COMPARATIVE STUDY OF STUDENTS' ASSESSMENT IN GENERAL MECHANICS IN THREE TVET COLLEGES IN ADDIS ABABA

By

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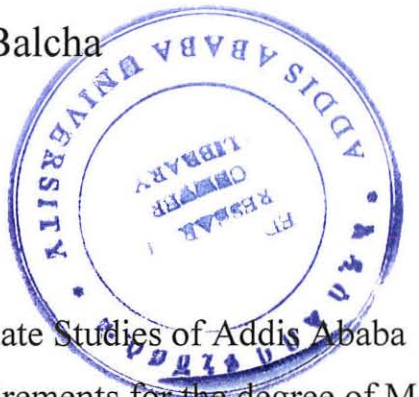

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Abstract

This study, aimed to describe and analyze the existing assessment practices in General Mechanics in TVET sector in a comparative manner among some selected Government, private and NGO Colleges in Addis Ababa and the contribution of the assessment practices toward the enhancement of quality learning. The sample participants of the study were 24 instructors and 18 students, enrolled at 10 + 3 program in 2007/08 academic calendar from the three selected private, Government and NGO Colleges.

Interview and Focused Group Discussion were conducted, questionnaire is administered to find out how assessment is conducted and how the information gleaned from the assessment is used and how often the instructors exercise the assessment formatively as an integral part of the teaching and learning process with respect to students' involvement in the learning, modeling of quality work, giving feedback and self assessment. Document analysis is also undertaken. Both the quantitative and qualitative data collected are analyzed and interpreted. The qualitative data are transcribed, translated, categorized and coded into recognizable themes. The tests and examination papers were also analyzed in terms of their content.

The study finds out that the assessment on both students' theoretical knowledge and the practical skills in continuous manner is the practice that promotes quality. The weak areas addressed in the study are that formative assessment lacks detailed criteria and achievement is not evaluated against prescribed learning outcomes. Besides, there is no meaningful involvement of learners in the learning. There is also a lack of self assessment and the test papers inclined to focus on the cognitive aspect of learning.

The study recommends that assessment primarily needs to focus on the progress towards the objective performance requirements rather than comparison between individuals. It is also needed to be done formatively with clear intention and teachers adjust their teaching accordingly. Students are needed to have involvement in peer assessment.

List of Acronyms

AA:	Authentic Assessment
ADLI:	Agricultural Development Led Industrialization
AFL:	Assessment for Learning
ANOVA:	Analysis of Variance
AU:	African Union
CBT:	Competency Based Training
EFA:	Education for All
ESDP	Education Sector Development Program
FGD:	Focused Group Discussion
GM:	General Mechanics
MDGs:	Millennium Development Goals
PRS:	Poverty Reduction Strategy
SBA:	School-based Assessment
TA:	Traditional Assessment
TGE:	Transitional Government of Ethiopia
TVET:	Technical and Vocational Education and Training
UNESCO:	United Nations Education, Science and Cultural Organization
UNCEF:	United Nations Children Education Fund
UPE:	Universal Primary Education

Chapter One

Introduction

1.1 Background of the Study

Education is essential for a satisfying and rewarding life; it is fundamental to the broader notion of expanded human capabilities. Education plays a key role in the ability of a developing country to absorb modern technology and to develop the capacity for self-sustaining growth and development of human capital (Todaro, 2003). The World Summit on Education for All (UNESCO, 2000), the World Education Forum and the UN Millennium Summit (Millennium Development Goals, 2000) all recognized the importance of education and the need to improve its quality in developing nations.

In addition, at an individual level, education and training contribute to personal development, increase his/her productivity and incomes at work, and facilitate everybody's participation in economic and social life. Furthermore, education and training can also help individuals to escape poverty by providing them with the skills and knowledge to raise their output and generate income. Investing in education and training is, therefore, an investment in the future; knowledge and skills are the engine of economic growth and social development.

It is an evident that in a time of continuous economic, social and technological change, skills and knowledge becomes quickly out-of-date. People who have not been able to benefit from formal education and training need be given opportunities to acquire new

skills and knowledge that will give them a second chance in life and at work. In this respect quality technical and vocational education and training (TVET) help develop the individual's knowledge of science and technology in a broad occupational area requiring technical and professional competencies and specific occupational skills.

Technical and vocational education and training (TVET) is used as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (UNESCO, 2003). Technical and vocational education is further understood to be:

(a) An integral part of general education;

(b) A means of preparing for occupational fields and for effective participation in the world of work;

(c) An aspect of lifelong learning and a preparation for responsible citizenship;

(d) An instrument for promoting environmentally sound sustainable development;

(e) A method of facilitating poverty alleviation (UNESCO, 2006).

The Education and Training Policy of Transitional Government of Ethiopia (TGE, 1994) stated that parallel to general education, diversified technical and vocational training, such as agriculture, crafts, construction, basic bookkeeping, will be provided for those who leave school from any level of education. The Policy also made clear that

technical and vocational training will be provided for those who complete grade ten for the development of middle level manpower.

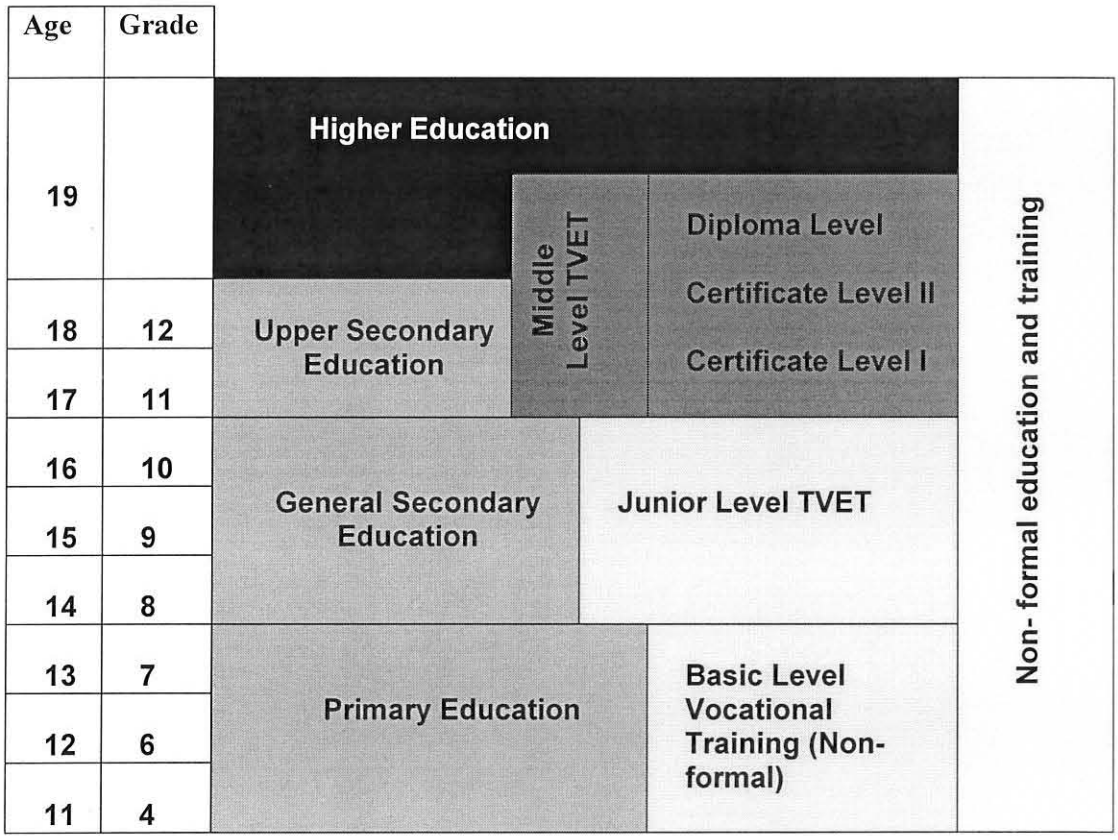
Within the framework stated in the Education and Training Policy (1994) the government so far came up with three Education Sector Development Programs (ESDPs) and proclamation dealing with TVET in 2004.

The major purpose of ESDPs is to translate the policy statement into action. As the result of the aforementioned Education and Training Policy (1994) and the implementation of ESDP- 1, 2, and 3 progresses has been made in all levels of education including TVET.

It is known that the Ethiopian educational system has three major levels. These are primary secondary and tertiary. Those who enroll in TVET program after completing grade 10, at the end of the first cycle of the second level, have three options to choose from depending on their performance in general secondary education. The three options to get training are: (a) 10+1 (grade10 completion and one year of training) (b) 10+2 (grade 10 completion and two years of training (c) 10+3 (grade 10 completion and three years of training). Those who had three years of training after grade ten are considered as having completed first year college level education and are eligible to join higher learning institutions to complete their undergraduate degrees. Figure 1 depicts this structure, which is defined in the TVET Strategy of Ethiopia from 2002.

The ESDP- 3 strategy document has outlined a comprehensive development vision for the TVET sector. It advocates a coherent system including formal and non-formal initial and further training, with open access to certification and permeability with the general and higher education systems. This strategy document further state that to implement the Poverty Reduction Strategy (PRS) successfully, the economy will need skilled and trained manpower at all levels –top, middle, low levels. Thus, the responsibility for training the required skilled manpower falls on the tertiary and TVET sub- sectors of education.

Figure 1: The Education and TVET System of Ethiopia



Source: Ministry of education (2003), Ethiopian Technical and Vocational Education and Training Qualification System. Addis Ababa. Ethiopia

TVET proclamation No.391/2004 was put in place to transform this sub-sector into an effective program so that it can play a major role in the process of skill development needed in all sectors of the economy. According to ESDP- 3 document (2005), in the coming five years, TVET programs will focus on creating quality oriented and demand driven system that can provide adequate and skilled manpower for the implementation of Agricultural Development Led Industrialization (ADLI) and Poverty Reduction Strategy.

Figure 2: Entry requirements, program duration and certification levels

Entrance through recognition of non-formal/formal

Formal Entrance Requirement	TVET Program	Type of Certificate
Middle Level Technical/ Vocational Certificate Level II	3rd year	Middle Level Technical/Vocational Diploma
Middle Level Technical/ Vocational Certificate Level I	2nd year	Middle Level Technical/Vocational Certificate Level II
General Education (Grade 10) Certificate, Junior Level Technical/ Vocational Certificate + Bridging Courses	1st year	Middle Level Technical/Vocational Certificate Level I
Primary Education (Grade 8) Certificate Drop outs 9-10 grades, Basic Level Vocational Certificate + Bridging Courses	Junior (=6 months)	Junior Level Technical/Vocational Certificate
Basic Education (Grade 4) Certificate, Drop outs 5-8grades	Basic (~4 months)	Basic Level Certificate

Source: Ministry of education (2003), Ethiopian Technical and Vocational Education and Training Qualification System. Addis Ababa. Ethiopia.

The Government is setting qualification standards, certification processes, valid assessment methods and acceptable outcome for quality assurance. Moreover, the integration of TVET programs with the rest of the educational system will enable horizontal and vertical movement both for formal and informal education and training.

Having considered the policy framework of the country's TVET system, it is important to discuss two significant facts in relation to TVET. The first is that the issue of quality. According to African Union, training for high-quality skills requires appropriate training equipment and tools, adequate supply of training materials and practice. Requirements also include relevant textbooks and training manuals and qualified instructors with experience in enterprises. The delivery of quality TVET is also closely linked to the building of strong, professional management and leadership capacity as well as a suitable qualifications framework and monitoring mechanism to drive the entire system (Africa Union, 2007).

The other fact worth to be noticed is that TVET emphasizes on practical skill development. Wanyam (2003) said that subjects in TEVT are the ones where a student uses both hands and the brain to acquire long life skills. There are challenges in the qualitative development of practical skills subjects. Generally speaking, quality TVET program is the one that produces graduates with theoretical aspects of the subject, cultivated proper attitude and more significantly equipped with necessary practical skills. TVET being practical skill development by its very nature, the obvious

expectation is significant emphasis on practice rather than classroom knowledge dissemination.

In light of the above discussion the apparent expectation of the type of assessment of the learners' achievement compared to the practice employed in the academic main stream could be quite different. According to Ponji (2004), assessment is increasingly being considered as an integral part of the teaching and learning process. It is not an end but a means for achieving the end, which is, improving student learning. However choosing and putting the best option of the type of assessment into practice in order to evaluate the educational achievements of learners is not an easy undertaking. The same author again argued that the notion of "assessment for learning" (AfL), with emphasis on the use of the assessment information to improve learning, is becoming more prominent and accepted as the way forward in efforts to improve the quality of education.

With regard to educational measurement and examination the Education and Training Policy of Transitional Government of Ethiopia claim that continuous assessment in academic and practical subjects; including aptitude tests will be conducted to ascertain the formation of all round profile of students at all levels. The policy goes on to say that the technical training program includes field experience, and curriculum development will ensure that students and trainees will acquire the necessary entrepreneurial and productive attitude and skills (TGE, 1994).

In addition, the Ethiopian TVET Qualification System (2003) made clear that after completion of the full training programme, which usually includes a specified apprenticeship period, trainees are assessed within the training institutions and by the employer during the apprenticeship period. This assessment is done against the training standards defined in the curriculum. And if successful, trainees are then awarded the relevant certificate signed by the regional TVET authorities. Such assessment is always a summative one and it has almost nothing to do with formative one.

The document also indicated that at the moment assessment is done in the institutions or workplace where the training is conducted and there are no independent authorities involved in the testing. Concerning the assessment procedure the document explained that it is done through practical performance of tasks, written and oral expressions.

The Ethiopian TVET System Curriculum Development Guidelines (2006) prepared on General Metal Fabrication and Assembly explained that the trainee's performance should be carefully examined through both theoretical and practical evaluations of in-school training and apprenticeship. Furthermore the document described that evaluation in each main course supposed to be done in three ways. The first one is *in-school training evaluation*. This consists of the practical continuous assessment and theoretical final examination sharing the allotted marks of evaluation equally, 50% each. The second one is evaluation on *project work*. The trainers are expected to make strict follow up to see the performance of each trainee participating in the project work and evaluate accordingly. Apprenticeship evaluation is another mechanism by which that

trainee's performance is assessed. At the end of the apprenticeship programme cooperating organizations are supposed to send trainee's performance results to training centers.

With regard to the supportive and common courses, the above mentioned document indicated that assessment can be made with a combination of successive tests during the delivery of courses and a final written examination at the end of the respective courses.

The present study, taking the above discussion and background information into account, aimed to describe and analyze the existing assessment practices in the TVET sector in a comparative manner among some selected Government, private and NGO Colleges in Addis Ababa with respect to the contribution of the assessment practices toward the enhancement of quality learning. Besides, the study will reflect ideas for the development of appropriate and effective policies and procedures for the quality assurance of assessment in the TVET sector.

1.2 Statement of the problem

It is an evident that assessment practiced in a well designed manner as part of the teaching-learning process, can be one of the factors that contribute for the promotion of quality learning. However, it is also true that the failure for a proper and well designed practice of assessment do not have any contribution for the assurance of quality in the

learning. Some important facts related to the failure of the practice of assessment, and as a result the absence of contribution to quality learning are described below.

One crucial element of the problem is that many times assessment is not practiced formatively as an integral part of the teaching-learning process. Instead of using assessment for learning and helping teaching and learning, it is mainly practiced to summarize what students know or can do at certain times in order to report achievement and progress. In relation to this, the failure to provide appropriate feedback to the students inhibits the positive contribution of the learning.

While assessment in TVET is needed to be practiced as the process of collecting evidence and making judgments on the extent and nature of progress towards the performance requirements set out in a standard, or a learning outcome, many times the priority has been given to forms which compared individuals with each other. Sometimes the exercise of assessment seeks to differentiate between individuals and find out where individuals fit in relation to the other. This is how excellence is determined in such assessment by how well individuals perform relative to the others.

In addition, good assessment is not just a matter of finding the appropriate method and using it sensibly in conjunction with given subject matter. There are always unintended consequences in assessment. Students are prompted partly by the forms and nature of assessment tasks and learn that, in order to maximize their marks, they use rote learning. In so doing, students learn to adopt "surface" approaches and leading to an

over-emphasis on memory and lower-level skills. If, for example, students get the idea that memorization works for multiple choice tests, they persists in that strategy even when they understood that it does not help.

Furthermore, while the teaching outcomes in TVET highly emphasize on the psycho-motor aspects of the courses, which is the development of skills, there are times when the assessment emphasizes on the cognitive aspects of the course. Such exercise of assessment do not provide emphasis to all aspects of a course and ignorant of significant aspect of the course. On top of this, such an assessment encourages students to focus on those topics which are assessed at the expense of those which are not. It is an evident that students give precedence to graded assessment tasks over those which are ungraded.

This study explores the practice of students' performance assessment employed currently in TVET in some selected government, NGO and private colleges of Addis Ababa and the extent that the assessment practice contribute toward the promotion of quality education.

Besides, the study also investigates the assessment practice functioning at the government, NGO and private colleges and come to conclude the assessment scheme that promotes quality.

1.3 Research Questions of the Study

The research question central to this study is:

1. How does the current assessment practice in the sector contribute to the promotion of quality education?

Two corollary questions are

2. Is there a significant difference among the three Colleges with respect to the practice of students' assessment formatively as an input and enhance quality learning?

3. What should be done to improve the quality of current assessment practice in TVET?

1.4 Significance of the Study

Since TVET is in the process of revitalizing itself in recent years for the development of middle level manpower, the study would be significant in indicating the type of assessment that assures and enhance quality. It also identifies the strength and weaknesses of assessment in TVET so that appropriate measures can be implemented towards improvement. The findings of the research can be transferred and would be important resource on how to assess practical skills for those who engaged in training learners at TVET.

Besides, as TVET being relatively young programme and much study are not conducted on it, the study will also serve as a spring board for further research.

1.5 Delimitation of the Study

This research deals with three selected TVET Colleges in Addis Ababa to represent the government, NGO and private. Thus, the study will be conducted at Addis Ababa Tegbare'ed College, Selam Technical and Vocational Center and Necat Engineering College. The research is also delimited by one field of study, namely General Mechanics. The field of study is selected due to the fact that General Mechanics is one of the fields of study that has homogeneity in it while some other fields have sub division in them, and a large number of trainees joined this field in a relative speaking.

CHAPTER TWO

REVIEW OF RELATED LITRATURE

The process of reviewing related literature is meant to synthesize existing discussions on the pertinent topics for this study while advancing towards the analysis and discussion of the subsequent sections. However, it is very important to make note that despite the fact that there are plenty of literatures on different aspects of TVET, assessment with respect to TVET is an issue that the researcher faced with paucity of literatures in a greater extent. Although the issue is raised as a passing remark in few books, article that has to do with assessment in TVET are not available in educational journals. In addition the contribution of assessment toward quality is also an issue that is not touched at all in the literatures. Besides, although huge amount of literatures are read and reviewed in search of related ones, educational articles that have to do with assessment specifically in General Mechanics and performance assessment is almost unavailable.

The A*assessment in TVET* discusses the nature and the relationship of assessment and TVET. The second subsection, *Performance Assessment,* presents the definition and the concept of performance assessment. The third subsection, *Assessment and Learning,* discusses the approaches and concepts of learning.. The final subsection, *The Role of Assessment with Respect to Quality* discusses how formative assessment and feedback bring meaning in learning, developing understanding and relating that

understanding to the world around. The subsection also discusses quality learning as a conceptual change-seeing the world differently.

2.1 Assessment in TVET

Assessment is perhaps the most vital of all the processes in vocational education. A high-quality assessment system provides the right emphasis on the different aspects of a course, gives students appropriate feedback, ensures that the right students are deemed to have learnt sufficient, and results in a qualification that is well understood. With the right procedures in place, students can be confident in the quality of their training, and employers can have confidence in qualified students. Without them, however, any of these can be placed in jeopardy (McDonald et al, 2008).

The importance of assessment issues in vocational education is often not appreciated. There is, for example, probably more bad practice and ignorance of significant issues in the area of assessment than in any other aspect of vocational education. This would not be so bad but for the fact that the effects of bad practice are far more potent here than for any aspect of teaching. Assessment acts as a mechanism to control students that has more effect on students than most teachers or administrators are prepared to acknowledge (McDonald et al, 2008).

The priority in assessment in the past—whether in the classroom or in large-scale public examinations—has been for forms which compared individuals with each

other. In vocational education, however, assessment needs to be thought of not as a comparison between individuals, but as "the process of collecting evidence and making judgments on the extent and nature of progress towards the performance requirements set out in a standard, or a learning outcome" (Hagar et al, 1994). Despite frequent claims, this has rarely been the case.

Rod McDonald and his colleagues (2008) identified the following particular problems

- assessment of students on those matters which it is easy to assess, leading to an over-emphasis on memory and lower-level skills,
- assessment encouraging students to focus on those topics which are assessed at the expense of those which are not,
- students adopting undesirable approaches to learning influenced by the nature of assessment tasks,
- students retaining fundamental misconceptions about key concepts in the subjects they have passed, despite performing well in examinations,
- successful students seeking cues from teachers to enable them to identify what is important for formal assessment purposes, and consequently ignoring important but unassessed material.

As a result, existing assessment approaches can have quite the opposite effects to those desired. Fortunately, the issue of the links between competence, learning and

assessment has now come to prominence, and it is possible to look afresh at ways in which assessment can fulfill two necessary requirements: that it measures competence, and that it has a beneficial effect on the learning process (McDonald et al, 2008).

Assessment of students in technical programmes usually covers theory and practical aspects of the subject. Badmus (2004) based on the situation in Nigeria, said that prior to the 1980s, the primary focus of research in assessment was on the area of standardized forms of assessment. In the early 1980s research on assessment focused on the construction and administration of high quality, large scale testing programmes. As to Badmus many educators still believe that student assessment is an essential part of teaching and that good teaching cannot exist without good student assessment. Moreover, assessment can play an important role in systematic educational changes (Wolf, 1995).

Badmus (2004) pointed out that literatures identified six categories of classroom assessment methods. These are objective paper and pencil test, essay test, standardized tests, performance test, informal observation and portfolios. Of the six methods of assessments, performance tests are particularly useful to technical/vocational education teacher since most technical/vocational curricula are modular and competency based in nature (Badmus, 1986). Informal observation has been found useful when grouping students for instructional activities while objective

paper and pencil test is well suited for assessing students' recall of factual knowledge. Information from portfolios is not much of use in generating information in decision making in the classroom. As Gordon quoted by Badmus, due to lack of proficiency in interpreting the use of information generated from standardized tests and as well as how to construct essay questions for assessment, the use of standardized tests and essay questions are not popular with technical/vocational teachers

Assessments of students progress, should provide feedback and be integrated into instruction, should help students to stimulate growth and form new habits. Classroom assessments are valuable when students and teachers use them to clarify achievement, interest, and aptitude for the purpose of stimulating new learning. They should be authentic to life experiences and encourage integration of technical/vocational and general education. Assessments should have what is known as "consequential validity" i.e. when they promotes positive consequences for students, thus helping them to form new and meaningful habits. Assessment should expand opportunities for students (Badmus).

The use of School-based assessment (SBA) has created controversy in the education community. The teaching profession generally agrees in principle that a combination of SBA and external examinations is good. However, it has been difficult to gain public confidence in teachers' assessment, particularly from employers (Aina and Badmus, 1996).

Granted that teacher assessment is not as reliable as external examination results, the usefulness of an assessment is directly related to its validity provided its reliability is not too low as to question its validity. Basis of assessment must broaden to prevent the narrowing of learning. In quality assessment validity should take precedence over reliability though the latter must be reasonably high. Examination policies and practices must be viewed as compromises between competing values.

Badmus asserted that apart from teachers improving their image with reference to practice of SBA, the *traditional assessment* methods (TA) should be *complimented* with what is now known as *authentic assessment* (AA). In authentic assessment students are asked to perform real world tasks that demonstrate meaningful application of essential knowledge and skills. AA usually includes a task and a rubric by which performances on the task will be evaluated.

TA is knowledge and skill-based while AA is performance-based. Definitely in quality assessment, TA should be complemented with AA, especially in the assessment of students in technical/vocational schools now that such programmes have integrated academic and technical/vocational curricula. This should be the case for assessment of students in classrooms.

AA is necessarily criterion-referenced based. This is clear from the fact that four essential steps are involved in the creation of AA. They are:

- *Standards* should be identified
- *Authentic task* should be developed for a particular standard or set of standards.
- *Criteria* i.e. characteristics of good performance on/of that task should be identified/started.
- *Rubric* for the task (assessment) which is a combination the criteria and the level of performance for each criterion should be created.

Information generated from application of the rubrics will give students feedback and allow the teacher to adjust instruction accordingly. AA in the classroom provides a criterion-referenced assessment which has been found to provide guidance to learning (Badmus, 1986, Green, 2002)

2.2 Performance Assessment

Despite the fact that performance assessment is essential assessment mechanism in the TVET, there is a lot paucity of information about it except the conceptual analysis of the terminology. Performance assessment in the Glossary of the *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association & National Council on Measurement in Education, 1999) is defined as follow:

> Performance assessments Product- and behavior-based measurements based on settings designed to emulate real-life contexts or conditions in which specific knowledge or skills are actually applied. (p. 179)

At the middle of the 20th century the term performance test was in most cases connected to the meaning of practical tests not requiring written abilities. In education the idea was to measure individuals' proficiency in certain task situations of interest (Palm, 2008). It was acknowledged that the correlation between facts and knowledge, on the one hand, and performance based on these facts and knowledge, on the other, were not always highly correlated. Judgment of the performance in the actual situation of interest was therefore desirable. The usefulness of such tests was regarded as obvious in vocational curricula and they seem to have been mostly applied in practical areas such as engineering, type writing and music (Palm, 2008).

It is appropriate to acknowledge the difference between vocational school subjects and theoretical school subjects in terms of performance. In vocational subjects there are well-defined performances tied to the profession, which can be observed relatively direct.

2.3 Assessment and Learning

2.3.1 Approaches to Learning

> Teaching and learning are reciprocal processes that depend on and affect one another. Thus, the assessment component deals with how well the students are learning and how well the teacher is teaching. (Kellough and Kellough, 1999)

Mc Donald and his colleagues (2008) argued that assessment is the most significant prompt for learning: every act of assessment gives a message to students about what they should be learning and how they should go about it. The message is often not explicit, is not easily understood and often it is read differently and is often given a different emphasis by teachers and by students.

They pointed out that there are always unintended consequences in assessment. Students will learn to adopt "surface" approaches (such as those relying on memorization) to study in some circumstances, and will adopt "deep" (meaning-seeking) approaches in others. In so doing, they will be prompted partly by the forms and nature of assessment tasks. They will learn that, in order to maximize their marks, they should use rote learning in many circumstances, even when the teacher might believe that this would distract them from the most important aspects of the course. This response—and other undesirable ones—will be a function not only of the assessment tasks set, but also of all the experiences of assessment students have had in the past. As to them if, for example, students get the idea that memorization works for multiple-choice tests, they will persist in that strategy even when assured that it will not help. Students are not simply responding to the given subject—they carry with them the totality of their experiences of learning and being assessed and this certainly extends far beyond concurrent and immediate preceding subjects (McDonald et al, 2008).

All of this means that the way a student approaches the task of learning will depend on:

- the intrinsic qualities of the form of assessment being used;
- the ways in which the assessor translates the material to be assessed into the given format, and selects assessment tasks appropriate for the subject and the specific learning goals; and
- (most importantly) how the student *interprets* the task at hand and the context of the assessment (McDonald et al, 2008).

Deborah Wills (1993) reasoned in a similar fashion that assessment methods have been shown to shape the learning approach of even the most academically able students. She added that assessment that is based on rote memorization is likely to encourage a narrow and superficial form of learning.

Thus, assessment plays an active role in the teaching/learning process (Crooks, 1988). Therefore, before any discussion of assessment reform is begun, consideration should be confined to technical matters but should take account of the socio-political implications of assessment and their effect on learning (Popkewitz et al.,1986)

Researchers support for the view that high order learning is more likely to be retained long term than the reproductive learning of factual material (Crooks, 1988; Wolf *et al.,* 1991). In addition it seems likely that high level learning is associated with the

development of intrinsic motivation and positive attitudes to continued learning. Students who lack the necessary motivation to undertake long hours of study find learning 'boring and irrelevant, and hence the pattern of declining effort and increased incidence of examination failure is understandable' (Svensson, 1977, p. 242). It is therefore important to look for ways of developing an alternative approach to assessment that will have more positive consequences for long-term learning.

Marton & Saljo again in Deborah (1993) based their findings on interviews with Swedish tertiary students. In this research, two approaches to learning were identified, and termed deep and surface. In the former approach, the student was concerned with identifying meaning and seeking out relationships both within the material itself and with prior learning and experience. A student using a surface approach looked at the superficial features of a text with the intention of rote learning the content.

Significantly, Marton & Saljo were able to demonstrate that students who used a deep approach were more likely to achieve understanding and retain details than those using a surface approach to learning, thus linking level of processing with level of outcome. The link between perception and action is an important feature of the work in this area.

In addition to the deep and surface approaches Biggs (1987) argues for a third approach-achieving. He describes three approaches and their derivatives as follows:

surface — where the motive is to meet institutional requirements minimally, and the congruent strategy is limiting the target to essentials that may be reproduced through rote learning;

deep — where the motive is intrinsic interest in the content learned, and the congruent strategy is discovering meaning and acquiring competence by reading widely, interrelating with existing knowledge, etc.;

achieving — where the motive is ego enhancement through high grades, and the congruent strategy is organising time, working space and syllabus coverage in the most efficient way;

surface-achieving — where the motive is to achieve but where the student conceives the accurate reproduction of much detail as the way to do so;

deep-achieving — where the student is motivated both by intrinsic interest and high grades and so approaches work through an organized and strategic search for meaning. (1987, p. 129).

2.3.2 Concepts of Learning

In a study that explored tertiary students' conceptions of a range of educational concepts such as understanding, learning and teaching, van Rossum *et* al. (1985) emphasised the centrality of the concept of learning arguing that:

> it seems to be possible to use it (learning conception) as the key concept: the learning conception gives us a clear picture of qualitatively different views on learning and moreover seems to be strongly connected with qualitatively different ways of thinking and acting, e.g. different study strategies. (p. 618).

In response to the question 'What do you actually mean by learning?' Saljo (1978) identified five qualitatively different concepts. There is some evidence to support a sixth conception (van Rossum & Deijkers, 1984; Beaty *et* al., 1990) where changes to the person are a central part of learning.

Beaty and her colleagues extended Saljo's earlier work to describe in greater detail the parameters and defining characteristics of students' concepts of learning.

For all the students in their study, learning implied a sense of permanence. The authors noted 'the point of time for acquisition and the point of time for application (that is for using what is learned) form the temporal axis of learning' (p. 5). Beaty *et al.* (1990) discuss each concept in great detail outlining defining characteristics. The following is but a brief summary of their extensive work.

A. Increasing one's knowledge. Learning is viewed as a simple process of increasing the amount of information one possesses. No reference is made of a later purpose.

B. Learning as memorising and reproducing. Learning is viewed as the storage of 'stuff that will be memorised and later applied-probably in a test, thus limiting the external horizon to the school. As with the previous conception knowledge is quantitative and pre-determined.

C. Learning as applying. Application extends beyond the classroom to the 'life world' of the person. Although there are clear differences between these first three concepts in all 'the knowledge that is acquired by learning is seen as something ready-made, given, something that exists "out there", waiting to be picked up, taken in and stored' (Beaty *et al.,* 1990, p. 10).

D. Learning as understanding. Learning is described as understanding or gaining insight (i.e. looking into) from the learning material. As an activity, learning is centered around the learner who examines the material thus extracting meaning from it and/or relates new concepts to those already known. This view of learning appears to be consistent with learning for its own sake.

E. Learning as an interpretive process aimed at understanding reality. Rather than simply seeing something in a different way-a characteristic of the previous conception, 'learning is changing his or her way of thinking about something' (Beaty *et al.,* 1990, p. 12)

F. Learning as changing as a person. This is an extension of coming to see things in a different way, where the student changes as a person and moves towards a sense of self-realization.

2.4 The Role of Assessment with Respect to Quality

While assessment of school learning provides information to all parts of stakeholders of the sector, the scope which this study limits itself is assessment that assists and promotes quality of learning in the classroom context. Effective teachers use assessment of students learning to inform day-to-day and month-to-month decisions about next steps for instruction, to give students feedback about their progress, and to motivate students. Such assessment is usually referred as assessment to assist learning, or formative assessment.

2.4.1 Quality Learning

In a paper that examines the dynamic interaction between teachers and learners, Bowden as quoted by Deborah (1993) articulates his view of quality learning:

> quality in learning is best described by contrasting preferred forms of learning with inferior ones. It is not simply increasing the store of knowledge, taking in and retaining (or not) more and more information. It is about searching for meaning, developing understanding and relating that understanding to the world around. As a consequence, the world is seen differently and student conceptions have undergone change. Quality learning is about conceptual change-seeing the world differently is an essential outcome. (p. 4)

Such quality learning seems likely to encourage students to be active participants in their current and future lives.

2.4.2 Feedback and Formative Assessment towards Quality of Learning

Feedback in any discipline is necessary for student learning to take place, whether that feedback is as simple as a checkmark beside a correct answer or as complex as a one-on-one consult to discuss student progress. In TVET courses, feedback on student performance is essential to helping students improve as they develop their skill in the training. While short-cuts and time-savers have their appeal, theory dictates that feedback is a crucial element in the learning process. One purpose of this review, then, is to determine whether or not feedback does contribute significantly and measurably to student learning, in particular in the General Mechanics discipline and related fields.

Black and Wiliam (1998) conducted an extensive literature review, covering more than 500 publications on the subject of formative assessment. The authors make it clear that "the two concepts of formative assessment and of feedback overlap strongly" (Black and Wiliam, 1998, p. 47).

Naturally, any discussion of feedback necessitates a definition of the term itself; as several studies have indicated, however, feedback is a relatively open-ended concept. Theoretically, feedback can be defined narrowly or broadly; for the purposes of this review, feedback should be considered any communication between the instructor and the student that provides information about the student's performance of an assessment task. Most of the publications reviewed here discuss feedback in the larger context of formative assessment; as such, a definition of formative assessment is also required. As with much of the literature in this area, Black and Wiliam begin with a definition of formative assessment; for the purposes of their review, formative assessment includes any activities from which students receive feedback which in turn modifies subsequent activities. According to this definition, then, feedback does not merely "overlap" with formative assessment, it is an integral component. Based on several quantitative studies, Black and Wiliam make several generalizations regarding formative assessment and feedback:

- all formative assessment by definition involves feedback between student and teacher;
- the success of this interaction directly affects the learning process;

- it is difficult to analyse the contribution of the feedback alone or, conversely, the assessment technique without the impact of the feedback;
- feedback must be applied in order for the assessment to be truly formative;
- feedback is most effective when it is objective (i.e., relevant to the task) rather than subjective (i.e., relevant to peer performance) (pp. 16-17).

While Black and Wiliam conclude from this section of their review that further investment in formative assessment should produce "significant learning gains" (p. 17), they also find that in general, teachers do not really understand formative assessment, which means that the application of formative assessment techniques is weak or simply neglected altogether (p. 20). Part of the problem lies in what appears to be a misalignment between the application of formative assessment practices and curricular requirements, leading Black and Wiliam to conclude that formative assessment can only really be implemented through radical changes in teaching practices, teacher philosophies, curricular requirements and institutional support of all of these elements.

2.4.2.1 Formative Assessment in a Summative World

Radical change is a key point for several proponents of formative assessment, including Yorke (2003), who echoes Black and Wiliam's conclusion that formative

assessment is universally lauded but generally misunderstood, or at least insufficiently supported. Yorke, among others, argues that assessments can – and often must – be both summative, providing a quantitative measure that contributes to the student's grade, and formative, providing feedback that contributes to the student's learning. In fact, according to Yorke, there is a definite place within constructivist teaching for summative assessment, in that it can be a "test of independence" (p. 497) that counters the potential pitfalls of student overconfidence from success that is really attributable to "the work the teacher" (p. 481). Similarly, Taras (2002) sees no conflict between summative and formative assessments, and in fact argues that "since the grade is linked to ideas of standards, it is also of great importance for formative work" (p. 507).

In contrast, Butler (2004) advocates "comments-only" marking (p. 37), based on his interpretations of Clarke (2001), who claims that "grades freeze [students] into 'ego-related' mode rather than 'task-related' mode" (as cited in Butler, 2004, p. 37). Based on a trial of the "comments-only" approach, Butler concludes that both teachers and students benefit from purely qualitative feedback, especially when coupled with self-reflection.

Bangert-Drowns, Kulik, Kulik and Morgan (1991) were also surprised to discover potentially negative effects from feedback provided in test situations. Using very specific definitions of feedback under specific conditions, the authors found that "a

full third" of their findings were negative, that is, the feedback provided did not increase student success in tests, and in some cases, decreased success. However, Bangert-Drowns et al attribute the negative effects to "presearch availability" and the type of feedback provided. As other studies have shown, task-oriented, instructional feedback that "in some way informed the learner" (p. 232) was significantly, and positively, effective, while feedback that simply indicated that the learner had responded correctly or incorrectly did not effectively contribute to learning.

2.4.2.2 The Role of Feedback

The fundamental role of feedback in the formative assessment process remains undisputed, however. Hounsell (1995), for instance, tells new colleagues that feedback "helps students to focus their intellectual energies in the most productive way" (p. 51). More to the point, then, is the nature of feedback itself. Black and Wiliam identify four elements essential to effective feedback: a recognized, measurable standard; a means of identifying student performance in relation to that standard; a means of comparing the two levels; and a way to apply this information to alter the gap. The most crucial inference to be drawn here is that feedback must be used by the student to change the gap between student performance and stated objective. Some of the studies reviewed by Black and Wiliam, as seen in the previously-discussed findings of Bangert-Drowns et al, noted a negative effect of feedback, typically as a result of one of three misapplications of the provided

feedback. The first of these is to reject the stated objective as too difficult; the second is to change the objective to meet performance; and the last is to deny any discrepancy between performance and objective (pp. 48-49). These studies suggest that feedback is most effective when it focuses on the task rather than the student; which, as Black and Wiliam point out, explains why research shows that praise frequently has a negative effect on performance. Comments that focus instead on the objectives, and the gap between performance and the standard, are more likely to produce learning gains. Furthermore, scaffolded responses, which provide as much or as little information as individual students need to accomplish the task, produce greater overall learning as well as better performance on individual tasks. Black and Wiliam conclude their review with several recommendations, not least of which is further research into the nature of feedback.

Like Black and Wiliam, Hattie and Jaeger (1998) recognize the importance of feedback in the assessment process. Their definition of feedback, however, differs from the one given by Black and Wiliam, which Hattie and Jaeger see as too narrow. Feedback, for their purposes, is "polymorphous" (p. 113) and refers to any information subsequent to performance, which means that feedback goes beyond external sources to include self-assessment. Furthermore, Hattie and Jaeger emphasize the duality of feedback, that is, that the teacher must provide opportunities for feedback on the one hand, and on the other, that students must be trained to receive feedback. Like Black and Wiliam, Hattie and Jaeger conclude that assessment must emphasize feedback and subsequent action, that testing should be a learning tool

rather than a learning measuring stick. In a more focused response to Black and Wiliam, Sebatane (1998) discusses the implications of their findings in the specific context of "the so-called developing countries" (p. 123). As Sebatane argues, despite the overwhelming research that underlines the importance and benefit of formative assessment, reforming pedagogical practice is a slow process, because to date no one "optimum model" of a formative assessment-based system has been proposed, and because all the studies to date have concluded that such reform requires substantial, radical changes in classroom practices and institutional standards (p. 124).

2.4.2.3 Making Feedback Effective

Thus far, the studies seem to show overwhelmingly positive response to the general idea of formative assessment and feedback; however, to some extent or another, many researchers address the importance of how feedback is provided, how it is received, and how it is applied. In short, for feedback to be truly effective as a formative learning tool, both the instructor and the student need to understand what to do with it. Nichol and Macfarlane-Dick (2006) reviewed recent research on formative assessment and postulate that such assessment can be used to help students become independent, self-regulated learners. Based on their findings, the authors propose seven principles of effective feedback: clarifying goals, developing reflection, delivering information about student learning, encouraging dialogue, encouraging motivation and self-esteem, helping students move from current performance to desired performance, and providing information to the teacher to shape the teaching (Macfarlane, 2006). As in other publications, Nichol and Macfarlane-Dick conclude

that task-oriented feedback, as opposed to simple praise or encouragement, is more effective and better appreciated by students, since it is more relevant and therefore, more in keeping with the formative assessment system. Nichol and Macfarlane-Dick posit that since such feedback must be interpreted by the student, effective feedback can become a vital part of the self-regulatory process.

Whether or not that feedback is indeed interpreted, and correctly, by the student is obviously a concern. Wiltse (2002) begins with the premise that feedback is effective in promoting student learning and improvement, but that the feedback itself must be examined in terms of ease of interpretation and application. Gibbs and Simpson (2002) support this latter idea, stating specifically that "feedback has to be quite specific to be useful", and that the feedback must focus on learning and on process, rather than on the students themselves. Furthermore, Gibbs and Simpson advocate timely feedback that is relevant to the assessment and the related criteria. Finally, as other proponents of formative feedback have shown, Gibbs and Simpson reiterate the importance of subsequent action on the part of the student, which they argue can be encouraged by the instructor through a variety of strategies. Similarly, Hounsell (1995) advocates feedback that shows students how and why corrections must be made, and suggests that comments phrased as questions, rather than directions, will be better received and thus acted upon by students. Hounsell cautions, however, that tutors should not be discouraged if comments are disregarded by students (p. 56).

CHAPTER THREE

DESIGN OF THE STUDY

3.1 Participants

The target population that is represented in the study is TVET trainers and trainees enrolled at 10 + 3 program of the colleges in Addis Ababa in 2007/08 academic calendar. At the time of the study there were about 81 TVET institutions in Addis Ababa. The largest number of these institutions, 63 colleges, belongs to the private sector. Ten institutions are owned by the government, three belong to missionary organizations and the rest five are owned by NGOs. With regard to the number of trainees, 39,751 students are enrolled in the academic calendar. Out of the total number 19,150 trainees were male and 20,601 were female. Similarly, the number of trainers was 2,708; and out of this number of trainers, 1,990 were male and 718 were female.

mHowever, because of the heterogeneous nature of the field of studies in TVET, it is not possible to deal with the whole target population in a single study. For this reason trainees and trainers in a single field of study, namely, General Mechanics, are taken as an accessible population. Therefore, the sample is taken from this group alone. The trainees enrolled at the accessible population were 216 and the trainers were 71. The

size of the male trainees was 176 and the females were 40. Out of 71 trainers 61 trainers were male and 10 were females[1].

Furthermore, participants of the study are from three different Colleges studying and teaching the above mentioned field of study. Addis Ababa Tegbare-ed College, owned by the government; Selam Technical and Vocational College one of the NGO Colleges; and Necat Engineering College is privately owned enterprise.

The selection of the three Colleges is made purposively for the reason that they have reach experience in the selected field of study for a relatively longer time as compared to others. Besides, many of the other Colleges do not provide training on General Mechanics.

The sample participants of the study were 24 instructors and 18 students from the three Colleges. Interview was held with five instructors and one director. Six students participated from each College and in each of the three Focused Group Discussion. Although students were a larger population as compared to the instructors, the number of participants was small. This is due to the students participation is only in the Focused Group Discussion and the instructors responded to the questionnaire. The details about the number of students and teachers in each College are given below in table 3.1 and 3.2.

[1] All the statistics related to the population is collected from the Addis Ababa Bureau of Education.

Table 3.1: Students in the GM Department of 10 + 3 Program in the Colleges

Colleges	Addis Ababa Tegbare id College	Necat Engineering College	Selam Technical and Vocational College	Total
Male	73	54	49	176
Female	23	5	12	40
Total	96	59	61	216

Source: Registrar offices of the Colleges.

Table 3.2: Instructors in the GM Department in the Colleges

Colleges	Addis Ababa Tegbare id College	Necat Engineering College	Selam Technical and Vocational College
Male	9	8	7
Female	1	0	1
Total	10	8	8

In addition to the respondents, documents are the other source of data. Small range of official documents was collected from the Colleges, particularly tests, examination papers and course outlines were of interest. These materials were provided with understanding of maintaining each College's anonymity.

3.2 Instruments

3.2.1 Interview

The major purpose of conducting interview was to find out the ways trainees were assessed and whether the information gleaned from the assessment is used as an input for the promotion of quality in teaching and learning process or not. Furthermore, the researcher in person conducted the interview at all the three Colleges.

Interview was semi-structured, and where it is possible, responses were captured verbatim.

3.2.2 Questionnaire

Questionnaire, that consists 31 items, was developed by the researcher in order to measure how often the instructors exercise the assessment formatively as an integral part of the teaching and learning process and as a result they would ensure and promote quality in the training undertaken at the Colleges. The questionnaire has five response options ranging from always to never. Scores were assigned for each response one to five points depending on the statement.

Furthermore, the questionnaire has four main parts. The first part of the questionnaire has six items and deals with the extent to which the teachers involve learners in their

learning. The second part with its eight items evaluates how modeling quality exercise in the learning process. The third part has eleven items and has to do with giving feedback. And the final part with its six items explores the practice of self assessment.

3.2.3 Focused Group Discussion

Focused Group Discussion was conducted with a group of participants among the students in order to extract the data on the exercise of the assessment from the students' side. Although originally it was intended to include the teachers in the FGD, due to the culture existed about the relationship between students and teachers, it is unlikely that the students would speak freely and openly how their teachers assess the students' performance. For such reason the original plan is abandoned and the FGD included the students alone.

3.2.4 Document Analysis

Document analysis is also one of the instruments that data were collected through closer scrutiny of course outlines, test and exam papers administered in the Colleges at different times.

3.3 Procedures

3.3.1 Pilot testing

Before the actual study was conducted a pilot study was done to test the suitability and clarity of the data collection tools. The test was conducted at Misrak Technical and Vocational College.

All in all eleven trainees and five trainers are involved in the tryout. Trainees and trainers selected for the pilot study were involved in the Focus Group Discussion and interview.

The purpose of testing the questionnaire and the interview questions were for the clarity of the items and the direction. Accordingly using the interview guide discussion was made with the trainers individually and the group discussion was also made with the trainees. In the process when confusion is manifested, some modifications were made both on the interview guide and questionnaire.

3.3.2 Tape recording

When both the interview and the Focus Group Discussion were conducted at the selected Colleges recording was made through the use of tape recorder.

3.4 Methods of data analysis

Both the quantitative and qualitative research methods had been employed to analyze and interpret the data gathered from the different sources. Comparative analysis is made using One Way ANOVA and compute the magnitude of the exercise of formative assessment. Based on the result obtained, interpretation is discussed.

With respect to qualitative aspect several efforts are made to analyze the data. The data collected through interview are transcribed, translated, categorized and coded into recognizable themes. Similarly, the data collected from Focused Group Discussion is also transcribed, translated and categorized.

Furthermore, the tests and examination papers were also analyzed in terms of their content. Percentages were used to analyze various practices made at the Colleges in terms of the use of formative assessment as an integral part of teaching learning process and in order to indicate the effort made to promote learning.

3.5. Ethics

For the purpose of anonymity, I did not attribute quotations to individuals. I also assured the interviewees and the participants of the Focused Group Discussion of anonymity prior to the collection of data.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

This section of the study presents and analyzes the data collected through questionnaires, interview, Focused Group Discussion and document review. The discussion is presented in three parts. The first part deals with the practice of formative assessment of instructors in the three Colleges. The second section discusses the data collected on the performance assessment undertaken on the practical aspect of the training conducted at the workshops of the three groups. The last section of the chapter deals with the aspect of continuous assessment practiced in the Colleges. In all section the quantitative data collected through the questionnaire and the descriptive data collected through the interview and Focused group Discussion are presented and discussed.

While a total of 26 questionnaires were distributed to the instructors working at three Colleges containing closed ended questions, only the 24 participants responded. Therefore, the analysis was made on the data collected from 24 (92.3 %) respondents.

TABLE 4.1: NUMBER OF RESPONDENTS IN THE COLLEGES

	Addis Ababa Tegbare id College	Necat Engineering College	Selam Technical and Vocational College	Total
Male	7	8	7	22
Female	1	0	1	2
Total	**8**	**8**	**8**	**24**

4.1 Overall Formative Assessment

All the thirty one questions appeared in the questionnaire are organized into four categories. They are Involving Learners in their Learning, Modeling Quality, Giving Feedback and Self Assessment. Latter in the discussion the practice of these four aspects of formative assessment among the Colleges discussed separately. However, at this it is necessary to discuss the overall practice of formative assessment in the Colleges.

Table 4.2 shows the descriptive statistics for the exercise of overall formative assessment measures for the private, Government and NGO Colleges. The exercise at the Government College is least, compared to the private and NGO Colleges. The high degree of practice is undertaken at the NGO College. The exercise at the private college is in between.

TABLE 4.2: MEAN AND STANDARD DEVIATION AND FORMATIVE ASSESSMENT AMONG THE COLLEGES

	N	Mean	Std. Deviation
Private	8	82.50	4.60
Government	8	76.75	4.62
NGO	8	93.00	2.33
Total	24	84.08	7.86

Table 4.3 shows a one way analyses of variance between the private, Government and NGO Colleges that has to do with the exercise of formative assessment. The table shows that F value, 33.99, is greater than F critical (i.e. $F_{(2,21)}$ at alpha 0.05 = 0.00).

This implies that there is a significant difference between the private, Government and NGO Colleges with respect to the exercise of formative assessment.

TABLE 4.3: ANALYSIS OF VARIANCE OF SCORE AND FORMATIVE ASSESSMENT AMONG THE COLLEGE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1086.33	2	543.167	33.999	.00
Within Groups	335.50	21	15.976		
Total	1421.83	23			

Table 4.4 shows the Post Hoc multiple comparisons between the private, Government and NGO Colleges with respect to the exercise of formative assessment. The table indicates that there are significant differences between all the three groups of participants, namely the private, Government and NGO Colleges.

TABLE 4.4: MULTIPLE COMPARISONS USING SCHEFFE METHOD AND FORMATIVE ASSESSMENT AMONG THE COLLEGES

College type		Mean Difference	Sig.
Private	Government	5.75(*)	.03
	NGO	-10.50(*)	.00
Government	Private	-5.75(*)	.03
	NGO	-16.25(*)	.00
NGO	Private	10.50(*)	.00
	Government	16.25(*)	.00

* The mean difference is significant at the .05 level.

Interviewees in the private and Government Colleges indicated that formative assessment is not practiced purposely and intentionally. It all depends on the choice of individual instructors, since some do formatively to some extent and others do not

have the notion at all. For instance, one of the respondents in the Government College said, "We don't do the assessments intentionally for formative purposes. We do them summative assessment, just evaluate and give scores." Students in Focused Group Discussion held at the Government College indicated, "The teachers do not observe and supervise our work while we do at the workshop. Because of the shortage of machineries, we use our spare time and do on our own. Our teachers can not be with us and observe and evaluate everyone's progress. The teachers see and evaluate the work after we finished the task and give points or marks that will be added to our final grade."

The students at the Government College also pointed out that the amount of time allocated for the apprenticeship is not practiced as stated in the curriculum. It is only during third year that students went out for the apprenticeship. They strongly indicated that the time was not enough and this affected the assessment that their experience of apprenticeship is not assessed properly.

Similarly, one interviewee at the private college said, "Formative assessment is not practiced properly in the College." It was also indicated by one respondent at the NGO College that it is difficult to figure out what proportion of assessment is done formatively at the NGO College.

However, the interviewees in all Colleges indicated that the information collected from the assessment help them to identify students whose performance is weak. The

instructors in the private and NGO Colleges claimed that, using the information, they take time and help those students. The NGO College further indicated that they use the information gleaned from the assessment as an input for further teaching in the subsequent lessons, and sometimes because of these input, the instructors change their teaching strategy.

Assessments, in all Colleges, were always done for the purpose of giving score to the student in comparison to the other students. Besides, all the scores students achieved through assessments, be it formative or summative, recorded and contribute to the students' final grade and eventually recorded and contribute to the students' final grade. The instructors decide on the promotion of individual student to the next level. It may be decided some students to repeat the course when their performance is poor. With respect to this the interviewee in the private College said, "We obtain information about the knowledge and skill level of our students and make decision about the promotion of individual students. It maybe decided some students to repeat the course."

The interviewees in the private and Government Colleges also raised a factor that negatively affects the formative assessment. They said that it is difficult to administer formative assessment when the class size is big. The respondent at the private college said:

> It is needed to exert some effort to help the students. Especially whenever the class size is big, TVET can not be effective at all. When the number of students is big, they can not use the machines effectively.

> The teachers also can not use the time effectively. Each student can not have time to exercise the learning, using different tools and machines. In such situation it is difficult to exercise formative assessment. Therefore, there should be minimum class size always in TVET.

This implies that the class size have indirect effect on the practice of assessment because instructors do not have time to inspect the work and the progress of each student, and students do not have enough opportunity and exposure to use the machines.

4.1.1 Involving Learners in the Learning

The first six questions of the first part of the questionnaire explore the strategy of involving learners in their learning by their teachers as a strategy of formative assessment.

The participants of the study were asked to indicate how often they tell their students what the teachers hope the students will learn and why they are learning it. In the private College only one (12.5 %) respondent claim that s/he does always, three (37.5 %) other respondents claim that they do usually, one (12.5 %) does sometimes and the rest of three (37.5 %) respondents said they do rarely.

Similarly, the participants at the Government College responded to the same questioned stated above as follow. One (12.5 %) claim that s/he does usually, three

(37.5 %) of them claim that they do sometimes and the rest four (50 %) instructors responded that they practice rarely.

Concerning the NGO College, one (12.5 %) claim that s/he does always, three (37.5 %) instructors exercise usually, one (12.5 %) other respondent claim to practice sometimes and the rest three (37.5 %) people do rarely.

The respondents were also asked to indicate their exercise of inviting students to build on their contribution. Four (50 %) participants of the private College made clear that they exercise usually, and two (25 %) participant sometimes and the other two (25 %) also do rarely. In the Government College two (25 %) claim to do usually, another two (25 %) participants sometimes and the rest four (50 %) rarely. One (12.5 %) participant in the NGO College claim to do always, four (50 %) of them exercise usually and the rest three (37.5 %) sometimes.

Concerning to the question asked about spurring students on by making encouraging specific, focused comments, three (37.5 %) participants of the private College responded that they do usually and the rest five (62.5 %) exercise sometimes. Two (25 %) participants of the Government College made clear that they do sometimes and the rest six (75 %) people do sometimes. From the NGO College one (12.5 %) does always, four (50 %) sometimes and the rest three (37 %) participants do sometimes.

Table 4.5 shows the descriptive statistics for the exercise of involving learners in the learning measures for the private, Government and NGO Colleges. It is indicated that the mean score of the NGO College is higher than the rest. This implies that there is a high degree of practice undertaken at the NGO College. The table also indicates that the exercise at the Government College is least, compared to the private and NGO Colleges, and the exercise at the private college is in between.

TABLE 4.5: MEAN AND STANDARD DEVIATION AND INVOLVING LEARNERS IN THE LEARNING AMONG THE COLLEGES

College Type	N	Mean	Std. Deviation
Private	8	19.38	2.56
Government	8	18.25	1.28
NGO	8	21.25	1.17
Total	24	19.63	2.12

Table 4.6 shows a one way analyses of variance between the private, Government and NGO Colleges with respect to the exercise of involving learners in the learning. The table shows that F value, 5.77, is greater than F critical (i.e. $F_{(2,21)}$ at alpha 0.05 = 0.01). This implies that there is a significant difference between the three groups of participants with respect to the exercise of involving learners in the learning.

TABLE 4.6: ANALYSIS OF VARIANCE OF SCORE AND INVOLVING LEARNERS IN THE LEARNING AMONG THE COLLEGES

Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	36.75	2	18.38	5.77	.01
Within Groups	66.88	21	3.19		
Total	103.63	23			

Table 4.7 shows the Post Hoc multiple comparisons between the private, Government and NGO Colleges with respect to the exercise of involving learners in the learning. The table indicates that there are significant differences in the exercise of students' involvement in the learning between the Government and NGO Colleges. However, there is no significant difference in the exercise between the private and Government Colleges and between the private and NGO Colleges.

TABLE 4.7: MULTIPLE COMPARISONS USING SCHEFFE METHOD AND INVOLVING LEARNERS IN THE LEARNING AMONG THE COLLEGS

College type		Mean Difference	Sig.
Private	Government	1.125	.465
	NGO	-1.875	.135
Government	Private	-1.125	.465
	NGO	-3.00(*)	.011
NGO	Private	1.88	.135
	Government	3.00(*)	.011

* The mean difference is significant at the .05 level.

Both the focused group discussion and interview indicated that students' involvement in all three groups is very limited. Students' contribution is invited in the project work when students are working in group. They help to each other and contribute their skills and come up with a product and a piece of work done. This is an opportunity among the students to learn one another. However the involvement in peer assessment is almost absent in all three groups.

Although some teachers ask their students that whether the tests and exams are tough or not, both the instructors and students in all three types of Colleges indicated that it is not customary for the students to express their opinion and challenge their teachers.

4.1.2 Modeling Quality

All of the questions appeared in the second part of the questionnaire examine the participants strategy of modeling quality work as a strategy of formative assessment.

The participants were asked to indicate their practice of choosing and showing learners examples of students' work for learning purpose. In the private College two (25 %) respondents expressed that they usually chose and show the quality work to the learners while the other five (62.5 %) do sometimes and one (12.5 %) other participant does rarely. Two (25 %) participants of the Government College indicated that they do usually, four (50 %) others do sometimes and the rest two (25 %) participants do rarely. Similarly, one (12.5 %) participant in the NGO group claim to do usually, five 62.5 %) exercise sometimes and two (25 %) others do rarely.

Table 4.8 shows the descriptive statistics for the exercise of modeling quality of the formative assessment measures for the private, Government and NGO Colleges. It is indicated that the mean score of the NGO College is higher than the two. The exercise at the Government College is least, compared to the private and NGO Colleges. The exercise at the private college is in between.

TABLE 4.8: MEAN AND STANDARD DEVIATION AND MODELING QUALITY AMONG THE COLLEGS

College type	N	Mean	Std. Deviation
private	8	20.63	1.92
Government	8	18.00	2.51
NGO	8	24.00	1.51
Total	24	20.88	3.17

Table 4.9 shows a one way analysis of variance between the private, Government and NGO Colleges with respect to the exercise of modeling quality. The table shows that F value, 17.699 is greater than F critical (i.e. $F_{(2,21)}$ at alpha 0.05 = 0.00). This indicates that there is significant difference between the three groups of the participants with respect to the exercise of modeling quality in formative assessment.

TABLE 4.9: ANALYSIS OF VARIANCE OF SCORE AND MODELING QUALITY

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	144.750	2	72.375	17.699	.000
Within Groups	85.875	21	4.089		
Total	230.625	23			

Table 4.10 shows the Post Hoc multiple comparisons between the private, Government and NGO Colleges with respect to the exercise of modeling quality. The table indicates that there are significant differences between the private and NGO Colleges and between the Government and NGO Colleges. However, there is no significant difference in the exercise of modeling quality between the private and NGO Colleges.

TABLE 4.10: MULTIPLE COMPARISONS USING SCHEFFE METHOD AND MODELING QUALITY AMONG THE COLLEGES

College type		Mean Difference	Sig.
private	Government		2.63
	NGO	.054	-3.38(*)
Government	private	.011	-2.63
	NGO	.054	-6.00 (*)
NGO	private	.000	3.38(*)
	Government	.011	6.00 (*)

* The mean difference is significant at the .05 level.

The focused group discussion pointed out that the participants of the NGO College indicated that sometimes a sort of model is presented as a demonstration of best work to the class and as an assessment. The participants made clear that particularly it was common during the first year of their study when students were beginners in the training. However the presences of such practices are not indicated in the other two groups.

4.1.3 Giving Feedback

Part three of the questionnaire deals with giving feedback. Eleven questions appeared in this section to explore the practice of the participants of the study with respect to giving feedback to their students as a strategy of formative assessment.

One important issue that the participants were asked to respond was about their practice of analyzing completed work to work out why a student has or has not achieved. In the private College two (25 %) participants responded that they do

sometimes and the rest six (75 %) exercise this at a rare case. Three (37.5) respondents in the Government College claim that they do sometimes and the rest five (62.5 %) indicated they do rarely. Similarly, one (12.5 %) participant of the NGO College said to do the work usually, five (62.5 %) participants of the group indicated that they do sometimes and the rest two (25 %) people do such practice rarely.

Another important issue that has to do with giving feedback and the participants were asked to respond was telling students what they have achieved with specific reference to their learning. Two (25 %) participants of private College indicated that they do such a work usually and the rest six (75 %) sometimes. The numbers of participants responded usually and sometimes in the Government College are the same with the previous group. One (12.5%) respondent in the NGO College responded usually, the other five (62.5 %) claim to do sometimes and the rest two (25 %) of them indicated that they do rarely.

The other crucial issue raised to the respondent to react was their practice of writing an evaluative note on a learner's work for the learner. One (12.5 %) respondent from the private College and two (25 %) respondents of the Government College indicated that they have never done this. The big proportion of the numbers indicated that they do at a rare case: six (75 %) from the private, four (50 %) from the Government and five (62.5 %) from the NGO. And finally one (12.5 %) respondent of the private College indicated that s/he practiced sometimes, two (25 %) of the Government college and three (37.5 %) of the NGO Colleges do the same.

Table 4.11 shows the descriptive statistics for the exercise of giving feedback of the formative assessment measures for the private, Government and NGO Colleges. Here again indicated that the mean score of the NGO College is higher than the two. The exercise at the Government College is least, compared to the private and NGO Colleges. The exercise at the private college is in between.

TABLE 4.11: MEAN AND STANDARD DEVIATION AND GIVING FEEDBACK AMONG THE COLLEGES

College type	N	Mean	Std. Deviation
Private	8	31.75	1.83
Government	8	30.38	2.50
NGO	8	33.26	1.04
Total	24	31.79	2.17

Table 4.12 shows a one way analysis of variance between the private, Government and NGO Colleges with respect to the exercise of giving feedback in formative assessment. The table indicate that F value, 4.64, is greater than F critical (i.e. $F_{(2,21)}$ at alpha 0.05 = 0.00). This indicates that there is significant difference between the three groups of the participants with respect to the exercise of giving feedback in formative assessment.

Table 4.12: ANALYSIS OF VARIANCE OF SCORE AND GIVING FEEDBACK AMONG THE COLLEGES

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	33.08	2	16.54	4.64	.021
Within Groups	74.88	21	3.57		
Total	107.96	23			

Table 4.13 shows the Post Hoc multiple comparisons between the private, Government and NGO Colleges with respect to the exercise of giving feedback of the formative assessment. The table indicates that there is significant difference between the NGO and the Government Colleges. However, there are no significant differences in the exercise between the private and NGO Colleges and private and Government Colleges.

TABLE 4:13: MULTIPLE COMPARISONS USING SCHEFFE METHOD AND GIVING FEEDBACK AMONG THE COLLEGES

College type		Mean Difference	Sig.
Private	Government	1.38	.364
	NGO	-1.50	.304
Government	Private	-1.38	.364
	NGO	-2.88(*)	.021
NGO	Private	1.50	.304
	Government	2.88(*)	.021

* The mean difference is significant at the .05 level.

Both the interview and the discussion indicate that some participants, teachers, in the Government group give only general and short comments. Students are not given specific remarks for learning. The comments are very short. They are not given feedback at every piece of the assessment. Usually there is no any feedback on the paper-and-pencil test. They don't clearly know the marks given to every project or mid term and final exam. Sometimes they only see their final grade on the notice board at the end of the semester. Here is how the students explained the practice of feedback in the Focused Group Discussion:

> The teachers do not tell us where we are strong and where we are weak. Usually, they only tell us the marks we obtain in the test. Sometimes they write only short comments, such as "Well done," or "Keep it up," or "Not good work." It might be because of the shortage of time. The number of students in the class is big and the teachers do not have time to discuss the strength and the weaknesses of every student both at the classroom test and projects at the workshop. There are times when we only see our final grades posted on the notice board at the end of the semester. We don't clearly know the marks given to every project or mid term and final exam. We are not given any feedback at every piece of the assessment.

The participants of the study in the private College indicated that the practice is similar to the Government College. Some instructors do not comment any thing other than the mark they gave to each student even when the majority of the students' score is very low in the assessment. Sometimes it is only when students are eager to discover their weakness and ask their teachers that they explain why the students couldn't find the correct answer.

Some instructors in both groups, the government and private Colleges, ask students' opinion whether the exam is difficult or not. Beyond this students are not invited to express their opinion. It is indicated that it is not customary to express students' opinion. The instructor in the private College said, "It is not common to give feedback to the students after the assessment. Sometimes we only write some words to encourage them. Sometimes we ask the students personally about their problem. We try to give them advice to those students whose performance is weak."

The Focused Group Discussion indicated that the reason is the shortage of time. The class size is big and the teachers do not have time to discuss the strength and the weaknesses of every student both at the classroom test and projects at the workshop.

The participants of the Focused Group Discussion in the NGO group indicated similarly that they are given marks or points for the work they did. Sometimes the teachers inform them that their performance is weak or good. However, specific comments that refer to learning are not exercised here too. The positive aspect is that at times comparison is made to the students' previous work. Students said, "We are given marks or points for the work we did. Sometimes the teachers tell us that our performance is weak or good. … And comparison is made to our previous work. The teacher comments that either we are making progress or performing poor as compared to the previous work."

4.1.4 Self Assessment

The last part of the questionnaire, where six questions appeared, search for the practice of self assessment as a strategy of formative assessment.

One of the issues that the participants of the study were asked to respond was providing time for learners to reflect and talk about their learning. One (12.5 %) respondent of the private College indicated that s/he do sometimes, whereas other six (75 %) participants made clear that they exercise rarely and one (12.5 5) other

participant indicated that s/he has never done at all. With regard to the Government College five (62.5 %) respondents claim that they exercise rarely and the rest three (37.5 %) respondents have nothing to do with self assessment. While one (12.5 %) respondent of the NGO College expressed that s/he has never exercise self assessment, while the other six (75 %) and one (12.5 5) participant claimed to do rarely and sometimes respectively.

Table 4.14 shows the descriptive statistics for the exercise of self assessment of formative assessment measures for the private, Government and NGO Colleges. The exercise at the Government College is least, compared to the private and NGO Colleges. The high degree of practice is undertaken at the NGO College. The exercise at the private college is in between.

TABLE 4.14: MEAN AND STANDARD DEVIATION AND SELF ASSESSMENT AMONG THE COLLEGES

	N	Mean	Std. Deviation
Private	8	10.75	1.04
Government	8	10.13	1.13
NGO	8	14.50	.53
Total	24	11.79	2.17

Table 4.15 shows a one way analyses of variance between the private, Government and NGO Colleges with respect to the exercise of self assessment in the formative assessment. The table indicates that F value, 4.64, is greater than F critical (i.e. $F_{(2,21)}$ at alpha 0.05 = 0.00). This indicates that there is a significant difference between the three groups of the participants with respect the exercise of self assessment.

TABLE 4.15: ANALISYS OF VARIANCE OF SCORE AND SELF ASSESSMENT AMONG THE COLLEGES

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	89.58	2	44.79	51.19	.00
Within Groups	18.38	21	.88		
Total	107.96	23			

Table 4.16 shows the Post Hoc multiple comparisons between the private, Government and NGO Colleges with respect to the exercise of self assessment in formative assessment. The table indicates that there are significant differences between private and NGO Colleges and between Government and NGO Colleges. However, there is no significant difference in the exercise between the private and Government Colleges.

TABLE 4.16: MULTIPLE COMPARISONS USING SCHEFFE METHOD AND SELF ASSESSMENT AMONG THE COLLEGES

College type		Mean Difference	Sig.
Private	Government	.63	.42
	NGO	-3.75(*)	.00
Government	Private	-.63	.42
	NGO	-4.38(*)	.00
NGO	Private	3.75(*)	.00
	Government	4.38(*)	.00

* The mean difference is significant at the .05 level.

The data from the focused group discussion indicate that the participants of the NGO group pointed out that they are expected to write reports [portfolio] on their performance of the week and report them to their instructors at the end of the week.

They do the same every week. Participants also indicated that such exercises help them to evaluate themselves and trace out their progress. The other two groups have no such experiences. The participants explained the practice in this way:

> We write reports [portfolio] on our performance of the week and report them to our instructors while we take tests or at the beginning of the upcoming week. We do the same every week.

4.2 Performance Assessment

The participants of the Focused Group Discussion indicated that in the Government College they are not given specific and detail criteria for the assessment of every piece of work and project. However, the students claimed that they knew how and when their performance is assessed.

On the other hand, the participants of the private College remarked that the criterions are not clearly stated and the performance taking place at the workshop is not reliable and they even doubt the capability of the assistants at the workshop in assessing students' performance. The data indicated that the formative elements of the assessment are so minimal.

The participants of the NGO group indicated that the criteria are clear and specific to some extent. The course on "Welding" is mentioned as an example and the criteria for the performance test in this course is known to them and their work is evaluated in some specific aspects as described follow:

> We know the criteria. For instance, in the performance test of the Welding course, we knew that our work is evaluated in terms of its height, width, quality, safety, neatness, handling of tools, etc.

The practical assessment or the performance assessment that is undertaken at the workshops, which some of the participants, both the teachers and students claim to have 70 per cent of the total share of the assessment, is not administered in a written form in all three Colleges. Instructors, clearly declared that the instruction is always given to the student orally and in some cases students are given the design in a paper so that they read, interpret and work out the given work piece. All the Colleges do not have any written copy of record of the instructions given in the workshop for the purpose of assessment. Instructors said that it is not customary at all to prepare instructions in a written form at the performance assessment undertaken at the workshops.

In addition, with respect to the assessment on the students' performance and practical skills, participants of FGD in the private and Government College indicated that they are mainly given projects to be done in group. It was only at rare cases that they are given projects to work out independently. The participants ascribed the reason to the shortage of machines and tools at the workshop. They said that there is a high shortage of machines and tools at every workshop. They added that because of this, many times they do only a small work piece rather than a complete project. They indicated that their exposure to some machinery is very much limited.

The participants of the FGD in the private college explain that in the cases of some advanced courses, they do not have machines at all in the College. They added "In such cases the whole assessment of the course is on the theoretical aspect of the course. 100 % of the weight is given to paper-and-pencil test."

The instructors at the private and the Government College shared the same concern. The interviewee said "The shortage of equipments and machineries affects indirectly the assessment practice. There has to be a better proportion between the number of machines and the number of students. Without this students can not be well versed with the theory and can not be effective in their skill. In such situation it is difficult to give effective training and practice performance assessment properly and promote quality."

Moreover, the participants of FGD in the Government College indicated that they tempted to focus only on the theoretical part of the courses for the reason that they can easily earn good mark at the workshop since their project is given in group and all the members are given equal points for the work done in group. They even indicated that instructors at the workshop do not assessed students' work carefully and any effort is rewarded easily. It is only in the area of theoretical knowledge, where students are assessed with paper-and-pencil test, compete to get a better grade. For this reason they rather give attention to such tests than the skill assessment undertaken at the workshops.

Some participants, students, even indicated that they sometimes feel that they can have practical experience in the world of work, and the College is where they are equipped with theoretical knowledge. Students made clear that even some of their teachers tend to feel the same way.

This implies that shortage of machinery and equipments in the workshop have indirect effect on the practice of assessment because instructors do not have time to inspect the performance of each student, and students do not have enough opportunity and exposure to use the machines. And the instructors are also inclined to depend upon paper-and-pencil test and evaluate their students' knowledge than to use performance assessment to evaluate the students' skill achievement.

The performance assessment at the NGO College has no such problems compared to the other two groups. They said that at times they do the projects in group and other times individually. Besides, the workshops are well furnished with all the necessary machinery and equipments. Furthermore, the training is integrated with production; the students have opportunities to participate in the production and learn a lot in practice and improve their skill.

4.3 Continuous Assessment

As the data from the interview and the discussion indicated that participants of all the three groups are happy with the continuous assessment and indicated that it stimulate

them to work hard and improve their performance. Hence, continuous assessment promoted students' learning. The participant of FGD in the Government College said,

> I think continuous assessment is good. Some of us were weak academically while we were in high school. However, here we have improved our performance. I think it is because of the type of the assessment practiced here. We are assessed at every duty. This promotes our learning. We try to read and be ready for the tests and exams every time.

All the three groups remarked that, generally speaking, they are assessed in two major ways. The theoretical aspect of the course is assessed through quizzes and exams. They are given quizzes at the end of every duty or chapters and the final exams are given on many of the major courses. The participants also indicated that exams and quizzes on the theoretical part of the course usually have 25 to 30 % of the total share of the course assessment.

On the practical aspect, participants of both the Government and private Colleges pointed out that they are mainly given projects to be done in group. It was only at a rare case that they are given projects to do independently. The reason at both groups is the shortage of machines and tools at the workshop. There is a high shortage of machines and tools at every workshop. Because of this many times they only do a small work piece. They indicated that they do not do a complete project; and as the result their exposure to some of the machines is very much limited. Indicate

The same groups, government and private, pointed out that they usually do two work pieces in a course. In the case of some advanced courses, the machines are not

available in the Colleges and participants pointed out that they do not have any practical work or experience with the machines. They said that their knowledge about some of the machines is only from the books. This indirectly affected the assessment process. In such cases more than 70 per cent, sometimes even 100 per cent of the weight of the assessment of the course is on the theoretical aspect of the course. Students are evaluated through paper-and-pencil test alone.

Besides, usually when the course material is very short students are given only final exam and the assessment in such cases is not continuous one. Students' achievement is evaluated with a single exam. However it all depends on the preferences of the individual teachers.

Because of the shortage of machineries, instructors can not supervise students work and evaluate their progress while students use their spare time to work at the workshop. The teachers see and evaluate the work after they finished the task, and give marks that will be added to their final grade.

Participants in the NGO College made clear that they are given a projects to do mainly individually and sometimes in group. Most of the projects that were given during the first year participants' training were very short ones. They usually complete them in three days. The instructors were observing and supervising their progress as they do in the workshop and give marks or points for every piece of works.

The participants of the private College indicated that the exams do not evaluate their achievement reliably. In the case of multiple choice and true or false questions, which appear many times in the exam, a student just can choose one of the choices as long as the choices are given. Sometimes there are other external factor that students can score well in the assessment, like copy answers from others. They indicate that the type of question that really evaluates is a subjective one that students have to be asked to explain what they know about the issue.

Both group of participants at the private and the NGO indicated that they are sometimes unable to understand the questions appeared in the exam and tests due to their limitations with English language. They indicated that they have problem with comprehending some words and phrase.

The desk review on the exam papers in all three groups indicated that the objective questions, such as multiple choice and true or false questions share 50 to 75 per cent of the total weight of the exam.

CHAPTER FIVE

SUMMARY AND CONCLUSION

The purpose and the central research question to this study was to find out the practice of the current assessment in the Government, private and NGO TVET Colleges of Addis Ababa and evaluate whether the practice contribute for the promotion of quality education.

One positive practice in the Colleges that facilitate the assessment practice is that students' achievement in the courses is evaluated in terms of their theoretical knowledge and the practical skills. The literature indicated the same that assessment of students in technical programmes usually covers theory and practical aspects of the subject. Although the proportion of the evaluation shared between the theory and the practice vary from one course to the other based on the preference of one instructor from the other, and also from one College to the other. Such practice is exercised in all major and supportive courses given in all Colleges.

However, it is observed in the study that the development of students' practical skills directly and the assessment of their performance indirectly affected by the absence of machineries and equipments and by a relatively bigger class size both in the Government and private Colleges. These two factors affected both the teaching-learning process and the assessment negatively. This is one of the areas that needs further study with respect to TVET.

The other positive practice conducted at TVET in relation to assessment is undertaken in a continuous manner. Students are given projects, tests, exams and rarely asked to write research papers. These works are given at different times in the semester. This has promoted students motivation, diligence and achievement in the training.

Some of the weak areas of the practice of assessment are the following. First, the formative assessment practiced at the workshops has no detailed criteria and students' achievement is not evaluated against prescribed learning outcomes. It is discussed in chapter two, the review of related literature that in vocational education assessment needs to be thought of not as a comparison between individuals, but as "the process of collecting evidence and making judgments on the extent and nature of progress towards the performance requirements set out in a standard, or a learning outcome" (Hagar et al, 1994). Particularly in the private and Government Colleges there is no clear requirements as to how students' performance is assessed in the workshops. In relation to this the supervision made by the instructors on the performance assessment in the private and Government Colleges is minimal. It is only their finished work that is evaluated and instructors are unable give feedback on every step that the students were undergoing in doing the project. Furthermore, since performance assessment is not given in a written form in all the Colleges, it is unlikely to conclude that objective evaluation is undertaken on students' performance. It rather open to decide and give marks based on one's own perception and good will.

Second, there is no meaningful involvement of learners in the learning. Students do not express their opinion on the assessment in all the Colleges. They are not invited to build on and contribute in the learning through peer assessment and are not encouraged to make specific and focused comments. However, it does not mean that they are completely passive in the teaching learning process. One positive aspect of the assessment process is that students are given assignments, like projects, to be done in groups. This encourages students to help another learner and promote and stimulate quality work.

Third, self assessment is practiced at the NGO College alone. The NGO College is significantly different from the other two in this aspect. Such practice helps students at the NGO College to evaluate their own progress and promote towards quality work.

Fourth, although group work among the students has its own benefit as stated above, in relation to the assessment is not found to be authentic and genuine. Students' motivation for quality work in the performance assessment is low in both the private and Government Colleges. This is because the group work is usually done in the absence of the instructors' supervision and the group members are not equally contribute to the work. With the efforts made by only some members of the group that all the members get marks easily. This led students in the Government College to give weight to the theoretical aspect of the course and to the paper-and–pencil test that a lower proportion is given in the percentage wise in the assessment.

In relation to this the test and exam papers reviewed in the study are more inclined to focus on the cognitive aspect of learning. The bigger proportion of the type of the questions appeared in the paper-and-pencil tests are leading to an over-emphasis on memory and lower-level skills. Such nature of the assessment tends lead the students to a learning approach, that is based on rote memorization and encourage a narrow and superficial form of learning.

One of the corollary questions of the study was to figure out whether there is a significant difference among the three Colleges with respect to the practice of students' assessment formatively as an input and enhance quality learning or not. The quantitative data clearly show that the formative evaluation that contributes for the enhancement of quality learning is relatively better in the NGO Collage as opposed to the other two categories.

Therefore the data collected, particularly in the private and Government Colleges, do not indicate that assessments undertaken are not promoting quality learning satisfactorily.

Recommendations

One of the other corollary questions of the study is to present recommendations for the implementation of improvement of the quality of current assessment practice in TVET. As a result of the study the researcher recommends the following.

- Assessment primarily needs to be thought of not as a comparison between individuals. Rather clear and detailed criteria to every task at every assessment procedure needs to be developed and set out standard by the Colleges so that evaluators collect evidence and make judgments on the extent and nature of progress towards the performance requirements objectively.

- In addition the formative assessment practiced at the workshops need to have detailed criteria and students' achievement is needed to be evaluated against prescribed learning outcomes. Such practice will help to monitor and evaluate students' progress towards the preset objectives or outcomes of a given course.

- Besides, the performance assessment needs to be given and recorded in a written form that shows the students what to achieve in the training and eventually in the assessment.

- Assessments need to be done formatively with clear purpose and intention so that instructors understand the strength, the weaknesses and progress of their students and adjust their teaching accordingly.

- Students are needed to have involvement in the learning specifically in peer assessment and able to express their opinion in the assessment.

- Students need more of exposure to the practical aspect of the training. This includes that students should have enough exposure to the machines and equipments in the workshop and spends hours using these equipments. This gives rise to a better skill development and an indirect contribution of the proper assessment of the students' achievement and ensures quality training. This also includes the fact that the Colleges are needed to have the necessary machineries and tools for the training.

- The less class size is also another important factor that has indirect and positive effect the way the instructor deals with the student in the assessment. It is only when the class size is less that the instructor inspects the achievement and the progress of the students.

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Appendix 1

GENERAL METAL FABRICATION AND ASSEMBLY

MODULES

A. MAIN MODULES	
1	Manual Metal Arc Welding
2	Oxy-acetylene Welding
3	Resistance Welding
4	Weld using Gas Metal Arc Welding Process (GMAW)
5	Weld using Gas Tungsten Arc Welding Process (GTAW)
6	Plasma Arc Welding
7	Submerged Press Welding
8	Sheet Metal Cutting & Fastening
9	Advanced Press Operations
10	Advanced Press Operations
11	Foundry
12	Production Assembly
B. MAIN MODULES	
1	Work Ethics
2	Technical Drawing
3	Bench Work
4	Basic Electricity
5	Machine Drawing
6	Metallurgy
7	Mechanics
8	Hydraulic and Pneumatics
9	Basic Wood work
10	Auto Cad
11	Quality control & Inspection
12	Basic Machine Operation
C. COMMON MODULES	
1	Mathematics
2	English
3	Civics
4	Introduction to IT & Basic Application
5	Entrepreneurship

Appendix 2

ADDIS ABAB UNIVERSITY
SCHOOL OF GRADUATE STUDIES
INSTITUTE OF EDUCATIONAL RESEARCH

Assessment Mechanism of Students' performance toward Quality Promotion in TVET: Comparative Study between Government, Private and NGO Colleges

Interview Questions

1. What is the main ways in which learners in your College are assessed? Do you plan to keep it this way?
2. What type of feedback and information do you give students about assessment? How and when is this information given?
3. What proportion of assessment is formative, and how are the results of the assessments recorded?
4. How do you use the information gleaned from these assessments? What sort of review or reflection processes do you have on assessment? Are these useful?
5. Do you ever ask students their opinions about assessment? If so, what do you do with the information?
6. Do you have anything to do with continuous assessment?
7. Do you have anything to do with performance assessment?
8. What do you do with the results of the assessment?
9. Have you any example of conflict? What is the policy about conflicts on assessment?
10. How do you try to ensure that you and your colleagues are producing quality in your work?

Appendix 3

ADDIS ABAB UNIVERSITY

SCHOOL OF GRADUATE STUDIES

INSTITUTE OF EDUCATIONAL RESEARCH

Assessment Mechanism of Students' Performance toward Quality Promotion in TVET: Comparative Study between Government, Private and NGO Colleges

Questions for Focused Group Discussion

1. Please describe main ways in which you are assessed? Please give some details.
2. Do you believe that the assessment accurately reflect what you have learned and what you can do in the training you obtained?
3. Do you consider the assessment process in the college is fair?

4. Are you informed about how you will be assessed? If so, how? If not have you ever asked your lecturers for this information? (note- looking for information on criteria, dates and times, methods)
5. What type of feedback (marks, comments) do you get from your teachers? How do you use this feedback? Can you tell me an example of an assessment that has useful feedback for you?
6. Are you ever asked your opinions about assessment? If so, in what way?
7. What do you value about the assessment?
8. If you were to change one thing about assessment in your College, what would that be?
9. What do you think of continuous assessment done at your College?
10. What would/could you do if you had a problem with assessment?
11. What must be done to improve the quality of assessment in your College?

Appendix 4

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
INSTITUTE OF EDUCATIONAL RESEARCH

Assessment Mechanism of Students' Performance toward Quality Promotion in TVET: Comparative Study between Government, Private and NGO Colleges

Formative Assessment
Questionnaire for Lecturers

The purpose of this questionnaire is to collect data about the practice of assessment of students in TVET. Please indicate your response to each item by writing the number in the second column that most closely matches your opinion to each item. Please respond ***honestly*** and ***frankly*** as the information obtained confidential and be used only for research purposes.

Personal data:

I have been teaching for 0 – 2 yrs _____, 2 – 10 yrs _____, 10 + yrs _____.

Position in college: _____ Sector: _____.

The subject/course I am teaching: _____.

		Please write the number that represents how often you ***use*** the strategies: 1 = Always 2 = Usually 3 = Sometimes 4 = Rarely 5 = Never
	Involving learners in their learning	
1	Telling students what you hope they will learn and (sometimes) why they are learning it.	
2	Inviting and building on students' contribution.	
3	Setting up tasks designed to enable students to 'get on' by themselves.	
4	Getting learners to collaborate in groups a joint outcome.	

		1 = Always 2 = Usually 3 = Sometimes 4 = Rarely 5 = Never
5	Spurring pupils on by making encouraging but specific, focused comments, e.g they are on the right lines and in what way:	
6	Getting a learner to help another learner.	
	Modeling quality	
1	Choosing and showing learners examples of students' work for learning purpose.	
2	Getting a student to show you how s/he had gone about sometimes so you can diagnose error.	
3	Getting a student to demonstrate to the class how s/he did something	
4	Getting student to suggest ways something can be improved	
5	Providing formats and structures for writing or recording findings.	
6	Showing students a range of other students' work to make judgment about performance.	
7	Showing students a range of other students' work to make a judgment about progress.	
8	Showing students a range of others student's work to model (or exemplify) criteria.	
	Giving feedback	
1	Using probing questions to diagnose the extent of the students' learning	
2	Analyzing completed work to work out why a student has or has not achieved.	
3	Giving rewards only when achievement is satisfactory for that student (with specific comments referring to student's success)	
4	Expressing approval when achievement is satisfactory.	
5	Expressing disapproval when achievement is unsatisfactory in specific terms which refer to learning.	
6	Making a conscious decision to avoid saying a student is wrong.	

		1 = Always 2 = Usually 3 = Sometimes 4 = Rarely 5 = Never
	Telling students what they have achieved with specific reference to their learning.	
	Telling students what they have not achieved with specific reference to their learning.	
	Describing why an answer is correct.	
0	Specifying a better/different way of doing something.	
1	Writing an evaluative note on a learner's work for the learner	
	Self Assessment	
	Getting learners to suggest ways they can improve	
	Negotiating a rout to improve something.	
	Providing time for learners to reflect and talk about their learning.	
	Getting learners to review their own work and record their progress.	
	Helping students to understand their achievements and know what they need to do next to make progress.	
	Providing opportunities for students to assess their own and one another's work and give feedback to one another.	

DECLARATION

I the undersigned, declared that this thesis is my work and that all sources of materials used for the thesis have dully acknowledged.

Name Aklilu Bekele Balcha

Signature Aklilu Bekele Balcha

June 2008