit outcomes/was modest understood by teachers than the students at the specified 0.05 level, t (1.96) df=296, p (0.01<0.05), d=0.33.

In addition to this, as the data collected from respondent showed, *there is less clarity of focus; the clarity of focusing must start from the KG to higher college. Focuses on industry not the need of students in order to based on OS and curriculum is not only the way. The trainees' placement to competence they want to need the consideration.*

On the subject of the level of teachers' and students' understanding of OBTL, the teachers' and students' mean scores were 4.08 and 3.60 respectively, with mean difference of 0.47. The t-test result with p –value of 0.00< 0.05 proves that there is statistically significant difference between the two groups of respondents towards the item. The t-value (3.61) which is greater than the t-critical value (1.96) shows that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers understood well differently outcome based teaching & learning/OBTL / and know how to implement. Their beliefs were modest (medium) even though the level of agreement by the teacher respondents was greater than that of the student respondents at the specified 0.05 level, t (1.96) df=296, p (0.00<0.05), d=0.33.

Similarly, 65.5% respondents agreed that teachers understood well differently outcome based teaching & learning/OBTL / and know how to implement while 14.4% of students disagree. On the other hand, during an interview question, the researcher asked, if there is any challenge you are facing during implementation of outcomes-based teaching and learning? Some respondents reflected their views; OBTL is as foundation setting only not fit totally and could not able to apply the OBTL properly. Lacks of understanding about OBTL also present.

So, from this data one can understand that the level of teachers' and students' understanding of OBTL is very low. They do not know about the OBTL premises and principles because of this little understanding of OBTL. So, it is difficult to determine how the teachers accommodate this premises and principles of OBTL in their class room practices.

The effectiveness of teaching practice

With regard to teacher prepares information sheet, job sheet, operation sheet for each of students, the mean scores of teachers and students were 4.02 and 4.01, with mean difference of 0.01. The t-test result with p-value of 0.95> 0.05 Indicates that there is no statistically significant difference between the responses of the two groups of respondents. The calculated t-value (0.05) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. That is both groups agree that there are not significant difference on teacher prepares information sheet, job sheet, operation sheet for each of students. This shows that, teacher prepares information sheet, job sheet, operation sheet for each of students level of agreements was weak effect size at the specified 0.05 level, t (1.96) df=302, p(0.95> 0.05),d=0.001

Similarly, during the observations, the researcher observed that the teachers distribute the information sheets to the learners in groups or a single copy to have their own copy instead of providing for learners individually.

As to the use of examples, illustrations and demonstrations by teachers to explain and clarify the lessons or contents they teach, the teachers' and students' mean scores were 4.48 and 3.87 respectively, with mean difference of 0.61. The t-test result with p-value of 0.00 < 0.05 proves that there is statistically significant difference between the two groups of respondents towards the item. The t-value (5.33) which is greater than the t-critical value (1.96) shows that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers' use of examples, illustrations and demonstrations to explain and clarify the lessons or contents they teach was high significance difference even though the level of agreement by the teacher respondents was greater than that of the student respondents at the specified 0.05 level,t(1.96) df=301, p(0.00<0.05),d=0.63. This clearly indicates there is no use of examples, illustrations and demonstrations by teachers to explain and clarify the lessons or contents they teach properly as needed pedagogy of teaching and learning.

Regarding teacher informs his student the intended learning out comes, the mean scores of teachers and students were 4.36 and 4.05, with mean difference of 0.31. The t-test result with p-value of 0.23 > 0.05 indicates that there is no statistically significant difference between the

responses of the two groups of respondents. The calculated t-value (1.17) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. That is both groups agree that teacher informs his students the intended learning out comes. Though, the results are not statistically significant, teachers and students had different agreement on item was weak at the specified 0.05 level, t (1.96) df=299, p (0.23 > 0.05), d=0.20. This, therefore, reveals that teacher informs his student the intended learning out comes. This means students well know the performance they are expected to achieve as the result of engaging in teaching and learning experience.

Concerning the teachers create the situations in which learning outcomes will be achieved, the mean scores of teachers and students were 1.36 and 1.39, with mean difference of -0.3. The t-test result with p-value of 0.76> 0.05 Indicates that there is no statistically significant difference between the responses of the two groups of respondents. The calculated t-value (-0.03) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. That is, there is no sufficient evidence to conclude that both groups agree significance difference on teachers create the situations in which learning outcomes will be achieved was weak at the specified 0.05 level, t (1.96) df=213, p (0.76> 0.05), d=0.04.

Teachers' Methods of teaching

As to teacher uses information sheet, job sheet, operation sheet and other printed materials to teach students, the teachers' and students' mean scores were 4.42 and 3.89 respectively, with mean difference of 0.52. The t-test result with p-value of 0.00 < 0.05 proves that there is statistically significant difference between the two groups of respondents towards the item. The t-value (4.05) which is greater than the t-critical value (1.96) shows that the two groups of respondents significantly differ in their agreement on the item. This shows that teacher uses information sheet, job sheet, operation sheet and other printed materials to teach students had real difference between the teachers and students were medium effect sizes even though the level of agreement by the teacher respondents were greater than that of the student respondents at the specified 0.05 level, t (1.96) df=299, p (0.00<0.05), d=0.48.

As the data obtained from the interviews made with one of department head revealed, "Still some teachers are mixing traditional way of delivery system with modern one.*Even though they had*

methodology training, no change. They do not use information sheet, job sheet, operation sheet and according to the unit of competence."

Teachers and students were asked to rate to what extent teacher gives individual assignment and practical project work to his students. The mean scores of the teacher and student respondents were 4.41and 4.12 respectively, with mean difference of 0.29. The t-test result with p-value of 0.01 < 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (2.37) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement that they give individual assignment and practical project work to his students differently in their learning level of their students than the students who support moderate effect size at the specified 0.05 level,t(1.96) df=294, p(0.01<0.05),d=0.30.

Teachers and students were asked to rate how far teacher considers learning outcomes to be achieved. The mean scores of the teacher and student respondents were 4.24 and 3.86 respectively, with mean difference of 0.38. The t-test result with p-value of 0.00 < 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (2.92) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement to teacher considers learning outcomes to be achieved differently in their learning level of their students than the students who support moderate effect size at the specified 0.05 level(1.96) df=289, p(0.00<0.05),d=0.36.

As the respondents stated teachers employed the various method of teaching. However, the most widely used the lecture method (44.8%), dominated the rest and ranked as 1st in rank.

The students' desired outcomes.

Teachers and students were asked to rate how far teacher encourages students to think independently work out problems, and self-managed learning. The mean scores of the teacher and student respondents were 4.09 and 3.79 respectively, with mean difference of 0.29. The t-test result with p-value of 0.02 < 0.05 indicates that there is statistically significant difference

between the two groups of respondents towards the item. The t-value (2.33) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement to teacher encourages students to think independently work out problems, and self-managed learning differently in their learning level of their students than the students who support moderate effect size at the specified 0.05 level,t(1.96) df=293, p(0.02<0.05),d=0.29.

By encouraging students to think independently, to develop the skill or competence needed to learn on their own and to work out the problems, rather than just telling them a solution enhance the training learner- centered approaches is trainer the responsibility as well as learners way of self-managed learning. The learners need to nurture themselves to self–managed learning, independently thinking and problem solving through practice.

Teachers and students were asked to rate how teacher adjusts the unit of competence to the industry needs during his/her students on company training and supervises them on company training. The mean scores of the teacher and student respondents were 3.91and 3.57 respectively, with mean difference of 0.34. The t-test result with p-value of 0.01< 0.05 indicates that there is statistically significant difference between the two groups of respondents towards the item. The t-value (2.42) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This shows that teachers have higher level of agreement that teacher adjusts the unit of competence to the industry needs during his/her students on company training and supervises them on company training significantly differ than the students who support with weak effect sizes at the specified 0.05 level,t(1.96) df=286, p(0.01<0.05),d=0.30.

The data recorded during the time of observation, students on cooperative training places, suggested that: "*There is no unit of competence we learn in the college and what we see here very different and there is no resources, materials.no one know where we are, our teacher gave us the mark list format, memorandum of agreement and competence list then told us to go and find then start the company training."*

As one can understand from this data and respondent responses there is no regular basis of supervise the students on company training.

Regarding the students well understood the intended learning outcomes, teaching activities and outcomes based Assessment rated by each group of the respondents. The mean scores of the teacher and student respondents were 3.94 and 3.75 respectively, with mean difference of 0.19. The p-value 0.15>0.05 shows that there is no statistically significant difference between the two groups of respondents towards the item. Similarly, the t-value (1.41) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item.

This, therefore, shows the students well understood the intended learning outcomes, teaching activities and outcomes based Assessment with weak effect sizes agreement of the teachers and students at the specified 0.05 level(1.96) df=289, p(0.15>0.05),d=0.18.

Assessment methods of outcomes based teaching & learning,

As the respondents stated teachers employed the various Assessment Methods. However, the most widely, used Formative Assessment method (22.9%) dominated the rest and ranked as 1st in rank.

Factors affecting the implementation of outcomes based teaching and learning

As an overall Items related to factors affecting the implementation of outcomes based teaching and learning was computed by aggregating the responses of the items resulted in average mean scores of 3.99 and 3.42 by teachers and students respectively, with a mean difference of 0.56.This shows that there is statistically significant difference between the responses of the two groups of respondents (p-value of 0.02< 0.05). The t-value (3.81) which is greater than the t – critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the items. These results indicate that teachers have higher level of agreement to the items than the students. Students, if not as to the level of their teachers' agreement, do have above moderate level of agreement at the specified 0.05 level, t (1.96) df=297, p (0.2<0.05), d=0.47. Except item 8, the mean scores of the teacher and student respondents were 3.57 and 3.36 respectively, with mean difference of 0.21.The p-value 0.22>0.05 shows that there is no statistically significant difference between the two groups of respondents towards the item. Similarly, the t-value (1.22) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item at the specified 0.05 level, t(1.96) df=297, p(0.22>0.05),d=0.16.

Availability of resources

As overall issues related to availability of resources Computed by aggregating the responses of respondents groups issues related to availability of resources resulted in average mean scores of 2.62 and 3.41 by teachers and students respectively with mean difference of -0.78. The p-value of 0.00< 0.05, this indicates that, there is statistically significant difference between the two groups of respondents in the computed average agreement for the overall issues related to availability of resources. The t-value (4.46) which is greater than the t-critical value (1.96) proves that the two groups of respondents significantly differ in their agreement on the item. This indicates that the results are statically significant evidence to conclude that two groups have difference. Although the both groups of respondents had different weak effect sizes level of agreement to the overall issues related to availability of resources even though teacher respondents have low level agreement to the item at the specified 0.05 level(1.96) df=296, p(0.00<0.05),d=0.60.

similarly, 50.68% students and 67.03% of teachers respondents disagree that there is moderate availability of resources while 49.33% students and 32.98% teachers are agree that there is moderate availability of resources. Therefore, the implementation of outcomes based teaching and learning at Misrak TVET College encountered challenges with availability of resource for implementation.

Trainee's certification

An interview question was asked to assess the student's certification and competent on the basis of exit graduate outcomes. The participants forwarded their opinions why students are not competent during the Occupational competency assessment and certification. The words of the participants are worth quoting: *The problems of why students are not yet competent are the sum different problems raised in various angles, from Students/trainees themselves, Trainers/teachers, Materials, Managements, Industry, and Assessor.*

Finally, from the data analyzed and findings, low understanding of OBTL and practices, Teaching and learning activities, delivery systems, effectiveness of teaching practice, aligned curriculum to students desired outcomes changing in short time, assessment task, lack good managements of the college, insufficient of training facility and availability of resource are the

core problems for students success. In order to achieve the required knowledge, skills, attitude and demonstrate the intended outcomes during the Occupational competency assessment and at workplace these problems need a solution.

5.2. Conclusions

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

- With regard to the understanding of Outcomes Based Teaching and learning Practices, the level of teachers' and students' understanding of OBTL is very low. They do not know about the OBTL premises and principles because of this little understanding of OBTL. So, it is difficult to determine how the teachers accommodate this premises and principles of OBTL in their class room practices.
- On the subject of the effectiveness of teachers' teaching practice, Teacher has no arranged consultation hours for all students, teacher prepares information sheet, job sheet, operation sheet for each of students level of agreements was weak effect size, there is no use of examples, illustrations and demonstrations by teachers to explain and clarify the lessons or contents they teach properly as needed pedagogy of teaching and learning.
  Therefore, the effectiveness of teaching practice with such trainers/teachers/ skill gab is real matters on achieving the intended outcomes
- Teachers have higher level of agreement that teacher adjusts the unit of competence to the industry needs during his/her students on company training and supervises them on company training significantly differ than the students who support with weak effect sizes. As a result, there is no regular basis of supervise the students on company training.
- On the subject of how well the students understood the intended learning outcomes, teaching activities and outcomes based Assessment; the t-value (1.41) which is less than the t-critical value (1.96) proves that the two groups of respondents do not significantly differ in their agreement on the item. This, therefore, shows the students well understood the intended learning outcomes, teaching activities and outcomes based Assessment with low agreement of the teachers and students.
- The challenging factors that upset the implementation of outcome based teaching and learning Such as: Insufficiency of teaching facilities; Traditional shop lay out/arrangements/ and old machines; Lack of convenient learning station/class room for

theory class/;Lack of convenient practical station and assessment; Lack of competence and curriculum related books in library; Lack of good management of the College; Lack of place for cooperative training and facilities; The outcomes based teaching and learning curriculum (outcomes-based) is not differently designed from traditional curriculum (content-based)and low access for new technology via internet for both teachers and students are the major factor in the Misrak TVET college.

- Issue for assess the student's certification and competent on the basis of achieving intended exit graduate outcomes; from the data analyzed and findings, low understanding of OBTL and practices, Teaching and learning activities, delivery systems, effectiveness of teaching practice, aligned curriculum to students desired outcomes changing in short time, assessment task, lack of good managements of the college, insufficient of training facility, different problems from students/being stressed, fear/,less commitments of teachers, industry/no place for cooperative training/,Assessor/being biased, less understand of competence they assessing, less experience/ and availability of resource are the core problems for students success.in order to achieve the required knowledge, skills, attitude and demonstrate the intended outcomes during the Occupational competency assessment and at workplace these problems need a solution.

5.3. Recommendations

Based on the findings and conclusion reached, the following recommendations are forwarded.

1. The level of teachers' and students' understanding of OBTL is very low. They do not know about the OBTL premises and principles. So, it is recommended that adequate awareness ought to be created for all level of stakeholders, teachers and students. The dean of the college, vice dean of the college and outcomes based training coordinator should prepare short workshop and training to create awareness and fill the gap.
2. On the subject of the effectiveness of teachers' Teaching practice, Teacher has no arranged consultation hours for all students, teacher prepares information sheet, job sheet, operation sheet for each of student level of agreements was weak effect size, and there is no use of examples, illustrations and demonstrations by teachers to explain and clarify the lessons or contents they teach properly. Consequently, the effectiveness of teaching practice with such trainers/teachers/ skill gap is real matters on achieving the intended outcomes. Therefore, the responsible bodies (academic managements, dean of the college and vice dean) need to find the ways to fill skill gaps for teachers and give standardized methodology training for them. Modern teaching methodology Approach put in practices can shift/fill the gaps. In addition to this; know how to prepare teaching and learning Materials, CBLM, TTLM, training system need to be applied continuously.
3. Teacher adjusts the unit of competence to the industry needs during his/her students on company training and supervises them on company training significantly differ than the students who support very low. As a result, there is no regular basis to supervise the students on company training. Therefore, teachers should play a more facilitative role than they are doing now. Teachers should check whether students are achieving the intended outcomes on company training and more visiting the students at workplace.
4. On the subject of how well the students understood the intended learning outcomes, teaching activities and outcomes based Assessment, shows the students well understood the intended learning outcomes, teaching activities and outcomes based Assessment with weak agreement of the teachers and students. For more achieving the intended learning outcomes, teachers should put emphasis on outcomes learners should achieve before they engage learners in learning activities. Also, teachers should update their planning and preparation for learning activities. The instructor should begin design down to teach by identifying the exit

outcomes/curriculum content flow from general outcomes to specific out comes to class room activities/

5. The challenging factors that upset the implementation of outcome based teaching and learning in the Misrak TVET College. Such as: Insufficiency of teaching facilities; Traditional shop lay out/arrangements/ and old machines; Lack of convenient learning station/class room for theory class/;Lack of convenient practical station and assessment; Lack of competence and curriculum related books in library; Lack of good management of the College; Lack of place for cooperative training and facilities; The outcomes based teaching and learning curriculum (outcomes-based) is not differently designed from traditional curriculum (content-based)and low access for new technology via internet for both teachers and students the major factor in the Misrak TVET college. This is an alarm rings call for the failure. Therefore; the stakeholders/the college managements, deans, teachers, supportive staff's members/ need to pick up the responsibility they lost. These challenges can be winning by devoted commitment and working with team spirit.
6. The issue of unsuccessful student's certification and competent on the basis of achieving intended exit graduate outcomes during the Occupational competency assessment result from different problems as the study finding reveals, from Students/trainees themselves, Trainers/teachers, Materials, Managements, Industry, and Assessor need the attention.in addition to these, from the data analyzed and findings, low understanding of OBTL and practices, Teaching and learning activities, delivery systems, effectiveness of teaching practice, aligned curriculum to students desired outcomes changing in short time, assessment task, lack good managements of the college, insufficient of training facility and availability of resource are the core problems for students success.in order to achieve the required knowledge, skills, attitude and demonstrate the intended outcomes during the Occupational competency assessment and at workplace these problems need a solution. Therefore, the trainers need to focus on how well learners achieve the intended learning outcomes/ILO/, Teaching and learning activity /TLA/ stimulates, encourages or facilitates the ILO, An Assessment Task and the alignment of model curriculum they use.

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Appendix A

ADDIS ABABA UNIVERSITY

School of Graduate studies

Institute of Educational Research

Questionnaire to be filled by Teachers,

Dear Teacher,

I would like to express my heartfelt thanks and appreciation for your time and sincere cooperation to fill this questionnaire. The questionnaire is designed to assess the Implementation of outcomes Based teaching and learning in Misrak TVET.The results and success of this study will highly depend on the quality of your responses and I hope you will give accurate and honest responses to the items presented.

Your response will be kept confidential and used only for academic purpose.

Direction

- You are not required to write your name.
- Put a "√" in the space provided in front of each item.
- The questionnaire has seven (7) parts. Please, try to fill all the items.
- Please, choose the one which you think is the most appropriate response to each questions.

Part one: Background Information.

1. Sector/Department:_____Field of specialization_____

2. Sex: Male ☐ Female ☐

3. Age: 21-25 ☐ 26-30 ☐ 31-35 ☐ 36-40 ☐ above 40 ☐

4. Educational level

BA ☐ BSc ☐ BED ☐ MA ☐ MSc ☐

A-level ☐ B-level C-level ☐

5. The teaching Experience in Misrak TVET.

Less than 2 years ☐ 2-3years ☐ 5- 10years ☐ More than 11-20 ☐

6. The OCA:Competent ☐ Not yet competent ☐ Not examined ☐

Part two: **Items related to the understanding of outcomes based teaching and learning practice.**

Please, indicate the extent to which you understood to apply the day to day practices of outcomes based teaching and learning premises and principles in your teaching by putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree 2=dis agree 3=undecided 4=Agree 5=Strongly Agree.

No	Items	1	2	3	4	5
1	All learners can learn and succeed, but not all the same time in the same way					

2	Schools control the conditions that directly affect successful Learning.					
3	Successful learning promotes even more successful learning					
4	Clarity of focus isto facilitate students' achievement of the intended learning outcomes./teachers informed choice of students when design exit outcomes					
5	The instructor begins design down to teach by identifying the exit outcomes.(curriculum content flow from general outcomes to specific out comes to class room activities)					
6	High expectation to success for all students succeed reinforces and provides motivation.					
7	Expanded opportunities and supports to allow learning success(outcomes) in a variety ways.					
8	I understood well outcome based teaching & learning/OBTL / and know how to implement.					

Part three: **Items related to the effectiveness of your teaching practice.**

Please, indicate the extent to which you apply the day to day practices of your teaching by putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree 2=dis agree 3=undecided 4=Agree 5=Strongly Agree.

No	Items	1	2	3	4	5
1	I prepare information sheet, job sheet, operation sheet for each of my students.					
2	I have arranged consultation hours for my students.					
3	I use examples, illustrations and demonstration to explain and clarify the lesson or content I teach.					
4	I inform my students the intended learning out comes					
5	I use attention gain activities, ideas, concepts and devises while teaching.					

6. Do you create situations in which intended learning outcomes will be achieved?

Yes ☐ No ☐ . If your answer is yes ,

how?_____

_____

_____
_____

Part Four : **Items related to teachers' methods of teaching.**

Please, indicate the extent to which you apply methods of teaching in teaching process by putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree 2=dis agree 3=undecided 4=Agree 5=Strongly Agree.

No	Items	1	2	3	4	5
1	My way of teaching creates learners' interests, enthusiasm and appreciation.					
2	I encourage students' involvement and success in their learning.					
3	My teaching enhances critical thinking and skills of scientific investigations.					
4	I use information sheet, job sheet, operation sheet and other printed materials to teach my students.					
5	I use audio tapes, video tapes, slide sequence photographs, models, practical kits, tools, and printed materials in my own classroom.					
6	I give individual assignment and practical project work to my students					
7	I encourage my student to develop group learning skills such as discussion and interpersonal skills.					
8	I consider learning outcomes to be achieved.					
9	I commonly use observation, written tests, port polio, and actual demonstration of performance methods to assess my students' master of intended learning outcomes.					

10.Here are some teaching methods and you are required to order them by writing number 1-8 on the space provided in front of them in which 1 represents the methods that you employ mostly in your class room teaching and 8 represents the least employed method.

1. Lecture method _____
2. Demonstration method _____
3. Inquiry method _____
4. Discovery method _____
5. Laboratory method _____
6. Individualized method _____
7. Discussion method _____
8. Project method _____

Part five. **Items related to students' desired outcomes.**

Please, indicate the extent to which you achieve students' **desired outcomes**in your teaching process by putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree, 2=dis agree, 3=undecided, 4=Agree, 5=Strongly Agree.

No	Items	1	2	3	4	5
1	I encourage students to think independently, work out problems, and self-managed learning.					
2	My students debate, discuss, reflect in the class by their own judgments and interpretation.					
3	I push my students to do practical work and highly adapted to it.					
4	My students demonstrate their communication skills during the class and team-work.					
5	My students show higher-order intellectual capability, ability to work together and independently during assessment and succeed competent.					
6	My students achieve learning outcomes, skills, knowledge, and attitude by intended learning activities.					

7	The curriculum, competence that I use aligned with desired graduate outcomes.					
8	I adjust the unit of competence to the industry needs during my students on company training and supervise them on company training.					
9	The intended learning outcomes, teaching activities and outcomes based Assessment are well understood by my students.					
10	My students contribute create new technology, adaptation, accumulation and transferring technology to micro and small enterprise as well as industry extension to maximize the productions.					

11.Here are assessment methods of outcomes based teaching & learning, and you are required to order them by writing number 1-7 on the space provided in front of them in which 1 represents the methods that you employ mostly in your class room teaching and 8 represents the least employed method.

1. Observation based assessment _____
2. Standardized-led assessment_____
3. Summative assessment _____
4. Formative assessment _____
5. Continuous assessment_____
6. Individualized assessment _____
7. Project based practical assessment._____

Part six. **Items related to factors affecting the implementation of outcomes based teaching and learning.**

Please, indicate the extent to which the following factors can affect the implementation of outcomes-based teaching and learning by putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree 2=dis agree 3=undecided 4=Agree 5=Strongly Agree.

No	Items	1	2	3	4	5
1	Insufficiency of teaching facilities; like raw materials.					
2	Traditional shop lay out /arrangements/ and old machines.					
3	Lack of convenient learning station/class room for theory class/					
4	Lack of convenient practical station and assessment.					
5	Lack of competence and curriculum related books in library.					

6	Lack of good management of the college.					
7	Lack of place for cooperative training and facilities.					
8	The outcomes based teaching and learning curriculum(outcomes-based) is not differently designed from traditional curriculum (content-based).					
9	There is low access for new technology via internet for both teachers and students.					

Part seven: issues related to availability of resources.

Please, indicate the degree of fulfillment availability of resources for training materials and equipment. By putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree, 2=dis agree, 3=undecided,4=Agree, 5=Strongly Agree.

No	Items	1	2	3	4	5
1	The management of college has the necessary capacity in providing materials and equipment for training.					
2	Training materials resources positions are adequately supervised.					
3	Purchased materials are appropriate for training.					
4	There is timeliness of purchasing and distribution process of training materials.					

5. What are challenges that affect the outcome based teaching and learning in your class room practices?(If any)

_____
_____
_____
_____

6. List the factors that challenge for your College?

_____
_____
_____*Thanks!*

Appendix - B

ADDIS ABABA UNIVERSITY

School of Graduate studies

Institute of Educational Research

Questionnaire to be filled by students ,

Dear students,

I would like to express my heartfelt thanks and appreciation for your time and sincere cooperation to fill this questionnaire. The questionnaire is designed to assess the Implementation of outcomes Based teaching and learning in Misrak TVET.The results and success of this study will highly depend on the quality of your responses and I hope you will give accurate and honest responses to the items presented.

Your response will be kept confidential and used only for academic purpose.

Direction

- You are not required to write your name.
- Put a "√" in the space provided in front of each item.
- The questionnaire has seven (7) parts. Please, try to fill all the items.

• Please, choose the one which you think is the most appropriate responses to each questions.

Part one: Background Information.

1. Sector/Department:_____ Field of specialization_____

2. Sex: Male ☐ Female ☐

3. Age: 15-21 ☐ 22-30 ☐ 31-35 ☐ 36-40 ☐ above 40 ☐

4. Educational level

level II ☐ level lII ☐ level IV ☐ level V ☐

5. The year of study in Misrak TVET.

2 years ☐ 3years ☐ 4 years ☐

6. The OCA:Competent ☐ Not yet competent ☐ Not examined ☐

Part two: Items related to the understanding of outcomes based teaching and learning practice.

Please, indicate the extent to which you understood to apply the day to day practices of outcomes based teaching and learning premises and principles in your learning by putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree 2=dis agree 3=undecided 4=Agree 5=Strongly Agree.

No	Items	1	2	3	4	5
1	All learners can learn and succeed, but not all the same time in the same way					
2	Schools control the conditions that directly affect successful Learning.					
3	Successful learning promotes even more successful learning					

4	Clarity of focus is to facilitate students' achievement of the intended learning outcomes./teachers informed choice of students when design exit outcomes					
5	The instructor begins design down to teach by identifying the exit outcomes.(curriculum content flow from general outcomes to specific out comes to class room activities)					
6	High expectation to success for all students succeed reinforces and provides motivation.					
7	Expanded opportunities and supports to allow learning success(outcomes) in a variety ways.					
8	I understood well outcome based teaching & learning/OBTL / and know how to implement.					

Part three: Items related to the effectiveness of teacher teaching practice.

Please, indicate the extent to which teachers apply the day to day practices of teaching by putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree 2=dis agree 3=undecided 4=Agree 5=Strongly Agree.

No	Items	1	2	3	4	5
1	My teacher prepares information sheet, job sheet, operation sheet for each of us.					
2	My teacher has arranged consultation hours for all students.					
3	My teacher uses examples, illustrations and demonstration to explain and clarify the lesson or content he/she teaches.					
4	My teacher informs his students the intended learning out comes .					
5	My teacher uses attention gain activities, ideas, concepts and devises while teaching.					

6. Do your teachers create situations in which intended learning outcomes will be achieved?

Yes □ No □. If your answer is yes, how?

_____

_____

_____

Part Four: Items related to teachers' methods of teaching.

Please, indicate the extent to which teachers apply methods of teaching in teaching process by putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree 2=dis agree 3=undecided 4=Agree 5=Strongly Agree.

No	Items	1	2	3	4	5
1	My teacher's way of teaching creates learners' interests, enthusiasm and appreciation.					
2	My teacher encourages students' involvement and success in their learning.					
3	My teacher teaching enhances me critical thinking and skills of scientific investigations.					
4	My teacher uses information sheet, job sheet, operation sheet and other printed materials to teach students.					
5	My teacher uses audio tapes, video tapes, slide sequence photographs, models, practical kits, tools, and printed materials in his /her own classroom.					
6	My teacher gives individual assignment and practical project work to his students.					
7	My teacher encourages his/her student to develop group learning skills such as discussion and interpersonal skills.					
8	My teacher considers learning outcomes to be achieved.					
9	My teacher commonly uses observation, written tests, port polio, and actual demonstration of performance methods to assess his/her students' master of intended learning outcomes.					

10.Here are some teaching methods and you are required to order them by writing number 1-8 on the space provided in front of them in which 1 represents the methods that teachers employ mostly in their class room teaching and 8 represents the least employed method.

1. Lecture method _____

2. Demonstration method _____

3. Inquiry method _____

4. Discovery method _____

5. Laboratory method _____

6. Individualized method _____

7. Discussion method _____

8. Project method _____

Part Five. Items related to students' desired outcomes.

Please, indicate the extent to which you achieve desired outcomes in your learning process by putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree, 2=dis agree, 3=undecided, 4=Agree, 5=Strongly Agree.

No	Items	1	2	3	4	5
1	My teacher encourages students to think independently work out problems, and self-managed learning.					
2	Students debate, discuss, reflect in the class by their own judgments and interpretation.					
3	My teacher encourages students to do practical work and highly adapted to it.					
4	Students demonstrate their communication skills during the class and team-work.					
5	Students show higher-order intellectual capability, ability to work together and independently during assessment and succeed competent.					
6	Students achieve learning outcomes, skills, knowledge, and attitude by intended learning activities.					
7	The curriculum ,competence that teachers use is aligned with desired graduate outcome.					
8	My teacher adjusts the unit of competence to the industry needs during his/her students on company training and supervises them on company training.					
9	The students well understood the intended learning outcomes, teaching activities and outcomes based Assessment.					

10	Students contribute to create new technology, adaptation, accumulation and transferring technology to micro and small enterprise as well as industry extension to maximize the productions.					

11.Here are assessment methods of outcomes based teaching & learning , and you are required to order them by writing number 1-7 on the space provided in front of them in which 1 represents the methods that teachers employ mostly in your class room leaching and 8 represents the least employed method.

1. Observation based assessment _____
2. Standardized-led assessment _____
3. Summative assessment _____
4. Formative assessment _____
5. Continuous assessment _____
6. Individualized assessment _____
7. Project based practical assessment._____

Part six. Items related to factors affecting the implementation of outcomes based teaching and learning.

Please, indicate the extent to which the following factors can affect the implementation of outcomes-based teaching and learning by putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree 2=dis agree 3=undecided 4=Agree 5=Strongly Agree.

No	Items	1	2	3	4	5
1	Insufficiency of teaching facilities ;like raw materials					
2	Traditional shop lay out/arrangements/ and old machines					
3	Lack of convenient learning station/class room for theory class/					
4	Lack of convenient practical station and assessment					
5	Lack of competence and curriculum related books in library					
6	Lack of good management of the College.					
7	Lack of place for cooperative training and facilities.					
8	The outcomes based teaching and learning curriculum(outcomes-based) is not differently designed from traditional curriculum (content-based).					

9	There is low access for new technology via internet for both teachers and students.					

Part seven: issues related to availability of resources.

Please, indicate the degree of fulfillment availability of resources for training materials and equipment. By putting "√" mark. There are five alternatives and their value is indicated as follows.

1=strongly disagree, 2=dis agree, 3=undecided, 4=Agree, 5=Strongly Agree.

No	Items	1	2	3	4	5
1	The management of the college has the necessary capacity in providing materials and equipment for training.					
2	Training materials resources positions are adequately supervised.					
3	Purchased materials are appropriate for training.					
4	There is timeliness of purchasing and distribution process of training materials.					

5. What are challenges that affect the outcome based teaching and learning in your class room practices? (If any)

_____
_____
_____

6.list the factors that challenge for your College?

_____
_____
_____
_____

Thanks!

Appendix - C

ADDIS ABABA UNIVERSITY

School of Graduate studies

Institute of Educational Research

Interview questions or vice dean, department heads and section heads

The following questions are prepared for interview.

1. Do you have any information about the outcomes based teaching and learning/OBTL/?
2. What is your opinion about the following OBE premises?
    - All learners can learn and succeed, but not all at the same time in the same way.
    - Schools control conditions for success
    - Success breeds/increases/ success
3. What is your opinion about the following OBE principles?
    - Clarity of focus
    - Design down
    - High expectations
    - Expanded opportunities
4. Which teaching strategies do teachers follow in their instructional practices?
5. Which assessment strategies do teachers follow when assessing learners' work?
6. In your opinion why students are not competent as expected during national OCA?
7. Is the curriculum you are using aligned to exit graduate outcomes?
8. Is there any challenge you are facing during implementation of outcomes-based teaching and learning?(If any problems)

Thanks

Appendix - D

Observation schedule

Observation no.	Date	Level	Learning Area /competence/	Topic	Duration
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					

Check list for observation

The following criteria will be used during observations:

A. Number of learners in a classroom
B. Classroom setting,
C. Workshop, hand tools and machines arrangements.
D. The use of resources
E. Teaching strategies followed
F. Assessment strategies followed
G. Learner participation
H. Incorporation of OBE principles and practices.

level	Competence	A	B	C	D	E	F	G	H	Re mark

Appendix - E

Reliability Statistics

Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.892	.894	46

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
item2.1	169.6154	435.090	.366	.890
item2.2	169.3077	429.397	.572	.888
item2.3	168.9231	440.410	.333	.891
item2.4	169.9231	439.077	.215	.893
item2.5	169.1538	450.308	.033	.894
item2.6	169.7692	464.192	-.251	.899
item2.7	169.3846	445.756	.093	.894
item2.8	169.3077	451.064	-.012	.897
item3.1	169.0769	418.910	.517	.888
item3.2	169.3846	432.756	.254	.893
item3.3	168.8462	448.141	.083	.893
item3.4	169.2308	438.859	.334	.891
item3.5	169.0000	443.667	.156	.893
item3.6	171.5385	451.936	.002	.893
item4.1	168.8462	431.641	.666	.888
item4.2	168.7692	456.359	-.113	.897
item4.3	169.1538	445.641	.161	.892
item4.4	168.5385	423.269	.559	.887
item4.5	168.9231	442.244	.197	.892
item4.6	168.2308	450.359	.109	.892

item4.7	168.3077	442.564	.514	.890
item4.8	169.0000	429.167	.715	.887
item4.9	168.8462	440.474	.369	.890
item5.1	169.0000	439.333	.387	.890
item5.2	169.6923	444.731	.111	.894
item5.3	168.7692	436.026	.499	.889
item5.4	168.8462	422.974	.625	.887
item5.5	169.6154	415.756	.826	.884
item5.6	169.4615	416.269	.668	.885
item5.7	169.6154	431.090	.425	.889
item5.8	168.9231	437.410	.424	.890
item5.9	169.4615	418.603	.660	.886
item5.10	169.8462	413.641	.580	.886
item6.1	169.0000	438.000	.334	.891
item6.2	169.3077	423.064	.580	.887
item6.3	168.9231	454.077	-.073	.895
item6.4	169.5385	420.603	.579	.887
item6.5	169.5385	415.769	.766	.884
item6.6	170.2308	411.526	.599	.886
item6.7	169.3846	426.756	.437	.889
item6.8	169.8462	427.974	.397	.890
item6.9	169.0769	436.577	.277	.892
item7.1	169.6154	408.423	.656	.885
item7.2	169.6154	427.423	.472	.889
item7.3	169.7692	422.526	.583	.887
item7.4	170.3077	416.397	.557	.887

Appendix-F

An interview codes and dates

Code	date
Interview #1	(April 15, 2013)
Interview #2	(April 15, 2013)
Interview #3	(April 16, 2013)
Interview #4	(April 17, 2013)
Interview #5	(April 17, 2013)
Interview #6	(April 17, 2013)
Interview #7	(April 18, 2013)
Interview #8	(April 18, 2013)
Interview #9	(April 19, 2013)
Interview #10	(April 16, 2013)

Declaration

I declare that "The Implementation of Outcomes Based Teaching and Learning in Misrak Technical-Vocational Education and Training College" is my own original work (has not been presented for a degree in any other university) and that all the sources I have used/quoted/ in this have been accordingly acknowledged.

Name Girma Gutema Kitila

Signature …….

Date of submission……..

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

Wossenu Yimam (phD) …… ……..

Advisor signature Date

Institute of Educational Research

Addis Ababa University