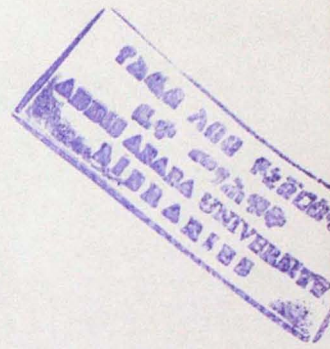


ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES



MAJOR FACTORS AFFECTING THE QUALITY OF
TECHNICAL AND VOCATIONAL EDUCATION AND
TRAINING PROGRAMS IN SELECTED INSTITUTIONS OF
OROMIA AND SNNP REGIONS

BY

TEKLU TAFASE OLKABA

JUNE 2009

ADDIS ABABA

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES



MAJOR FACTORS AFFECTING THE QUALITY OF
TECHNICAL AND VOCATIONAL EDUCATION AND
TRAINING PROGRAMS IN SELECTED INSTITUTIONS OF
OROMIA AND SNNP REGIONS

BY

TEKLU TAFASE OLKABA

JUNE 2009

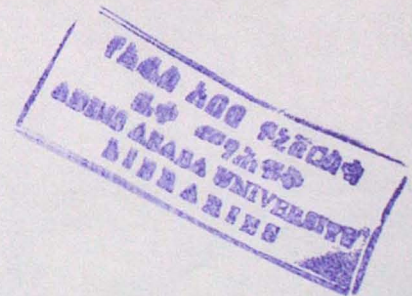
ADDIS ABABA

MAJOR FACTORS AFFECTING THE QUALITY OF TECHNICAL AND
VOCATIONAL EDUCATION AND TRAINING PROGRAMS IN SELECTED
INSTITUTIONS OF OROMIA AND SNNP REGIONS

By

TEKLU TAFASE OLKABA

A Thesis Submitted to the School of Graduate Studies of Addis
Ababa University in Partial Fulfilment of the Requirements for the
Degree of Masters of Arts in Educational Research and
Development



JUNE 2009

ADDIS ABABA

MAJOR FACTORS AFFECTING THE QUALITY OF TECHNICAL AND
VOCATIONAL EDUCATION AND TRAINING PROGRAMS IN SELECTED
INSTITUTIONS OF OROMIA AND SNNP REGIONS

By

TEKLU TAFASE OLKABA

A Thesis Submitted to the School of Graduate Studies of Addis
Ababa University in Partial Fulfilment of the Requirements for
the Degree of Masters of Arts in Educational Research and
Development

JUNE 2009

ADDIS ABABA

MAJOR FACTORS AFFECTING THE QUALITY OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING PROGRAMS IN SELECTED INSTITUTIONS OF OROMIA AND SNNP REGIONS

TEKLU TAFASE OLKABA



Approved by the Board of Examiners

Wanna Leka

Advisor

[Signature]

Signature

02/07/2009

Date

Desalegn Chakiso

Internal Examiner

[Signature]

Signature

02/07/09

Date

Gitma Zewde

External Examiner

Gitma Z.

Signature

03/07/09

Date

Gitma Lemma

Chairperson, Graduate Committee



Signature

09/07/09

Date

Acknowledgements



I would like to express my gratitude to those persons and institutions involved in this particular study.

First and for the most, I am honored and indebted to my research advisor Dr. Wanna Leka for his unreserved guidance, commitments and inspiration throughout the work of this thesis. I am greatly indebted to Dr. Wossenu Yimam and Dr. Desalegn Chalchisa for their constructive comments on the content validity of the research instruments. I am also deeply thankful to all staff in the Institute of Educational Research for their lovely relation during my stay in the Institute

My heartfelt gratitude is extended to Soddo, Hawwasa, Ambo and Nekampite TVET instructors, students and top managements involved in this study from their heart with respectful cooperation and responding the questionnaires properly and timely in their respective institutions.

I am especially indebted to the Ministry of Agriculture and Rural Development; Agricultural TVET Coordination Office, for their financial support both for the research and my salary without which this thesis would not have been accomplished.

My special honored and heartfelt gratitude indebted to Mr. Goaner Yer Zor; the Deputy Chief Administrator of Gambella Regional State, for his encouragement and recognition during my admission. My heartfelt gratitude is extended to Mr. Jakob Nhial Lul and Mr. Teshome Yetbarek Baye; Dean and Administrative Vice Dean of Gambella Agriculture TVET College for their constant encouragement and recognition starting from the admission up to the completion of this thesis, without whose assistance this study would not have been completed.

I am also grateful to w/o Hanna Alebachew for her valuable assistance, warm friendship, encouragement and support until the completion of my study. My gratitude also goes to Ato Amsalu Gobena for his valuable assistance in arranging my monthly salary. The academic staff of Gambella Agricultural College: Befakadu Bayisa, Tamirat Kassa, Abebe Lega, Tariku G/Tsedik, Ashenafi Assefa, Debebe Worku and Elias Jemal are specially acknowledged.

My special and heartfelt gratitude goes to w/t Bijigdu Kebede for her generous support, love and encouragements.

Last but not least, my special thanks are due to my Father Tafase Olkaba and Mother Shashwork Negasa whose values and faith supported me throughout my study levels.

Abstract

The main objective of this study is to investigate major factors affecting the quality of TVET program. The study was aimed at some aspects the quality of the program at input and process level. Descriptive survey method was employed to carry out the study. Four TVET institutes namely Soddo, Hawwasa, Ambo and Nekampte were selected from Oromia and SNNP regions purposely and the top managements, instructors and students of each institute were selected by stratified sampling techniques. The study was carried out by employing closed-ended questionnaires addressing issues related to input and process aspects of the program. In this case, institutional managements, educational facilities, streaming process of students to TVET program, the teaching- learning process and students' performance evaluation, competences of instructors and students; and institutional quality assurances practices were the major study area thoroughly emphasized. These variables were analyzed with ANOVA, t-test and chi-square tests. The results of the study indicate that lack of relevant training facilities and the poor quality of students joining TVET are the most significant factors affecting the quality of program. Instructors' incompetence's, lack of policy and associate procedures, institutional management incompetence are considered as moderately affecting the quality of TVET program.

Abstract

The main objective of this study is to investigate major factors affecting the quality of TVET program. The study was aimed at some aspects the quality of the program at input and process level. Descriptive survey method was employed to carry out the study. Four TVET institutes namely Soddo, Hawwasa, Ambo and Nekampite were selected from Oromia and SNNP regions purposely and the top managements, instructors and students of each institute were selected by stratified sampling techniques. The study was carried out by employing closed-ended questionnaires addressing issues related to input and process aspects of the program. In this case, institutional managements, educational facilities, streaming process of students to TVET program, the teaching- learning process and students' performance evaluation, competences of instructors and students; and institutional quality assurances practices were the major study area thoroughly emphasized. These variables were analyzed with ANOVA, t-test and chi-square tests. The results of the study indicate that lack of relevant training facilities and the poor quality of students joining TVET are the most significant factors affecting the quality of program. Instructors' incompetence's, lack of policy and associate procedures, institutional management incompetence are considered as moderately affecting the quality of TVET program.

Table of Contents

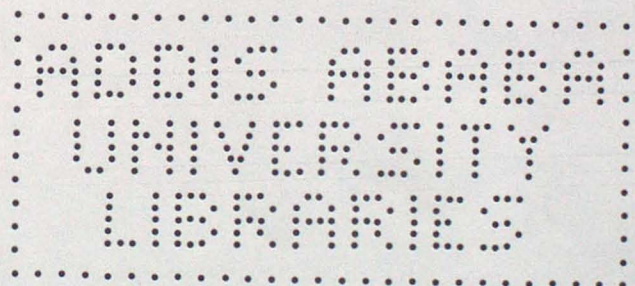
ADDIS ABABA UNIVERSITY
EDUCATION LIBRARY

List of Tables	iv
Acronyms and Abbreviations	vi
CHAPTER1: INTRODUCTION.....	1
1.1 Background of the Study	1
1.2 Statement of the Problem	5
1.3 Objectives of the Study.....	6
1.4 Significance of the Study	7
1.5 Delimitation of the Study	7
1.6 Limitations of the Study.....	8
1.7 Definition of Terms	8
1.8 Organization of the Study	9
CHAPTER 2: REVIEW OF RELATED LITERATURE	10
2.1 The Concepts of Quality and Quality Standard.....	10
2.2 Educational Quality Indicators	18
2.3 Input Factors that Affect Quality of Education	22
2.4 Process Factors that Affect the Quality of Education	30
2.5 Summary of the Review of Related Literature.....	36
CHAPTER 3: RESEARCH METHODS.....	38
3.1 Design of the Study.....	38
3.2 Participants	38
3.3. Instruments	39
3.4 Procedures.....	40
3.5. Methods of Data Analysis	42
CHAPTER 4: RESULTS AND DISCUSSIONS.....	43
4.1 Results	44
4.2 Discussions	80
CHAPTER FIVE: Summary, Conclusion and Recommendations.....	93
5.1. Summary of the Major Findings	93
5.2 Conclusions.....	98
5.3 Recommendation	99
References.....	102
Appendices.....	107

List of Tables

Table 1: Participants by Institutes	39
Table 2: Respondents by Regions and Institutes	44
Table 3: Respondents by Qualifications, Experience and Year Levels	45
Table 4: Descriptive Statistics of Institutional Management Issues by institutes	46
Table 5: Summary of ANOVA of Institutional Management Issues by Institutes	47
Table 6: Post - hoc Tests of Institutional Management Issues by Institute	48
Table 7: Descriptive Statistics of Institutional Management Issues by Respondents	49
Table 8: Summary of ANOVA of Institutional Management Issues by Respondents	50
Table 9 : Post -hoc Tests of Institutional Management Issues by Respondents	50
Table 10: Descriptive Statistics of Educational Facility Issues by Institutes	51
Table 11: Summary of ANOVA of Educational Facility Issues by Institutes	52
Table 12. Post hoc Tests of Educational Facility Issues by Institutes	53
Table 13: Descriptive Statistics of Educational Facility Issues by Respondents	54
Table 14: Summary of ANOVA of Educational Facility Issues by Respondents.....	54
Table 15. Post -hoc Tests of Educational Facilities Issues by Respondents.....	55
Table 16: Descriptive Statistics of Streaming Procedures by Institutes.....	56
Table 17: Summary of ANOVA of Streaming Procedures by Institutes.....	57
Table 18: Descriptive Statistics of Streaming Procedures by Respondents.....	57
Table19: Summary of ANOVA of Streaming Issues by Respondents	58
Table 20: Post Hoc Tests of Streaming Issues by Respondents.....	58
Table 21: Descriptive Statistics of EGSECE, GPA of Students by Institutes.....	59
Table 22: ANOVA for EGSECE GPA as TVET Entry Requirements by Institute	59
Table 23: Post -hoc Tests of EGSECE GPA by institutes	60
Table 24: Mean differences between Instructors and Students on Teaching-Learning Approaches.....	62

Table 25: Frequency of Teaching Methods by Institutes.....	64
Table 26: Frequency of Teaching Methods by Respondents.....	66
Table 27: Frequency of Evaluation Methods by Institutes.....	68
Table 28: Frequency of Evaluation Methods by Respondents.....	70
Table 29: Availability and Competence by Institutes.....	73
Table 30: Availability and Competence by Respondents.....	75
Table 31: Institutional Quality Assurance Practices.....	77
Table 32: Differences between the two Regions across major variables.....	81



Acronyms and Abbreviations

AU	African Union
BA	Bachelor of Art
BED	Bachelor of Education
BSc	Bachelor of Science
Dip	Diploma
EGSECE	Ethiopian General Secondary Education Certificate Examination
EHEQE	Ethiopian Higher Education Entrance Qualification Examination
EQA	External Quality Assurance
ESDP	Education Sector Development Program
ESDPI	Education Sector Development Program One
ESDPPII	Education Sector Development Program Two
ESDPPIII	Education Sector Development Program Three
FDRE	Federal Democratic Republic of Ethiopia
GPA	Grade Point Average
MDGs	Millennium Development and Goals
MOE	Ministry of Education
NGOs	Non- Governmental Organization
SDPR	Sustainable Development and Poverty Reduction Program
SDPRS	Sustainable Development and Poverty Reduction Strategy
SNNPR	Southern Nations Nationalities and Peoples Region
TVET	Technical and Vocational Education & Training
UNESCO	United Nation Education, Scientific and Cultural Organization
USAID	United State Agency for International Development

CHAPTER1: INTRODUCTION

This chapter deals with background of the study, statement of the problem, objectives of the study ,significance of the study, delimitations and limitations of the study, definitions of terms and organization of the study.

1.1 Background of the Study

Technical and vocational education and training (TVET) is increasingly recognized as an effective means of empowering young people to engage in productive work and quality life skills for sustainable livelihoods. Hence, TVET programs that respond to the demands of the labor market, both local and global, are viewed as central to equip the young with the work skills that will enable them to escape the trap of poverty and competencies needed for economic competitiveness and to promote the skills needed in knowledge-based societies and economic wellbeing (World Bank, 2005).

The development of any country depends on the active and responsive participation of its population. Without having adequate workforce with the necessary knowledge, skills and attitudes, one cannot imagine changes that lead to development in the social and economic sectors. Several educators claim that education is the cornerstone for any development. The quality of the economic performance of country is a function of the quality of its human resources; and that, in turn, is a function of the performance of its young people because their technical skills are needed to increase productivity both in the formal and informal sectors of its economy (Todaro,1985). Moreover, the development of trained labor force

makes a significant contribution to national development by facilitating the application of science and technology for transformation of material into goods and services (UNESCO,1996). According to Todaro (1985), it is the quality of the human capital of the nations, not its material resource, that ultimately determine the character and pace of its economic and social development. Improving quality of education is important and it is an essential means by which any nation can achieve optimum development. Therefore, investment in population quality through schooling enhances the human capital for productive life.

✓ Indeed, among the different categories of education, technical and vocational education and training (TVET) is largely believed to determine the competitive strength of a country's productive workforce (Wanna,1992). Technical and Vocational Education and Training was the most neglected area, in the history of the Ethiopian Education System (MOE, 2005). However, since 2001 a massive expansion of this sub-sector has taken place in Ethiopia. The strategic thinking behind the expansion of the TVET sub-sectors is to meet the middle-level human power demand of the industry, service sector and commercial agriculture, which have become very essential to the overall development of the country. It is an instrument for producing technicians equipped with practical knowledge, who unlike in the past would be job creators rather than expecting jobs to be provided by the Government (MOE, 2005).

In line with this, the government of Ethiopia has placed particular emphasis on education with the firm belief that the long-term development of the country rests upon the expansion and provision of quality education. The Government's desire to

improve the provision of quality education resulted in the formulation of the Education and Training Policy (ETP), which encompasses the entire education and training sector. In 1997 the Government launched the first five year Education Sector Development Program (ESDP-I) within the framework of ETP as a part of a twenty-year education sector indicative plan (MOE, 2001).

The main thrust of ESDP is to improve quality, relevance, equity, efficiency and to expand access of education in all levels (MOE, 2001). The first ESDP (1997/98 to 2001/02) derived its goals and strategies directly from the Education and Training Policy. Subsequently the Government developed a second comprehensive Five-Year Education Program (2000/01 to 2004/05) to align it with the five-year term of the government's plan. This covered the last two years of ESDP-I and three years beyond. Therefore ESDP II deliberately has only a three-year span (2002/03 to 2004/05), so that ESDP III will be synchronized with the Government's five-year planning cycle. Now ESDP III, which may have a life span of five years (2005/06 to 2009/10) and is in line with Sustainable Development and Poverty Reduction Program (SDPRP) and Millennium Development Goals (MDGs), has been developed.

In ESDP III, TVET programs focused on creating quality and demand-driven system that can produce adequate skilled human power for the implementation of the Sustainable Development and Poverty Reduction Strategy (MOE, 2006). It was believed that the previous education system in general and vocational technical education programs in particular were entangled with complex chronic problems like limited access, inequitable distribution, low quality, lack of relevance and

efficiency. Likewise, the vocational and technical education as part of education system shares most of the problems (MOE, 2004). One of the aims of TVET is giving the students both general and special knowledge and skills that they need for placement in the labor market. Outputs of a given TVET graduates are expected to possess knowledge, skills, and attitude that enable them to join the labor market. In Ethiopia efforts are being made to expand TVET in a view to alleviating the long standing problem of shortage of skilled human power.

However, the challenge is how the quality of the TVET provided can be maintained while expanding the system. So, the "quality-versus-quantity" dilemma in the expansion of TVET should be properly addressed in Ethiopia. The development of high quality human resource is in high quality education system, which is realized when institutions have conducive training environment, adequate training facilities, students with good academic stand, competent instructors and evaluation of training relevancy. From the challenges facing TVET institutes today, this study deems it important to look into the extent to which the quality at input and process level influence the quality of training offered in TVET institutes.

Therefore the provision of greater TVET opportunity should not be compromised with the quality of education provided in TVET program. Hence, it is important to investigate major factors affecting the quality of TVET program.

1.2 Statement of the Problem

The economic policy and strategy of the country requires technical and professional skills in broad and specific occupational fields. To meet this demand, public and non-public TVET institutions have increased in number, the training areas have been diversified, enrolment has increased, and the trainees are prepared to perform functions valued and needed by the Agricultural Development Led Industrialization Strategy of the Country. Although the Education and Training Policy of 1994 and ESDP III of 2005 showed the major educational issues such as relevance, quality accessibility and equity in general, the issues of quality of TVET in particular, have yet to come.

The present situation reveals the fact that most TVET graduates do not meet the expectations of the service and production sectors (MOE, 2005). Some of the issues are lack of adequate qualified academic staff, problems of selection criteria and incompetence of students, lack of adequate instructional materials and limited funding, weak linkage between vocational and general education, limited institutional capacity to make tracer studies and lack of harmonization and relevance of curriculum. So far, very limited studies in scope and depth have been made in the areas of major factors affecting the quality of TVET program. Some of the existing research works are also limited to case studies related apprenticeship training, availability of resources and the like. Thus, so far no comprehensive studies have been made especially in comparing major factors that are significantly affecting the quality of TVET programs.

In view of the facts stated above, this study attempts to address the following major research questions.

1. Are the delivery of teaching learning process and evaluation adequate enough to ensure the quality of TVET program?
2. To what extent educational materials are adequate enough to ensure the quality of TVET program?
3. Do the streaming procedures of students to TVET ensure the quality of the program?
4. Are the instructors' and top managers' qualification, experience and competence adequate enough to the required level to ensure the quality of teaching learning?
5. To what extent institutional management issues are conducive enough to ensure the quality of TVET program?

1.3 Objectives of the Study

The main objective of this study was to investigate major factors affecting the quality of TVET programs and to forward some recommendations. The specific objectives of this study were:

1. To investigate the adequacy of qualified human, educational materials of the selected institutions in the two regions.
2. To assess the streaming procedures of students to TVET programs in the selected institutions of the two regions.
3. To assess the delivery of the teaching learning process and evaluation methods of students performance.
4. To analyze differences between Oromia and SNNP across the major factors affecting the quality of TVET program.

1.4 Significance of the Study

The main objective of the study was to investigate major factors affecting the quality of TVET program. The result of the study will address and identify those factors positively and negatively affecting the quality of teaching and learning processes. It is also hoped that the study will inform planners, TVET policy makers; national and regional TVET agencies and educational officers and practitioners to get valuable information on major factors affecting the quality of TVET program and helps to make a comprehensive study at national level. The study also encourages other researchers to carry out further studies on quality improvement in TVET program.

1.5 Delimitation of the Study

Taking into account the time and other resources required for data collection process, the study was carried out in four TVET institutions of Oromia and SNNPs regions. Factors of quality education are multidimensional and controversial. In principle, the quality of any educational institutions can be assessed in terms of input, process and output. In fact the quality of output depends on the quality of input and process. Because of these realities the study was delimited to some aspects of input and processes.

1.6 Limitations of the Study

First of all, the sample of the institutions selected from the two regions was limited to only four, which could often be difficult to generalize the result of the study to the rest of TVET programs at national level. The other limitation of the study is that standard models for the quality of TVET programs in Ethiopia have not yet been developed. Therefore, the study adopted the theoretical and research findings of other countries TVET quality models. These issues could limit the findings of the study to some extent.

1.7 Definition of Terms

Competence: the ability of staffs and students to consistently perform activities to the standard required (competency= knowledge + skill + attitude).

Evaluation: the process by which students' performance evaluated so as to show the required quality standard.

Institutional management issues: A variable that characterize conducive teaching learning environment to ensure the quality of TVET program (it constitutes competences of top management, participatory decision making, institutional monitoring and evaluations and encouragements and rewards for teaching staffs).

Educational Facilities: Training equipments available for both theoretical and practical demonstration in TVET institutions to ensure the quality of training offered (in this case; training manuals, workshop facilities, service rendering organizations or factories and other facilities for vocational education are the major factors to ensure the quality of the program).

Quality: Aspects of the quality of educational institutions that refers to the quality of the staff, students and resources allocated to the system and the quality output.

Qualification: a cluster of duties, formal reward for demonstrating competence, based on occupational testing, against occupational standards provided to individuals in the form of certificate specifying the nature of the competence

Streaming: the selection and placement of students who have completed secondary education to TVET program based on certain criteria.

1.8 Organization of the Study

The study consists of five Chapters. The first chapter deals with introduction of the study. The second chapter presents the review of related literature, the third chapter deals with methods of the study, the fourth chapter deals with data results and discussions of findings and the fifth chapter presents summary of findings, conclusions and recommendations of the study.

CHAPTER 2: REVIEW OF RELATED LITERATURE

This chapter deals with reviews of the concepts of quality and quality standard, educational quality and educational quality indicators based on research report, books, educational journals, conference proceedings and the governing principles that address the quality of TVET programs.

2.1 The Concepts of Quality and Quality Standard

2.1.1 The Concepts of Quality

Quality is a multi-dimensional concept, embracing all functions and activities of education, including teaching and academic programs, research and scholarship, staffing, students, buildings, facilities, equipment, services to the community, academic environment; taking into account national cultural values and circumstances and international dimensions such as exchange of knowledge, interactive networking, mobility of teachers and students, and international research projects. A number of individuals have contributed to the issues and definitions of quality. Quality means different things to various people depending on one's particular background. It also varies from society to society and from institution to institution. It is multidimensional, dynamic, hard to measure, discrepant in terms of goals and susceptible to social interpretations. Supporting this, Mugatroyd (1994) has said that the concept of quality originated in the manufacturing sector in the late 19th and early 20th centuries and different features were incorporated in the word "Quality" from the manufacturing point of view.

✓ Economics based viewers' related quality to the content of the product while manufacturing based viewers such as Philip Crosby (1976) quality was defined as a conformance to specification/ requirements of the product by focusing management commitment, quality measurement, zero defective planning and quality awareness. Supporting this, Adams and Oakland (1993) said, "Quality can be definable in context, measurable objectively, integrated with interpretations of efficiency and equity to be attained". Although there could be widely differing conceptualizations of quality in use in education, as to Harvey and Knight (1996), they are classified into five distinct but interconnected thoughts: Quality as exceptional, Quality as perfection or consistency, Quality as fitness for purpose, Quality as value for money and Quality as transformation.

The Exceptional Concept of Quality: a traditional concept linked to the idea of 'excellence', usually operationalized as exceptionally high standards or academic achievement. Quality is achieved if the standards are surpassed. Quality as exceptional sees quality as something special that can be associated with the notion of distinctiveness, or in a higher class that implies exclusivity. Moreover, it is a view of quality as exceeding very high standards (or 'excellence').

The excellence notion of quality in education thus tends to focus on input and output. For instance, educational institution that takes best students, provides them with the best resources, both human and physical by its nature excels. Whatever the processes with students learn, the excellence remains. Excellence, with its emphasis on the level of input and output, is an absolutist measure of quality.

Harvey (2002), states that the exceptional approach to quality emphasized the maintenance of academic standards through the summative assessment of knowledge and assumes an implicit normative standard of learning and research. Moreover, it continues to advocate 'elitism' even within a mass education system so as to prioritize knowledge over skills, other than 'high level skills' or professional competence. This approach presumes that standard depends on input such as well-qualified staff, well-stocked libraries, well-equipped laboratories and students with good entry qualifications.

Quality as Perfection or Consistency: a "quality as Perfection" approach focuses on process and sets specifications that it aims to meet. Quality in this sense is summed up by the interrelated ideas of zero defects and getting things right first time. The notion of quality as perfection or consistency may be applicable to administrative tasks such as the maintenance of student records but it does not fit well with the idea of discovery learning.

Quality as fitness for purpose: judges quality in terms of the extent to which a product or service meets its stated purpose. The purpose may be customer-defined to meet requirements or (in education) institution-defined to reflect institutional mission (or course objectives). According to this approach quality only has meaning in relation to the purpose of the product or service. Supporting this, Harvey(2002) has noted his ideas of fitness for purpose that emerged as a fashionable way to drive for perfection. Customer satisfaction i.e. student satisfaction is the most likely intermediary of fitness for the mission-determined

purpose. This implies that educational institutions need to be vigilant that they base their quality standards upon an analysis of customer needs.

Quality as Value for Money: assesses quality in terms of return on investment or expenditure. At the heart of the value-for-money approach in education is the notion of accountability. Increasingly, students are also considering their own investment in education in value-for-money terms. Value for money is a market view of quality that relates quality of education to "value for money" through its demand for efficiency and effectiveness. It states 'quality at a price you can afford' which implies a high standard specification at reduced cost. The value for money approach requires the maintenance or improvement of academic standards of both graduate abilities and research output or to maintain decline unit of resource. It also expects the maintenance of the supply of competent recruits to post graduation professional bodies and suitably skilled graduates for employment (Harvey, 2004)

Quality as Transformation: it is a quality as a process of change, which in educational institutions adds value to students through their learning experience. Education is not a service for a customer but an ongoing process of transformation of the participant. This leads to two notions of transformative quality in education: enhancing and empowering the consumer. A transformative notion of quality presupposes a fundamental purpose of any education system. It assumes that education must concern itself with transforming the life experiences of students by enhancing and empowering them (Harvey, 2004). The transformative approach uses standards to assess the enhancement of students both in terms of academic



knowledge and a broader set of transformative skills such as analysis, critique, lateral thinking, innovation, and communication.

2.1.2 Relationship between Quality and Standard

The methods of measuring standards and how standards relate to the different concepts of quality are the cornerstones of educational institutions. 'Standard' is a word used to denote both excellent (high standard) and ordinary (standard procedure) being both an identification of uniqueness and a measure by which conformity is judged. According to Knight (1996), the term 'standard, in education, tend to be elusive. Nonetheless, it usually relates to three areas of activity: academic standards, standards of competence, and service standards (Knight, 1996; Harvey 1995 as cited in Ashcroft, 2004). Knight further discussed the terms as:

Academic Standards: measure ability to meet specified levels of academic attainment in relation to teaching and learning. This refers to the ability of students to fulfill the requirement of the program of study, through whatever mode of assessment used.

Standards of Competency: measure specified levels of ability on a range of competences which include the general transferable skills required by employers and skills required for induction into a profession

Service standards: on the other are measures devised to see identified elements of the service provided by educational institutions. Service standards' benchmarks tend to be quantifiable and may include turnaround times for assessing student's

work, maximum class sizes, and frequency of personnel, absences, tutorials, availability of information on complaints procedures, etc. The relationship between quality and standard depends on the definitions (approaches) to quality and the particular notion of standards required (Knight, 1996)

2.1.3 Quality Control, Management, Assurance and Accreditation

Quality control is historically the oldest quality concept which involves the detection and elimination of components or final products which are not up to standard. As a method of ensuring quality as Sallis (1994) stated, it may involve a considerable amount of waste, scrap and reworking. Quality professionals known as quality controllers or inspectors carry out quality control. Inspection and testing are the most common methods of quality control and are widely used in education to determine whether standards are being met.

Total Quality Management (TQM) is an approach of continuous improvement, which can provide in educational institution as a set of practical tools for meeting and exceeding present and future customers need, wants and expectations (Sallis, 1994). Total quality management is about creating a quality culture where the aim of every member of staff to please their customers.

Education is about people learning. If TQM is to have relevance in education it needs to address the quality of the learners' experience. Learners are all different and learn best in a style suited to their needs and inclinations. Educational institutions have obligations to make learners aware of the variety of learning methods available to them (Sallis, 1994 & Heilman, 1986).



Quality assurance is a generic term that can mean different things in different national and regional contexts. It can refer to all forms of internal and external quality monitoring, evaluation or review or the systematic review of educational programs to ensure that acceptable standards of education, scholarship and infrastructure are being maintained. Quality assurance as a process, whereby customers, producers, or any other interested parties are satisfied that standards will be consistently met. Generally, responses to quality assurance fall into one or more of these three categories: external examination, course validation and professional commitment. Peer review and even examination results have all been put forward as aspects of quality assurance. In relation to the multi-faceted nature of the reform policies of the education system and quality issues, several researcher have stressed the quality of the students, the teacher, the effective management, availability of facilities and educational materials, the teaching-learning process, and conducive environment (Ellis, 1995).

Internal quality assurance refers to the policies and mechanisms implemented in an institution or program to ensure that it is fulfilling its own purposes and meeting the standards that apply to training institutions in general or to the profession or discipline in particular.

External quality assurance refers to the actions of an external body, which may be a quality assurance agency or body other than the institution that assesses its operation or that of its programs, in order to determine whether it is meeting the agreed or predetermined standards (Stella, 2007). External quality assurance (EQA) thus refers to the complete range of quality monitoring and quality

assurance procedures that are undertaken by bodies outside of academic institutions. Most often, this is a national quality assurance body, but may also be regional or international bodies as is the case of the quality criteria being developed here (Billin, 2003 & Clarke, 2005).

Quality assurance, as practiced in education elsewhere, represents a novel approach to the establishment and maintenance of standards in educational institutions (Ayalew, 1991 & Assefa, 2002). Quality accreditation tends to be divided in to two types: Institutional and Programmatic. Institutional accreditation focuses on the institution as a whole, giving attention not only to the overall educational program but to such areas as: governance, effective management, academic program, teaching staff, learning, resources (library, laboratories, and educational technology), students and their services, physical facilities, financial resources. The standards relate to the achievement of the institutions' mission and objectives.

Programmatic accreditation focuses on award-granting program within an institution, which typically prepares professional for special occupations. Each program has its own distinctive definitions of eligibility, criteria or standards for accreditation. Global practice in accreditation typically follows four steps: development of standards, self-evaluation which carries accreditation decision, and external and internal review, which is done by a team of experts (Assefa, 2002).

2.2 Educational Quality Indicators

Educational quality indicators are tools or measures that are used to assess a quality characteristic or the achievement of quality objectives. Indicators provide information about the state of particular systems and are typically used as yardsticks in comparisons. The three aspects of quality indicators are inputs, processes, and output. Developing a set of quality criteria against which institutions, and/or program can be assessed requires careful consideration of the nature of criteria or indicators that might be used. In particular, the distinction between input, process, and output indicators is important. (Dill, 2005 & Soo, 2004) found that most tended to focus on input indicators such as educational expenditure per student, student-staff ratios, and so on. The rankings place heavy weight on input measures; although empirical studies show that most input indicators have an irrelevant or very small effect on students' learning.

According to Dill and Soo (2004) the influence of inputs on student learning is one of the great myths of quality in education. That is, after taking into the account the characteristics, abilities, and backgrounds they bring with them to the training institute, how much students grow or change has only an inconsistent or trivial relationship with such input measures as educational expenditures per student, percentage of academic staff with highest degree in their field, research productivity, size of library, admission selectivity. These authors continue to argue for a greater focus, particularly on process indicators which they believe hold greater relevance to student learning.

Similarly, Clarke (2002) noted that, all else being equal, process (teaching quality) and output (effectiveness of graduates in the workplace) measures are preferred since they are better indicators of the quality of the instruction, preparation, and resources offered by an institution. The key issue is the range of learning (not just subject knowledge) but particularly how students are facilitated to become empowered learners. Coates (2005) argues strongly for a greater focus on process indicators, as output indicators can be difficult or ambiguous both to define and measure. Whether quality is best assessed by input, process and output, or a combination of indicators is the understanding of what influences learning to the greatest extent.

Dill and Soo (2004) reviewed on a twenty years of research on factors that impact on learning, and concluded that inputs had an impact on student learning and output. Drawing on a constructivist philosophy of education and learning, Coates (2005) argues for an increasing focus on student engagement as a key quality indicator. He argues that learning is influenced by the extent to which students take part in purposeful activities that contribute to their learning and certain inputs can potentially influence student learning.

One way of thinking about the choice of indicators in terms of inputs, processes, and outputs (Clarke, 2005), argue that whether an indicator should be treated as an input or an output depends upon the perspective of the person who is going to use the results of the analysis. For example, student-staff ratio can be regarded as an input indicator, but a capable student might regard being able to devote a large proportion of resources to securing the services of many well-qualified staff, as an

output. Similarly, a student might view high entry standards as an indication of the reputation of the institutions (an output) or something that they have had to work hard for in order to secure a place or an input (Clarke, 2005).

It is believed that the internal factors such as academic environment, infrastructure, instructional technologies and equipments, organizational culture and effective management affect the quality of outputs of the program. The quality of outputs can be affected by the quality of inputs (Hallak,& Mosha, 1990). According Desta (2005) the quality of education is greatly affected when its system encounters inadequate educational materials and facilities, inefficient management and administration, poorly trained teachers and working conditions, and less relevance of curriculum and evaluation.

Quality is at the heart of any educational system. It influences what students learn, how well they learn and what benefit they draw from their education. Quality in education is relative and not easy to measure. Many educators measure the quality of education in terms of input, process and output. In the input-process-output frame work in which "input" refers to human and material resource and entry requirements, "process" refer to the teaching and learning process, and "output" refers to the employability and academic standings (Derebssa , 2005).

According to the productivity view the success of the education system is seen as depending on the attainment of the aspired outputs. This view underlines the output/outcome/impact indicators are predominating or even the only type of quality indicators that need to be monitored. Although output is equally important,

it is difficult to measure in countries like Ethiopia where a minimum input are not available. The qualification of student entrants and their perception of quality education also emanates from their potentials and capabilities. Knowing who our students helps to draw an understanding of the quality attributes and expectations so that the system of education can be responsive (Derebsa, 2005).

From a quality perspective, TVET needs to become an instrument to promote the skills needed in knowledge-based societies and move beyond narrowly defined skills. Quality education is expensive and requires huge resources: material, human, financial and time. In addition to these, institutional efficiency, governance, administration and accountability, the quality of staff, curriculum and student selection procedures are major factors that determine the quality of any education program in general and TVET in particular (Yekunoamlak, 2001).

In many countries, students entering the vocational education stream find it difficult to proceed to higher education which made TVET not attractive and the qualification standards and guiding principles were not exercised (Nahom, 2006). However, according to Wanna in Amare et.al (1998:61), the quality of vocational and technical institution can be affected by inadequately trained staff and instructors, poor curriculum, poor training materials and inadequate supplies, inadequate financing, inadequate recruitment of suitable trainees and high management complexes (Mosha, 1998).

2.3 Input Factors that Affect Quality of Education

There is no general agreement between educators on the issue of the best quality TVET model. Different countries experienced, and others are still experiencing, their own "quality" TVET model to prepare skilled crafts people and technicians (Antonios, 2006). Meanwhile most educators agree on some common principles which guide the designing of quality TVET program. Among these principles, the five most influential ones are those related to: the organization of its curricula, the selection and placement of its students, the preparation of its staff, the organization of its facilities, and the application of the right instructional methodology during its implementation. Training for high-quality skills requires appropriate training equipment and tools, adequate supply of training materials, and practice. Other requirements include relevant textbooks and training manuals and qualified instructors with experience in enterprises (Yekuamlak, 2001).

The delivery of quality TVET is 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. Academic staff has always been described as one of the most crucial resources of educational institutions (Ayalew, 1995). The relative strength and adequacy of academic staff in training institutions (among other things) is measured by the input factors (Doherty, 1994).

2.3.1. The Quality of Academic Staff

Of all the resources required for TVET programs, teachers are the major components who play the most important role in successfully achieving the objectives of the training (Aschroft, 2004). At the very centre of quality, technical and vocational education and training lies an effective interaction between teachers/trainers and learners. In fact, an overall improvement in vocational skills for employability and citizenship can only be realized if there is an improvement in the quality and relevance of teaching.

The first important principle that is used to define the quality of a TVET program is related to the preparation of adequately trained teachers and other professionals who shoulder the responsibility of preparing students with quality marketable skills for the dynamically changing world of work. According to this principle, quality TVET programs are distinguished by having a highly trained, experienced, technically competent, and enthusiastic staff including the coordinators, counselors, and all others who assist them in the instructional process (Antonios, 2006 & World Bank, 1993). For quality instruction, a continuous supply to teachers and instructional personnel with a substantial level of subject matter mastery is vital. Competent TVET teachers and coordinators, thus, should be continuously prepared on the basis of integrating strong theoretical knowledge with capable practical skills' training in the specific occupations (World Bank, 1993).

The delivery of quality TVET is dependent on the competence of the teacher; competence measured in terms of theoretical knowledge, technical and pedagogical skills as well as being abreast with new technologies in the workplace.

Education that supports and empowers both teachers and students through democratic process has increasingly defined quality in the 21st Century. Learning activity promotes critical thinking, problem solving, teamwork, and community involvement. The problem of teachers' quality is an area that must be seen as a sequential process. This process includes recruiting competent and effective teachers, providing them with preliminary courses, retaining them in the profession and making the best use of them by continuous education and training (Amare, 1998).

Professional development of teachers is also a factor that contributes to the whole hearted commitment of teachers to the profession. So to bring quality education and build an effective teacher should be a continuous task for an institution starting from the selection and continuing through orientation, training and promotion. The major objective to improve quality is to help instructors become professionally flexible so that they can select the teaching approach most suited to a particular content area and their student's inquisitiveness and need (Ashcroft, 2004 & Ayalew, 2002)

Good teachers are skilled not only in instructional methods but also in evaluation and assessment practices that allow them to measure individual students learning progress so as to adapt activities according to student needs which include both performance assessment and assessment of factual knowledge (Astin, 1991).

The issue of teachers' development is the heart of quality in education. Teachers need to have pedagogical skills, organizational skills, interactive skills, motivational

abilities that will help them to work with their students and colleagues. Instructors need to increase their profession by expanding their sound knowledge base as a reservoir. According to Ashcroft (2004) more attention should be given for preparation for teaching, quality of delivery, volume and range of teaching, innovation in teaching, and communication with students. Thus, motivation of teachers is very important condition for bringing about quality of education and the competence, quality and training of teachers is a key in any educational institutions. However, the teaching profession in many developing countries gives low status to teachers. However, according to Wanna in Amare et.al (1998: 61), the qualification of TVET instructors in Ethiopian does not meet such stipulation.

2.3.2 The Relevance of Curriculum

TVET curriculum must be relevant in terms of the needs of trainees, employees and society. Hence, there should be strong participation of relevant stakeholders at different hierarchal levels in planning, implementation and evaluation of curriculum (Derebssa, 2004). It incorporates, the needs of students, because they are the primary beneficiaries of the programs; the needs of private enterprises, because they are the ones that employ the products of these programs; and the needs of the society and the state, because they are responsible for the socioeconomic well-being of the youth (Wanna, 1998).

Curricula for quality TVET programs should be developed on the basis of a careful analysis of the occupation in different employment areas by systematically studying what a successful worker does and needs to know in the practice of his/her job (Coe, 1973). While analyzing a particular occupation or family of

occupations to which a need has been identified, different social, economic and technological changes, and the effects they bring up on occupations could be considered. In order to adapt the curricula to those changes, strong feedback mechanisms between the curriculum developers and other people such as the former graduates, employers and the public should be established. It is not enough to make an occupational analysis once; rather it must be constantly updated to adjust the curricula to the above changes, and the requirements of the labor market.

The design of quality TVET curricula involves modularization that emphasizes the specification of particular knowledge and skills, and their application to the standards of performance required in the workplace. King (1998) reiterated that the curricula developed by the specification of learning objectives in a modular structure, makes learning easier in any TVET program. The modules should be broad enough to cover as many occupations as possible in order to minimize the danger of training individuals for only few specific jobs, which might become obsolete through time and technological advancements (Ecclestone, 1996). In addition to the preparation of individuals for specific defined occupation, the curricula should also target providing educational experiences in various areas of knowledge, work habits, communication skills and attitudes needed for living in an era of globalization.

To this end, Larsen (1973) writes quality vocational education results from a balanced curriculum of vocational and general education courses. The information that involves student characteristics, characteristics of society at large the world of

occupations, types of knowledge and skill relevant to the program being designed, principles, functions and objectives of learning, parameters of student population, administration and academic framework of the school, facilities and finance available should be obtained by the program designer of occupational education. Moreover, the delivery of TVET should be flexible outcome based TVET. In line with this idea, periodic evaluation of TVET curriculum is necessary in order to ensure proper implementation, effectiveness; to improve and update its content in line with the changing technology and science (Larsen, 1973).

According to Yekunoamlak (2001) curricula for training programs should be designed in a manner that they help trainees develop work awareness and a self-questioning attitude whereby they will probe into what they could do with their skills without limiting themselves to the specific jobs in the area of their specialization. The contemporary approach to employability, highly regards the relevance of skills development not just within the field of study. It is rather geared towards equipping trainees with transferable skills with generic attributes that cut both horizontally and vertically across all types of jobs (service, industry, etc.) and all job levels including entry-level worker to the senior position respectively.

In the era of globalization, balance should be stricken between the development of specific skills and generic ones in order to ensure organizational competitiveness. The demand for comprehensiveness of TVET programs in turn calls for the inclusion of academic skills apart from specific vocational skills to broaden chances of securing paying jobs (Lauglo, 1993).

2.3.3. The Quality of Instructional Materials and Technologies

Amidst the changes in the learning landscape, technology is emerging as a primary mode for delivering education to the learners in the formal and non-formal sectors. A number of issues require policy consideration to generate awareness of and interest in the retraining and re-skilling of workers through the TVET system. Most of the training institutions facilities in the developing world tend to be crucial factors in the 21st Century innovation and knowledge-based global economy. The presence and heterogeneous use of technology is one manifestation of how institutions can become and realities of individuals and groups i.e., how institute can become more student-centred (Doherty, 1994 & World Bank, 1993).

The quality of any TVET program is largely dependent upon the degree of the organization of its training facilities (Gilli, 1976). They are characterized by the presence of adequate, well-planned, and properly equipped physical facilities, which are very much similar in nature and operation to the facilities in the actual working places. TVET program is the preparation of human power for the labor market; the training institutions should look and operate like a factory as much as possible. Meanwhile, because of the dynamic nature of TVET curricula, training institutions should always maintain updating their training facilities in line with the changes occurring in the workplaces. Scholars agree in the role and function of educational materials, technologies, and facilities in enhancing the quality of education.

In light of this, the quality of education and the learning achievement depends on the availability instructional materials. Training institutions' facilities, i.e. physical

structure, an arrangement of computer space, labs, a set of special environments, and a class neatness, chairs, etc have major contribution to create conducive environment to the success of each students in accomplishing the desired learning out comes in the instructional program (Yekunoamlak, 2001 & Ayalew, 2002).

2.3.4. Effective Management System

Institutions need competent managers to be able to reach their objectives. Quality has to be managed. It must involve everyone in process and be applied throughout the organization. Failure to meet the requirements in any part of a quality chain has a way of multiplying, in other words, failure in one part of the system creates problems elsewhere leading to yet more failure and more problems. The worth of a quality system depends largely on how well people do their jobs ((Ayalew, 1991 ,Tsfaye , 2004 and Zenawi,2007).

People are responsible for the success of the system and play the major role in the functions it performs. The strongest need at any given time tends to direct the person's activity toward the goal or situation that he feels is most likely to satisfy that need. The leaders of TVET must have essential qualities to be able to create the enabling environment in order to plan, mobilise, implement and monitor retraining and re-skilling programs for academic staffs of TVET institutions. The manager with responsibility for special TVET programs should provide the staffs with the opportunity to acquire upgraded skills and competencies for daily functions and even potential work roles (Desta, 2005 & Ayalew, 1991).

2.4 Process Factors that Affect the Quality of Education

2.4.1 Streaming Students to Different Fields of Study

Any economic development requires trained manpower that can be realized through proper planning. Manpower planning is concerned with the development of human resources based on economic situation of the country (Yekonoamlak, 2001). The people to be trained and the kind of training provided in technical and vocational fields should be planned and match the required skilled manpower and the supply of available resources at hand.

In order to cope up with ever changing science and technology, the quantity and quality of trained manpower should be planned ahead of time each year and this should be considered during selection and streaming of students to different fields of study (Befakadu, 1993). The low proportion of TVET in general secondary education is partly due to the public's attitude towards this branch of learning, which is usually regarded as leading to low-status occupations and lack of progression to higher levels of education. Moreover, the pupils who enroll in this kind of education are considered to be those who have failed in general education, which result, a negative image of TVET which may result poor quality (Delluc, 2002). As educational institutions form an interlocking system i.e. the leavers or graduate from one type of educational level of education invariably the input for the next; the qualifications obtained from one course become the entry requirement for another. That means education is an unbroken chain (Forojolla, 1993). The other important principle that characterizes the quality of any TVET program is the principle on the students' career and occupational placements. According to this

principle, students who join different occupational training areas should be selected and placed in accordance with their interests, aptitudes, and capabilities for the requirements of the particular occupations.

Quality TVET programs are flexible, so that it permits youth and adults enter into training when they are ready and able to do so. In this regard, Coe (1973:78) denotes "we must fit the programs in accordance with their full interest, aptitude, and capabilities are proved to be more motivated to learn different skills than those who are without. And hence, for the most effective learning of occupational skills, an optimal level of motivation should be established and maintained Thus, to ensure the quality of TVET program, the selection and placement of students into diverse education and training areas require a cluster of services that include vocational guidance and counseling which help students to acquire appropriate positions for their careers, either academically or in the world of work. Appropriate vocational counseling helps students make wise choices for their future careers (Atchoarena, 1994).

As far as the experience of different countries is concerned, the tracking of students in to academic and vocational streams is not free of biases. In most cases, students are not placed according to their interests and aptitudes. Rather, their placement is highly dependent on the basis of their academic achievements, where better achievers are usually assigned to the academic track, while those who are academically slower and most unmotivated (most of the time those who come from families of lower social status) are assigned to the technical and vocational streams(AU,2007). In Ethiopia, student who has completed grade 10

and taken the general education completion examination and got greater than or equal to 1.2 for girls, and 1.4 for boys for 10+1, 1.6 for girls and 1.8 for boys for 10+2 and greater or equal to 2.0 or both girls and boys for 10+3 level (MOE, 2003). However, the current attempt is to establish the new TVET qualification frame work in levels as level₁, level₂, level₃, level₄ and level₅ which is actually not implemented so far. The subjects of general education provide a service function for vocational and technical education. However, the subjects taught at primary level didn't raise the interest of students to join technical vocational education. This situation tends to reinforce the perception of inferiority of the vocational track. It is therefore important to create articulation pathways between vocational education and general education (Wanna, 2001). The selection and streaming of students in to different vocational fields of study can affect positively or negatively the performance of trainees in training center, and their further career. To alleviate such problems, the selection and streaming of students must consider the following factors:

Students Interest, Abilities and Preference: During selection and streaming the students' interest, abilities and capabilities should be given due attention. It is obvious that students have different interest, talent and potentiality for different fields of study. However, in most cases, students pick up courses without considering their abilities and potentialities. Supporting this Aggarwal (1997) states that many students end up in selecting courses based on availability, instructors popularity or other criteria that may have nothing to do with their career plans, learning styles or basic skill needed. Students, who do not get a chance to be

enrolled according to their need and interest, will face stress, anxiety and tension, which result in dropout and failures. Among others, the quality of education is dependent on the quality of students who constitute the raw material of education. (Aggarwal, 1997 & Befedadu, 1993).

Mental and Physical Fitness: Various technical and vocational fields of study required different mental and physical fitness of the learner. According to Evans in Befedadu (1993) different technical and vocational fields of study requires different abilities to see fine things, to identify different colors, to hear different tone of sound, to lift heavy weight, to stand or to sit for long time and the like. Due to various natural and man-made causes, some students may have mental and/or physical disabilities. These disabled students should be informed to arrange their choice that fit them best.

2.4.2 Teaching –Learning Process

The success of a TVET program largely depends on the competence of its teachers to select and use the right instructional methodology for the teaching of a particular skill. As most educators agree, there is no unique and best teaching method for the instruction of all types of objectives in varied practical circumstances. In this regard, the method which may be considered as the best for one teacher in a certain situation, for a particular skill may not be the best for others in different circumstances. However, most educators agree that TVET instruction becomes more successful when it is carried out in a student-centered mastery learning approach by emphasizing on the students-performing practical

activities (Cunningham , 1994). A quality program, thus uses methods as similar to the actual working conditions as is practical in a school situation, and schedules a sufficient amount of continuous workshop or laboratory time to carry out the learning of experiences. During the instruction of skills, especially in the school-based TVET models, the activities of both the teachers and the students are crucial to attain the required mastery of the instructional objectives. Quality TVET teachers are expected to carry out a cycle of five different activities: Planning, diagnosis, Instruction, Facilitating extended learning, and evaluation (Coe, 1973)

Planning: This is the stage where teachers familiarize themselves with the instructional objectives and the contents of the lessons as described in different curricula materials. During the process of planning, teachers analyze learning tasks, which the students are expected to accomplish; design their instructional approaches; and plan their best strategies to implement their plans in that particular situations for that kind of students in that learning environment.

Diagnosis: During this stage, teachers assess the student's readiness for instruction by asking them different questions, which aid them in determining whether the students have attained mastery, near mastery, or non-mastery of the instructional objectives in the preceding lessons. Based on the outcomes of the diagnosis, enrichment programs are prepared for those who have attained mastery; and remedial programs for those who have shown near mastery or non-mastery.

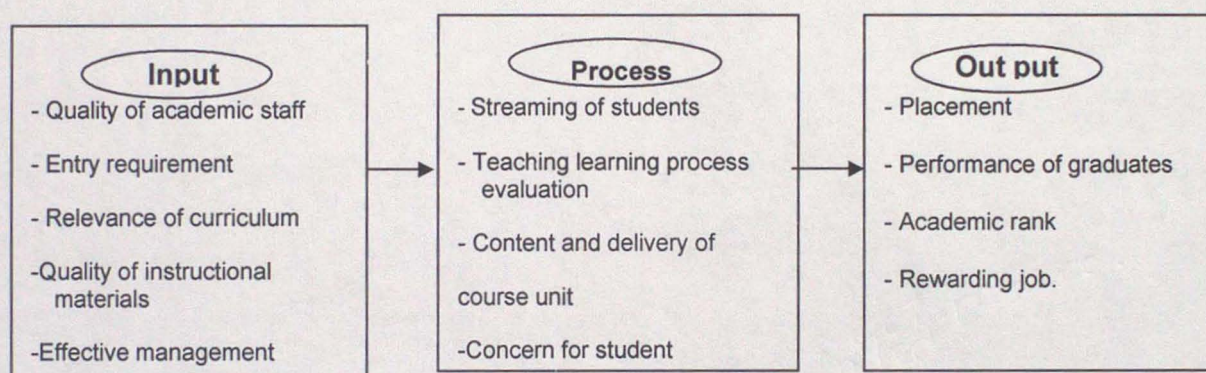
Instruction: During this stage, teachers conduct their actual instructional process by using the teaching methods, which they think are the most suitable for the given learning objectives and the characteristics of the particular students in that specific learning environment. Effective teachers apply varieties of teaching methods to make their lessons attractive so that their students become more motivated to learn their lessons. They are expected to individualize their instructional activities in order to meet the needs of their individual students (Middleton, 1993).

Facilitating extended learning: During this stage, teachers give different formative tests to assess their student's status of learning on the basis of which suitable remedial self-enrichment activities will be given in order to reinforce their understandings. Consequently, they are expected to give different self-learning activities to their students in the form of projects, assignments are other activities so that they will engage themselves in practicing these activities when they are out of their classrooms.

Evaluation: During this final stage, the student's mastery of the occupational skills is evaluated by using summative tests. Quality teachers frequently conduct systematic evaluation in an informal way (Coe, 1973). Regarding the quality of any education system in general and TVET in particular, the quality of teaching and learning approaches, curriculum development and revision, coordination between curriculum and assessment, and questions of professional development and capacity building and streaming of students to TVET program are an area of major issues to be considered. Quality TVET requires students' to practice in realistic workplace settings (AU, 2007).

2.5 Summary of the Review of Related Literature

It often helps to think of quality of any educational institutions in terms of inputs, processes and outputs. In industrial and business terms, the technical system includes all the tools and machinery and quantitative aspects of quality, and its inputs and outputs. In educational institutions, it is concerned with the flow of work. According to Clare (2004) the input-process-output framework of the quality classification of education system is as shown below in figure 1.



All the aspects of quality variables should also be applied to TVET programs. *Thus, the delivery of quality TVET training for high-quality skills requires appropriate training equipment and tools, adequate supply of training materials, quality of learners and practices. Other requirements 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. Moreover, assuring the employability of trainees begins with effective guidance and counseling of potential trainees in the

choice of training programs in relation to their aptitude and academic backgrounds are other dimensions of quality evaluation in training institutions (Lewis , 1984). However, the variety and even conflicting philosophies of TVET and Sector Development programs showed to be unsustainable due to discontinuity, poor quality and competence, and lack of resources.

In Ethiopian, a major barrier to economic and social development is the fact that the workforces of the Country characterized by poor quality at all levels and very low average educational attainment in general and TVET in particular. To tackle these problems the country formulated growth oriented policies that focus on available resources such as human resource and land (FDRE, 2000). However, studies have shown that many TVET graduates remain unemployed even in those occupational fields, which show a high demand for skilled manpower. The question of quality is an important issue in TVET programs. Often, access to jobs that training provides depends on the nature and qualities of training and job performance of graduates depends on the right kinds of skills acquired (Antonios, 2006).

In conclusion, the study of quality in educational institution is a site-specific issue, although there are some common standards and procedures. The culture of organizations, values, politics of states and institutions, educational applications, external stakeholders, educational philosophies adopted are the factors influencing the study approaches and practices.

CHAPTER 3: RESEARCH METHODS

The methods employed in this study were presented under the subtopics; Design of the Study, Participants, Instruments, Procedures and Methods of Data Analysis.

3.1 Design of the Study

In this study, descriptive survey method was employed for its appropriateness to get broad descriptions of quantitative information and to identify major factors affecting the quality of TVET program.

3.2 Participants

Four TVET institutes were selected from Oromia and SNNP regional states i.e. two from Oromia and two from SNNP regions. Purposive sampling was employed for selecting the research sites (TVET institutions) while stratified sampling techniques employed for selecting the respondents. The reason behind for selecting these institutes is that they could relatively be a good representative in offering variety of training fields, comparable facilities and infrastructure, qualified human resources and for easy accessibility as compared to the rest of other TVET institutes in the two regions.

From the four institutes second year and third year students, instructors with two years and above experiences of teaching and the top management were selected by employing stratified random sampling as shown in Table 1.

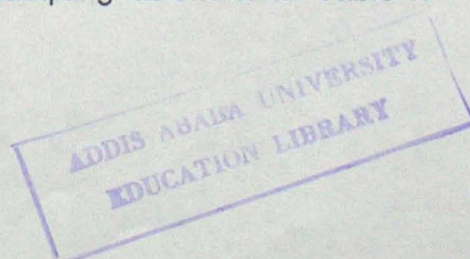


Table 1: Participants by Institutes

Regions	Institutes	Populations				Samples			Total
		Stud.	Inst	Mgt	Total	Stud.	Inst.	Mgt.	
Oromia	Nekamte	645	51	5	701	75	40	5	120
	Ambo	562	42	5	609	55	35	5	95
SNNP	Awassa	863	76	5	944	95	55	5	155
	Soddo	518	31	5	554	55	30	5	90
Total		2588	200	20	2808	280	160	20	460

Key Stud.: student, Inst.: instructor Mgt.: management

3.3. Instruments

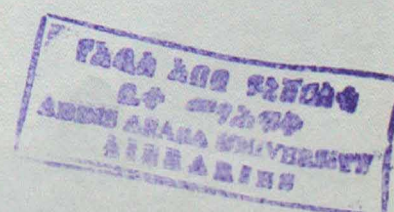
The research instruments employed for data collection were closed-ended questionnaires. The instruments were developed and partly adopted to assess major variables like institutional management issues, educational facility, streaming procedures of students. Furthermore, a questionnaire was developed to elicit the competences of instructors and students to the required levels, teaching and evaluation methods of students' performance and institutional quality assurance practices.

3.4 Procedures

The content and face validity of the instruments was evaluated by two instructors from the Institute of Educational Research of Addis Ababa University. To ensure whether the questionnaires were free from vague and unclear items a pilot test was made. Accordingly, 30 copies of draft questionnaires prepared in English and were distributed to 5 top managements, and 25 instructors of Entoto TVET College, respectively. The other 30 copies of the draft questionnaire prepared in Amharic were distributed to students Entoto TVET College of the same levels of the selected institutes.

The reliability coefficients were determined for the selected items using Cronbach alpha method of estimating reliability by the use of SPSS15.0. The Cronbach alpha reliability of the three groups' questionnaire items was 0.94, 0.86 and 0.91, respectively. After the validity and the reliability of instruments were checked, the revised questionnaires were distributed to the respondents of the selected TVET institutes. The questionnaires have different parts and each part has its own specific issues related to the basic research questions. The revised questionnaires were organized in the following sequence.

- i. Respondents background
- ii. Issues related to institutional management
- iii. The adequacy of educational materials.
- iv. Streaming procedures of students to TVET program
- V. Teaching- learning process and methods of students' performance evaluation.
- vi. The competency and experience of instructors and competence of the students



vii. Institutional quality assurance practices and

viii. Analyses of the significant factors affecting the quality of TVET programs

The first; second, third, fourth , sixth and seventh questionnaire items were distributed to top managements, instructors and students depending on the nature of each item. The fifth and the eighth questionnaire item were distributed to students and instructors; and top management and instructors, respectively. The questionnaires described above i.e. the first part constitutes qualifications and experiences of staffs; and year level and EGSECE GPA of students; the second ,third ,fourth and the fifth partly(induction process) were prepared in the form of Likert-type scale and the level of agreement on a five- point scale ranging from strongly agree to strongly disagree. The fifth questionnaires partly (the frequency of teaching and evaluation methods) were prepared in the form of multiple-choice type like always, sometimes and not used at all, to assess the frequency of teaching and evaluation methods. The sixth and seventh questionnaire were prepared in the form of multiple- choice type of items like competent to incompetent; items that are responded as yes, no and no response; adequate to inadequate; high to low, experienced to not experienced ; agree to disagree were administered to assess the competence and experience of the staff and competence of the students respectively. The eighth parts of the questionnaire items were prepared in such a way that the managements and instructors of each institute to identify the most significant factors affecting the quality of TVET program by rating the items from highly significant to highly insignificant.

3.5. Methods of Data Analysis

Based on the nature of the basic research questions the data were analyzed as follows:

1. Descriptive statistics like percentage and mean values were used to show respondents' background by, institutes, qualifications and summary of data collected in each of questionnaire subtitles.
2. One-Way Analysis of Variance (ANOVA) was employed to analyze the significance differences between various groups i.e. between the selected institutes and respondents concerning institutional management issues, availability of educational materials, and streaming/admission/process of students to TVET program, teaching- learning process and students EGSECE GPA.
3. t-test for independent sample was employed to analyze the significance differences between the responses of instructors and students concerning the teaching –learning process. Furthermore, it was employed to analyze differences of the major variable that affect the quality of training offered in TVET institutions in between the two regions (i.e Oromia and SNNP).
4. Non-parametric test (chi-square test) was employed to analyze whether or not the responses of the groups have significant differences concerning the evaluation methods of students' performance, availability; competency of the instructors and students; and issues of institutional quality assurance practices, and analysis of the current significant factors affecting the quality of TVET program in each institute.

CHAPTER 4: BRESULTS AND DISCUSSIONS

In this chapter the results of data collected from the respondents of the selected TVET institutes (top managements, instructors and students) were discussed. A total of 460 copies of questionnaires were distributed to 20 top management personnel, 160 instructors and 280 students. Out of this figure, a total of 418(93%) questionnaires were properly responded and returned. The proportions of the responded questionnaires by respondents were 20(100%) top management, 141(88%) instructors and 257(92%) students properly responded.

The first part of this chapter presents the general background of the respondents by region, institute, experience, and qualifications. The major areas of the study were categorized under, institutional management issues, adequacy and relevancy of educational facilities, admission procedures and streaming of students to TVET programs, the process of delivery of teaching learning process and methods of students performance evaluations, the competency and experience of the staff to the required level ; and competence of the students to cope up with the program, institutional quality assurance practices and analyses of the significant factors affecting the quality of TVET program.

All tables in this text constitutes summary of descriptive statistics, ANOVA, t-test and chi-square analyses. For further clarity of the summary of data presented in this text, the outputs of the study variables are presented in appendices.

4.1 RESULTS

4.1.1 The Characteristics of the Respondents

This part presents sizes of respondents by regions, institutes, qualifications, and experience and year levels of the participants

Table 2: Size of Respondents by Regions and Institutes

Regions	Institutes	Respondents			Total	%
		Management	Instructors	Students		
SNNPs	Soddo	5	26	56	87	21
	Hawassa	5	44	85	134	32
Oromia	Ambo	5	31	55	91	22
	Nekempte	5	40	61	106	25
Total		20(5%)	141(34%)	257(61%)	418	100

According to Table 2, 87 (21%), 134(32%) 91(22%) and 106(25%) participants were from Soddo, Hawassa, Ambo and Nekempte TVET institutes, respectively. Further more, Table 2 depicts the proportions of the participants as 20(5%) top managements, 141(34%) instructors and 257(61%) students. From these proportions, it is possible to claim that the majority of the stakeholders (instructors and students) in the selected institutes were participated in the study.

This shows that majority of the stakeholders were reasonably presented and the data obtained from these participants is believed to be strong enough to describe the current status of the quality of TVET program in the selected institutes in particular, and to make inferences to other similar TVET programs.

Table 3: Respondents' Qualifications, Experience and Year Levels

Managements & instructors			Managements & instructors			Students		
Qualifications	N	%	Experience in Year	N	%	Year	N	%
BA	21	13	2-7	98	61	2 nd	106	41
BED	26	16	8-13	35	22	3 rd	151	59
BSc	44	27	14-19	14	9			
Dip	67	42	20-25	10	6			
MA	3	2	26-31	4	2			
Total	141	100		161	100		257	100

Table 3 shows qualifications and experiences of top managements and instructors; and year levels of students. According to Table3, 21(13%) BA, 26(16%) BED, 44(27%) BSc, 67(42%) diploma and 3(2%) MA graduates involved in the study. That means 91(56%) first degree, 67(42%) diploma and 3(2%) MA graduates of the staff involved in the study. Table3 also show that 98(61%) staffs had teaching experience of 2-7 years while 63(39%) of them had teaching experiences of more than 7 years in TVET institutions. The data reveals that most of the program is run by first degree and diploma graduates. Furthermore 106(41%) and 151(59%) of second year and third year students were the other participants of the study, confirming that they are relatively matured enough to reflect their views critically about the actual status of teaching learning processes in their respective institute.

4.1.2 Institutional Management Issues

In order to look at the basic research questions, it is important to have a better understanding of the current institutional management issues of TVET program. Institutional management issues in this particular study addresses issues that have direct impact on the quality of teaching learning process to ensure the quality of the program. It constitutes 8 items on evaluation and monitoring of achievement of institutional goals, participatory decision making, qualification and competence of to management, criteria of staff promotion, encouragement and rewards for teaching learning innovations and institutional periodical assessment which are common to all participants. The overall mean values and standard deviation of items were presented in Table4.

Table 4: Descriptive Statistics of Institutional Management Issues by institutes

Variable	Institutes	N	Mean	Std. Dev.
Institutional Management issues	Soddo	87	18.58	4.02
	Hawassa	134	22.17	7.50
	Ambo	91	22.78	9.30
	Nekampete	106	22.56	9.12
Total		418	21.66	8.10

The results in Table 4 indicate that all the selected institutes have responded differently about institutional management issues. For instance, the overall mean and standard deviation of Soddo TVET institute (mean=18.58 & SD=402) shows disagreement against issues related to institutional management .However, the overall mean and standard deviation of the three institutes (Hawassa, Ambo, and Nekampete TVET) 22.17 & 7.50; 22.78 & 9.30; and 22.56 & 9.12, respectively shows similar responses which indicate that the institutes have undecided about

their respective institutional management issues. This is because of the fact that the participants in each institute have disagreed in some the items of management issues like monitoring achievement of institutional goals and problems areas, and involvements of instructors and students in decision making areas. The institutional management problem was also found to be incompetence of top managements as all institutes responded (see appendix A). From the result described in Table 4, it can be said that all the institutes have institutional management problems which could in turn have a negative impact on quality of training offered.

Table 5: Summary of ANOVA of Institutional Management Issues by Institutes

Variable	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.
Institutional management issues	Between Groups	1059.314	3	353.105	*5.388	.001
	Within Groups	27130.447	414	65.532		
Total		28189.71	417			

* shows statistically significant mean differences between institutes

The ANOVA summary Table 5 shows that the selected institutes differ significantly in their institutional management issues ($F_{(3, 414)} = 5.388, p=0.001$). That means all the selected institutes (Soddo, Hawassa, Ambo and Nekampite) do not have similar institutional problems. This indicates that the institutes have no similar conducive environment to ensure the quality of training offered, which in turn result in institutional quality differences. As clearly indicated in appendix A, even though the degrees of seriousness differ from institute to institute, all the selected institutes have disagreed against some of the items related to institutional management issues like competence of

top managements, participatory decision making and encouragement and rewards for teaching and learning innovative. To find out the institutes that are statistically differed from each others, post hoc-multiple comparison was made using scheffe test as shown in Table6.

Table 6: Post - hoc Tests of Institutional Management Issues by Institute

Variable	(I)institutes	(J)Institutes	(I-J) Mean Difference	Sig.
Institutional management issues	Soddo	Hawassa	-.46348(*)	.000
		Ambo	-.41043(*)	.000
		Nekamppte	-.36931(*)	.000
	Hawassa	Soddo	.46348(*)	.000
		Ambo	.05305	.933
		Nekamppte	.09417	.683
	Ambo	Soddo	.41043(*)	.000
		Hawassa	-.05305	.933
		Nekamppte	.04112	.972
	Nekamppte	Soddo	.36931(*)	.000
		Hawassa	-.09417	.683
		Ambo	-.04112	.972

* shows statistically significant mean differences between institutes

From Table 6, it is clearly observed that the difference was observed between Soddo and the rest of the other TVET institutes. That means, there is no statistically significant difference observed in the rest of the three institutes. The implication is that even though all the selected institutes have disagreed in some of the items addressing issues related to institutional management, the three institutes, namely Hawassa,

Ambo and Nekampite TVET are better than Soddo TVET as observed in Table 4. This is why statistically significant difference in institutional management was observed between Soddo and the rest of the three institutes.

Furthermore analyses were made in between the respondents on the same items analyzed in the preceding section (Table4). The overall mean and standard deviation of all items of institutional management issues was presented as shown in Table 7 below.

Table 7: Descriptive Statistics of Institutional Management Issues by Respondents

Variable	Respondents	N	Mean	Std. Dev.
Institutional management Issues	Managements	20	27.10	3.22
	Instructors	141	15.58	2.47
	Students	257	13.64	2.49
Total		418	18.67	2.61

From Table 7, it is clearly seen that the managements have agreed (mean= 27.10 ,SD= 3.22) while the instructors and students disagreed (mean 15.58 & SD 2.47 and 13.64 & SD= 2.49) respectively. This shows that the top managements have different outlook as compared to the instructors and the students. The implication is that instructors and students have similar understanding of their institutional management while the top management responded differently. Furthermore the overall (mean = 18.67, SD= 2.61) also shows the participants did not agree their institutional management issues of their respective institute. This is because of the fact that student and instructors participated in the study by far exceed those of the top management, the overall mean showed disagreement of the participant towards issues related to institutional management.

Table 8: Summary of ANOVA of Institutional Management Issues by Respondents

Variable	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.
Institutional management issues	Between Groups	17233.982	2	8616.991	*326.408	.000
	Within Groups	10955.778	415	26.399		
Total		28189.761	417			

* shows statistically significant mean differences between respondents

Table 8 shows that there is statistically significant difference ($F_{(2, 415)} = 326.408$, $p=0.000$) between the participants respondents (top managements, instructors and students) in their institutional management issues. This indicates that the stakeholders have different views about their institutional management issues.

Table 9 : Post -hoc Tests of Institutional Management Issues by Respondents

Variable	(I) Respondents	(J) Respondents	(I-J)Mean Difference	Sig.
Institutional management issues	Managements	Instructors	1.80036(*)	.000
		Students	1.79924(*)	.000
	Instructors	Managements	-1.80036(*)	.000
		Students	-.00111	1.000
	Students	Management	-1.79924(*)	.000
		Instructors	.00111	1.000

* shows statistically significant mean differences between respondents

According to Table 9, a statistical difference is observed between top managements, and the others (students and instructors). Surprisingly, students and instructors have the same opinion about institutional management problem as observed in the preceding tables. This in turn could probably suggest that institutional management system is not favorable for students and instructors in each of the selected institute.

Hence, it is too difficult to ensure the quality of training where there is no common understanding among the top managements and the other stakeholders. As observed in preceding tables, one can conclude that even though level of agreement varies from institute to institute or respondents to respondents, in all institutes there is no clear institutional management structure which involves the stakeholders to ensure the quality of the program.

4.1.3 Educational Facility Issues

Educational facilities in this particular study addresses lecturing space accommodation, workshop facilities, latest books and journal availability, relevant training equipments in accordance with practical activities, relevant training modules and relevant factories or serving giving organization availabilities were the major area covered. This section constitutes 9 common items for all participants. The rest of items were analyzed separately as shown in appendices E, F, G&H.

Table 10: Descriptive Statistics of Educational Facility Issues by Institutes

Variable	Institutes	N	Mean	Std. Dev
Educational facilities	Soddo	87	18.3218	8.20
	Hawassa	134	22.5493	9.51
	Ambo	91	23.1344	9.66
	Nekampete	106	22.6371	9.57
Total		418	21.716	9.49

Table 10, indicates that the overall mean (mean 21.716, SD=9.49) of educational facilities still fall in the range of disagreement. Furthermore institutes have different mean values implying that educational facilities may differ from institute to institute.

From Table 10, it is possible to suggest that the quality and the relevancy are not adequate. In most of the selected institutes their responses fall into in the range of disagreement as described in appendices E and G. This shows that, the variability of relevant training facilities are very limited which in turn suggest a low quality of training in each institutes. To know whether or not institutes have different educational facilities ANOVA was made as shown in Table 11 below.

Table 11: Summary of ANOVA of Educational Facility Issues by Institutes

Variable	Sources of variations	Sum of Squares	Df	Mean Square	F	Sig.
Educational facilities	Between Groups	570.523	3	190.174	4.906	.037
	Within Groups	36962.178	414	49.281		
Total		37532.701	417			

* shows statistically significant mean differences between institutes

From Table 11, there is statistically significant differences in educational facilities between the participant institutes ($F_{(3, 414)} = 4.906, p < 0.05$). From Table 11, it is possible to tell that, even though, all institutes disagreed against the relevancy and availability of training facilities, there is statistically significant difference between institutes. The implication is that availability of training materials not the same in each institute. Thus the quality of training offered might not be the same. Therefore it is difficult to expect the same quality of graduates from the same training program. To know the institute that differs significantly from the rest of the institute post-hoc test was made using scheffe test as shown in Table 12 below.

Table 12. Post hoc Tests of Educational Facility Issues by Institutes

Variable	(I) institutes	(J) institutes	(I-J) Mean Difference	Sig.
Educational facilities	Soddo	Hawassa	-.11684	.526
		Ambo	-.24019(*)	.048
		Nekampete	-.17538	.209
	Hawassa	Soddo	.11684	.526
		Ambo	-.12336	.466
		Nekampete	-.05855	.890
	Ambo	Soddo	.24019(*)	.048
		Hawassa	.12336	.466
		Nekampete	.06481	.888
	Nekampete	Soddo	.17538	.209
		Hawassa	.05855	.890
		Ambo	-.06481	.888

*shows statistically significant mean differences between institutes

From Table 12, statistically significant difference was observed in between Ambo and the rest of TVET institute. Even though all the institutes have disagreed the adequacy and relevancy of appropriate training equipments, Ambo TVET is relatively better than the rest of the selected institutes in training facilities. This in turn might indicate that the trainees in Ambo TVET might be exposed to practical activities than the other selected institutes (see Table 10 and appendix E). To know whether or not the respondents of each institute have agreed or not analysis was made in between management, instructors and students as shown in the following manner.

Table 13: Descriptive Statistics of Educational Facility Issues by Respondents

Variable	Respondents	N	Mean	Std. Dev.
Educational facilities	Managements	20	34.163	8.325
	Instructors	141	22.731	6.397
	Students	257	24.243	7.524
Total		418	27.23	7.573

The other intent of the study was to compare the agreements of top managements, instructors and students about the relevance and availabilities of training facilities. Table 13 shows that the top managements (Mean 34.163, SD= 8.325) have agreed about the availabilities and relevancy educational facilities while instructors and students (mean 22.731, SD= 6.397, and 24.243, SD= 7.524) respectively have shown that they disagreed about the relevancy and availabilities of educational facilities. From the responses of both instructors and students one can say that shortage of appropriate educational facility (training equipments) in each institute is adversely affecting the quality of training offered in TVET program.

Table 14: Summary of ANOVA of Educational Facility Issues by Respondents

Variable	Sources of variations	Sum of Squares	Df	Mean Square	F	Sig.
Educational facilities	Between Groups	20658.388	2	10329.194	*254.032	.000
	Within Groups	16874.313	415	40.661		
Total		37532.701	417			

*shows statistically significant mean differences between respondents

Table 14 depicts that there is statistically significant differences ($F_{(2, 415)} = *254.032$, $p=0.000$) between the stakeholders of each institute. It is possible to say that there is no similar understandings of training equipments /educational facilities/ among the respondents of each institute as observed in the Table 14. Both students and instructors reported that no relevant and adequate training materials are available, while the top management reported on the contrary (appendix H).

Table 15. Post -hoc Tests of Educational Facilities Issues by Respondents

Variable	(I) Respondents	(J) Respondents	Mean Difference(I-J)	Sig.
Educational facilities	Managements	Instructors	.61626(*)	.000
		Students	.71195(*)	.000
	Instructors	Managements	-.61626(*)	.000
		Students	.09569	.256
	Students	Management	-.71195(*)	.000
		Instructors	-.09569	.256

* shows statistically significant mean differences between respondents

Table 15 shows that the difference was seen between top managements and the rest of the respondents (instructors and students). In all the analysis made between the respondents the variation is observed between top managements and; students and instructors. The fact is that the daily users of educational facilities are both instructors and students. Therefore the two groups (students and instructors) are more cognizant of the situation than the top managements.

In this connection, the availability and relevance of educational facility comes from financial matters including budget allocation and resource distribution based on the

need assessment of each training programs. This can be practical when instructors and students are involved in decision making. However, as observed under institutional management issues no room is available for both instructors and students in decision making areas. This is why there is statistically significant differences observed between the top managements and others regarding training facilities. In line with this the degree of commitment by top management with respect to facilitating relevant training materials to ensure the quality of training offered in TVET program will be questionable.

4.1. 4 Streaming Procedures of Students to TVET Program

In this section 9 items that are related streaming procedures were analyzed. These include opportunity given to students how to choose field of study on the basis of their interest, EGSECE as basic criteria of the MOE to determine the admission of trainees to TVET, orientation given during admission about fields of study, the relations of courses of high school to encourage the students to join TVET and physical fitness of the students during admission to TVET are major area observed under streaming processes of students to TVET program in this particular study.

Table 16: Descriptive Statistics of Streaming Procedures by Institutes

Variable	Institutes	N	Mean	Std. Dev.
Streaming procedure	Soddo	87	18.896	5.28
	Hawassa	134	19.241	5.16
	Ambo	91	18.643	5.27
	Nekampete	106	18.765	5.15
Total		418	18.71	5.21

From Table 16, over all mean (mean 18.71, SD= 5.21) depicts that all institute disagreed about admission criteria of students to TVET program. One can see that the seriousness of admission issues, especially the criteria set by MOE for TVET entry requirement strongly disagreed by all TVET institutes (see appendix I &J).

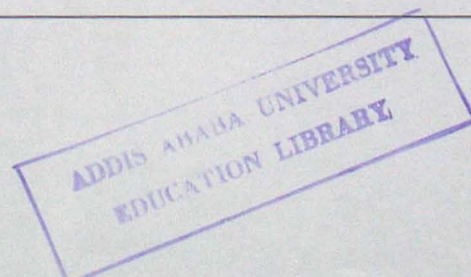
Table 17: Summary of ANOVA of Streaming Procedures by Institutes

Variable	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.
Streaming procedures	Between Groups	468.901	3	156	8.337	.078
	Within Groups	12124.087	414	19.285		
Total		12592.988	417			

Table 17, depicts that there is no statistically significant differences between institutes ($F_{(3, 414)} = 8.337, p > 0.05$). From Tables 16 and 17 and appendix I, it can be concluded that all the selected institutes have disagreed about the admission criteria of students to TVET program. It meant that, the streaming procedures of students to TVET equally threatening all the selected institutes.

Table 18: Descriptive Statistics of Streaming Procedures by Respondents

Variable	Respondents	N	Mean	Std. Dev.
Streaming procedures	Managements	20	21.850	7.058
	Instructors	141	18.872	.6.223
	Students	257	21.101	4.735
Total		418	20.385	5.495



From Table 18 over all mean (mean =20.385, SD= 5.495) shows that, the respondents have disagreed on admission criteria. However instructors are more resistant than the top managements and students. To show whether or not, there exists statistically significant difference between the respondents ANOVA was made as shown in Table 19 below.

Table19: Summary of ANOVA of Streaming Issues by Respondents

Variable	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.
Streaming procedures	Between Groups	497.366	2	248.683	*8.532	.000
	Within Groups	12095.622	415	29.146		
Total		12592.988	417			

* shows statistically significant mean differences between respondents

According to Table 19, there exist statistically significant difference ($F_{(2, 415)} = 8.532, p=0.000$) between the respondents. The implication is that differences came from differences in perceptions of top managements, instructors and students about the qualities of students entering the TVET program.

Table 20: Post Hoc Tests of Streaming Issues by Respondents

Variables	(I) respondents	(J) respondents	(I-J) Mean Difference	Sig.
Streaming procedures	Managements	Instructors	.33085	.071
		Students	.08320	.837
	Instructors	Managements	-.33085	.071
		Students	-.24765(*)	.000
	Students	Management	-.08320	.837
		Instructors	.24765(*)	.000

*shows statistically significant mean differences between respondents

Table 20 shows that the difference is observed between instructors and students. Even though, students are little bit proud of the admission criteria which is impractical, instructors are responsible to evaluate students competence based on their experiences. Interestingly enough, instructors can qualify the qualities of students entering TVET program than top managements and students.

Table 21: Descriptive Statistics of EGSECE, GPA of Students by Institutes

Variable	Institutes	N	Mean	St. Dev.
EGSECE GPA	Soddo	56	2.063	.129
	Hawassa	85	2.092	.204
	Ambo	55	2.113	.206
	Nekampte	61	2.235	.189
Total		257	2.124	.197

The mean values of EGSECE GPA were computed based on the result of student achievement in grade 10 completions collected through questionnaire.

From the descriptive statistics of students EGSECE GPA of Table 20, all students entering their respective institutes have the minimum pass mark as compared to the criteria set by MOE for the current TVET program. This show that those students actually failed to join preparatory program are joining TVET program (see appendix M).

Table 22: ANOVA for EGSECE GPA as TVET Entry Requirements by Institute

Variable	Sources of variances	Sum of Squares	df	Mean Square	F	Sig.
EGSECE GPA	Between Groups	1.052	3	.351	*9.978	.000
	Within Groups	8.854	253	.035		
Total		9.906	256			

* shows statistically significant mean differences between institutes

From Table 22, it is revealed that there exist statistically significance differences ($F_{(3, 253)} = 9.97, p = 0.000$) between the institutes in EGSECE GPA of students as entry requirement. This may predict the differences in competences of students in each institute, which in turn, brings institutional quality differences in the quality of training given in each institute in the same training program.

Table 23. Post -hoc Tests of EGSECE GPA by institutes

Variable	(I) Institutes	(J) Institutes	(I-J) Mean Difference	Sig.
EGSECE GPA	Soddo	Hawassa	-.02917	.846
		Ambo	-.04988	.581
		Nekampite	-.17199(*)	.000
	Hawassa	Soddo	.02917	.846
		Ambo	-.02071	.939
		Nekampite	-.14282(*)	.000
	Ambo	Soddo	.04988	.581
		Hawassa	.02071	.939
		Nekampite	-.12211(*)	.007
	Nekampite	Soddo	.17199(*)	.000
		Hawassa	.14282(*)	.000
		Ambo	.12211(*)	.007

*shows statistically significant mean differences between institutes

Table 23 shows that the difference is observed between Nekampite TVET and the rest of the participant institutes. As shown in previous Table 21, the mean of students' EGSECE GPA of Nekampite TVET (2.23, SD 0.18) is better than the rest of other institutes. Therefore, the variation of students EGSECE GPA for entry

requirement may affect the quality of students' performance in each institute which brings about institutional quality differences.

The findings of data described in Tables 16 through 23 shows that streaming procedures of students to TVET program is those who have practically failed to join preparatory program, which is a tangible reason for the program to be considered for the failures only. That means students with better performance in EGSECE are not encouraged to join TVET program. Thus the qualification of students joining TVET program is one of the other chronic problem to ensure the quality of training.

4.1.5 The Delivery of Teaching Learning Process

This section presents the actual content delivery of the subject matter, technological support in a manner appropriate to the program, the language level of the learning materials, practicality of teaching learning process, and frequencies of teaching and evaluation methods. The results of the study will be described in the following manner.

Table 24. t-tests for Instructors and Students about Teaching-Learning Approaches

Variable	Respondents	N	Mean	St.Dev	t	Sig
Teaching –learning approach	Instructors	141	28.907	8.729	*6.110	.000
	Students	256	24.226	6.389		

As depicted from Table 24, there is statistically significant differences between students' and their instructors in mode of delivery expectation by both groups ($t = 6.110$ $p = 0.000$). This shows that instructors and their students have different outlook on the needs and challenges of all targeted groups in the program. From this point of view, it possible to judge that TVET program is not getting its target.

Table 25. Frequency of Teaching Methods by Institutes

Teaching methods		Soddo	Hawassa	Ambo	Nekampete	Total	χ^2
1.Demonstration	Always	18	62	29	37	146	*18.66
		22.0%	48.1%	33.7%	36.6%	36.7%	
	Some times	46	54	48	51	199	
		56.1%	41.9%	55.8%	50.5%	50.0%	
	Not at all	18	13	9	13	53	
		22.0%	10.1%	10.5%	12.9%	13.3%	
2.Lecture	Always	41	71	48	55	215	9.87
		50.0%	55.0%	55.8%	54.5%	54.0%	
	Some times	28	45	30	44	147	
		34.1%	34.9%	34.9%	43.6%	36.9%	
	Not at all	13	13	8	2	36	
		15.9%	10.1%	9.3%	2.0%	9.0%	
3.Project work	Always	18	34	38	28	118	*30.622
		22.0%	26.4%	44.2%	27.7%	29.6%	
	Some times	46	61	36	67	210	
		56.1%	47.3%	41.9%	66.3%	52.8%	
	Not at all	17	32	12	6	67	
		20.7%	24.8%	14.0%	5.9%	16.8%	

*shows statistically significant mean differences between institutes at $p = 0.05$

Table 25 shows an attempt that the selected institutes frequently practice teaching methods. According to Table 36.7% responded that they use demonstration always while 50% and 13.3% uses sometimes; and not at all, respectively. These demonstrate that most of the selected institutes' teaching practice in this particular method is not practically oriented. Furthermore the frequency of teaching methods (demonstration) is not the same from institute to institute.

From the chi-square test analysis ($\chi^2 = 18.663$, $p < 0.005$) shows that there is statistically significant difference between institutes in practices of demonstration teaching methods.

From Table 25 item 2, 54% of the institutes responded that lecturing methods of teaching practiced frequently. This teaching method is similarly practical in each institute. The chi-square analysis ($\chi^2 = 9.38$, $p > 0.05$) shows that there is no statistically significant difference between the participant institutes. Therefore, one can argue that TVET institutes, lecturing teaching methods frequently practiced as that of academic stream. This demonstrates that more of knowledge transfer than skill transfer training as lecturing teaching method dominates the other activities in all the selected institutes.

Furthermore item 3 of Table 25 depicts that project work method of teaching is practiced some times. However this particular teaching method is not the same in all the selected institutes. For instance 56.1% of Soddo, 47.3% of Hawassa, 41.9% of Ambo and 66.3% of Nekampite institutes reported that, project work teaching method is practiced some times. The chi-square analysis ($\chi^2 = 30.22$, $p < 0.001$) shows that the project work teaching methods in each institutes statistically different. This suggests that difference in teaching methods can significantly affect the quality of training offered in the same program, which in turn results institutional quality differences.

From Table 25, in general, it is argued that the frequency of teaching methods are more of theoretical based teaching method which could help students to master the theoretical knowledge than the skill or practical work.

Therefore, an attempt that TVET to attain technically skilled manpower will be under question. Thus the intended goal of TVET quality may not be achieved based on this

justification. The fact that students of TVET institutes are expected to have acquired problem solving abilities might be a serious problem in the world of work as the general knowledge may not necessarily be helpful in practical world.

Table 26: Frequency of Teaching Methods by Respondents

Teaching methods		Instructors	Students	Total	χ^2
1. Demonstration	Always	51	95	146	.473
		36.2%	37.0%	36.7%	
	Some times	69	130	199	
		48.9%	50.6%	50.0%	
	Not at all	21	32	53	
		14.9%	12.5%	13.3%	
2. Lecture	Always	51	149	200	*11.30
		36.2%	50.2%	50.25%	
	Some times	86	96	182	
		61.0%	37.4%	45.73%	
	Not at all	4	12	16	
		2.8%	4.67 %	4.02%	
3. Project work	Always	62	56	118	*23.83
		44.0%	21.8%	29.6%	
	Some times	56	154	210	
		39.7%	59.9%	52.8%	
	Not at all	23	44	67	
		16.3%	17.1%	16.8%	

*shows statistically significant mean differences between respondents at $p=0.05$

From Table 26 of item1, majority of the instructors 48.9% and students 50.6% reported that demonstration is used sometimes in their respective classes. Moreover the chi-square analysis ($\chi^2=0.473$, $p>0.05$) shows there is no statistically significant differences between students and instructors against this teaching methods.

As observed in item 2 of Table 26, majority of the respondents 200(50.25%) reported that lecturing method is practiced frequently, while others 182(45.73%) and 16(4.02%) reported as lecturing method is practiced sometimes; and not at all, respectively. However majority of the instructors, 61% responded that lecturing methods used some times while majority of the students 149(50.2%) reported that lecturing is used always. This shows that there are different views reflected between instructors and students against this teaching method. Furthermore, the chi-square analysis ($\chi^2 = 11.30$, $p < 0.05$) shows that there is statistically significant differences between the two respondents. Even though instructors and students have contradicting ideas against the frequent use of lecturing method, from analysis of the above findings in Table 25 mentioned, it is possible to conclude that lecturing method is predominantly practiced.

In item 3 of the same Table 26, there exist contradiction in project work teaching method between students and instructors. From Table 26, 52.8% reported that project work methods of teaching employed sometimes while 29.6% reported that it is employed always. However 62(44.0%) of instructors reported that it is employed always while 56(39.7%) of instructors and 154(59.9%) of students reported that project work teaching method is employed sometimes. Moreover the chi-square analysis ($\chi^2 = 23.836$, $p < 0.01$) shows there is statistically significant differences between the two respondents. From this analyses made in Table 26, as indicate by majority of the respondent (52.8%) practice of project work teaching method was employed some times.

Therefore one can deduce that students were not well exposed to the variety of project /practical/ works which may have negative impact on the quality of the training program.

Table 27: Frequency of Evaluation Methods by Institutes

Evaluation		Soddo	Hawassa	Ambo	Nekampete	Total	χ^2
items							
1. Final examination	Always	46	72	54	59	231	5.878
		56.1%	55.8%	62.8%	58.4%	58.0%	
	Some times	25	48	21	31	125	
		30.5%	37.2%	24.4%	30.7%	31.4%	
	Not at all	11	9	11	11	42	
		13.4%	7.0%	12.8%	10.9%	10.6%	
2. Continuous assessment	Always	29	55	44	39	167	*25.707
		35.4%	42.6%	51.2%	38.6%	42.0%	
	Some times	36	55	40	58	189	
		43.9%	42.6%	46.5%	57.4%	47.5%	
	Not at all	17	19	2	4	42	
		20.7%	14.7%	2.3%	4.0%	10.6%	
3. Assignment or project work	Always	12	34	43	34	123	*40.304
		14.6%	26.4%	50.0%	33.7%	30.9%	
	Some times	58	65	35	58	216	
		70.7%	50.4%	40.7%	57.4%	54.3%	
	Not at all	11	30	8	9	58	
		13.4%	23.3%	9.3%	8.9%	14.6%	

*shows statistically significant mean differences between institutes at $p=0.05$

According to Table 27 item 1, majority of the institutes (58%) reported that final examination is practiced frequently while the rest (31.4%) and 10.6% reported that it is used some times and not at all respectively. Moreover chi-square analysis ($\chi^2=5.878$, $p>0.05$) shows that there is no statistically significant differences

against this particular evaluation method between each institutes. Therefore one can determine that final examination is employed predominantly as an evaluation method of student performances. From item 2 of Table 27 majority (47.5%) of the institute reported that continuous assessment is employed some times, while the rest (42.0%) and (10.6%) reported that it is practiced always; and not at all, respectively. However the result of chi-square ($\chi^2 = 25.707$, $p < 0.001$) shows there is statistically significant difference between institutes against this item. Thus it is possible to argue that institutional differences in evaluation methods of student performance may result institutional quality differences. Moreover this finding contradicts the criteria that MOE recommended as 70% continuous assessment and 30% final examination.

Furthermore as the basic issue of TVET program is to produce skillful technicians, the daily assessment of practical work is more recommended than final examination. Therefore it is difficult to attain the qualified technicians by predominantly final examination evaluations only.

From Table 27 of item3, assignment or project work evaluation method is used sometimes as reported by majority (54.3%) of the institutes, while 30.9% reported as always; and 14.6% reported as not at all. The result of chi-square ($\chi^2 = 40.304$, $p < 0.001$) shows that there is statistically significant different between institute in project work evaluation method, which could in turn result institutional quality differences.

Table 28: Frequency of Evaluation Methods by Respondents

Evaluation items		Instructors	Students	Total	
1. Final examination	Always	67	58	125	
		47.5%	22.6%	31.4%	
	Some times	64	167	231	*26.544
		45.4%	65.0%	58.0%	
	Not at all	10	32	42	
		7.1%	12.5%	10.6%	
2. Continuous tests	Always	89	78	167	
		63.1%	30.4%	42.0%	
	Some times	47	142	189	
		33.3%	55.3%	47.5%	*42.673
	Not at all	5	37	42	
		3.5%	14.4%	10.6%	
3. Assignments / project work/	Always	67	56	123	
		47.5%	21.8%	30.9%	
	Some times	52	164	216	*32.484
		36.9%	63.8%	216.0	
	Not at all	22	36	58	
		15.6%	14.0%	14.6%	

*shows statistically significant mean differences between respondents at $p = 0.05$

From Table 28, even though the majority (58%) reported that, final examination is employed as an evaluation method some times, the proportion of the respondents (instructors and students) is not similar. For instance 67 (47.5%) instructor and 58

(45.4%) and 167 (65.0%) reported as sometimes. Moreover the chi-square analysis ($\chi^2 = 26.544$, $p < 0.001$) shows there exist statistically significant difference between students and instructors.

Table 28, item 2 and 3, show that both the students and instructors responded differently against continuous test; and project work evaluation methods. The chi-square result ($\chi^2 = 42.673$, $p < 0.001$) also suggests that there is statistically significant differences between the two respondents. As observed from the Table 28, 89(63.1%) of instructors and 78(30.4%) of students reported as always, while 47(33.3%) of instructors and 142 (55.3%) of students reported as some times against the continuous assessments.

From Table 28, item3, 67(47.5%) of instructors and 56(21.8%) of students reported as always against project work evaluation method, while 52/36.9% of instructors and 164 (63.8%) of students reported as some times. The chi-square result ($\chi^2 = 32.484$, $p < 0.001$) shows that there is statistically significant differences between the instructors and students against project work evaluation method.

From the above results, it is possible to recognize that evaluation of students' performance practiced by each institute depends mostly on scheduled final examination which could entail problems. That means the exposure of the students to different sources of skills can be limited which might have come across by doing different practical works.

The other problem is that the views of instructors and students are not similar in each of the frequently used evaluation methods as observed in Table 28. This difference comes from the fact that students are not getting their expectation from TVET program training accordingly. As a matter of fact the frequency evaluation method of students' performance depends on the frequency of teaching methods.

From the observed result of teaching methods in preceding Table 25, and 27, it possible to conclude that evaluation of the student performance is also theory based like final examinations. Therefore it is highly argued that both the class room induction and evaluations are theory laden lather than practical laden.

4.1.6 Issues Related to Availability, Competence and Institutional Quality Assurance Practices

In this section availability, competence of instructors to utilize the existing training materials, competency of students to the required level, instructors' promotion and appointment criteria, institutional quality practices and analysis of major factors affecting the quality of TVET program are major area of the study analyzed between institutes and respondents as demonstrated in the following manner .

Table 29. Availability and Competence by Institutes

Items		Soddo	Hawassa	Ambo	Nekampete	Total	χ^2
1. How do you rate the availability of instructors in your institution?	Adequate	21	38	25	24	108	8.405
		24.1%	28.4%	27.5%	22.6%	25.8%	
	Moderate	55	65	49	67	236	
		63.2%	48.5%	53.8%	63.2%	56.5%	
	Inadequate	11	31	17	15	74	
		12.6%	23.1%	18.7%	14.2%	17.7%	
2. How competent academically are most students at your institution?	Competent	26	20	21	20	87	*17.914
		29.9%	14.9%	23.1%	18.9%	20.8%	
	Moderate	26	36	36	43	141	
		29.9%	26.9%	39.6%	40.6%	33.7%	
	Incompetent	35	78	34	43	190	
		40.2%	58.2%	37.4%	40.6%	45.5%	
3. Do you think that the instructors are capable enough to utilize the existing equipments for practical purposes?	No	36	29	26	46	137	*22.956
		41.40%	21.60%	28.60%	43.40%	32.80%	
	Yes	41	91	56	43	231	
		47.10%	67.90%	61.50%	40.60%	55.30%	
	No response	10	14	9	17	50	
		11.50%	10.40%	9.90%	16.00%	12.00%	

*shows statistically significant mean differences between institutes at $p=0.05$ *

Table 29 item 1, shows that majority of the institutes 236 (56.5%) reported that availabilities of instructors is moderate, while 108 (25.8%) reported as adequate and 74 (17.7%) reported as inadequate respectively. From the descriptive statistics of the Table 29, even though the proportion of respondents was slightly different, the chi-

square result ($\chi^2 = 8.4.5$, $p > 0.05$) shows that the availabilities of instructors in all the selected institutions is similar.

Table 29 item 2 shows that, from the total proportion 190 (45.5%) responded as incompetent; 141 (33.7%) responded as moderate; and 87(20.8%) responded as competent respectively. However, 35(40.2%) of Soddo, 78(58.2%) of Hawassa, 34(37.4%) of Ambo and 43 (40.6%) of Nekampite institutes reported that the competence of the students are incompetent. This shows competency of students vary from institute to institute. Furthermore, the result of chi- square ($\chi^2 = 17.91$, $p < 0.001$) depicts that there is statistically significant differences of students academic competency from institute to institute.

Table 29, item3 revealed that from the overall proportions, 231(55.3%) reported as no, while the rest reported yes; and no response, respectively. But the proportion in each institute differs from one another. For instance 41(47.1%) of Soddo, 91 (67.9%) of Hawassa, 56(61.5%) Ambo and 43(40.6%) of Nekampite reported that instructors are capable of utilizing existing equipments. From the chi-square result ($\chi^2 = 22.95$, $p < 0.001$) shows that there is statistical difference between each institute in competences of instructors. This could in turn results institutional quality difference as quality training comes from the quality of instructors.

Table 30: Availability and Competence by Respondents

Items		Managem ents	Instruct ors	Student s	Total	χ^2
1. How do you rate the availability of instructors in your institution?	Adequate	9	17	82	108	*39.282
		45.0%	12.1%	31.9%	25.8%	
	Moderate	9	80	147	236	
		45.0%	56.7%	57.2%	56.5%	
	Inadequate	2	44	28	74	
		10.0%	31.2%	10.9%	17.7%	
2. How competent academically are most students at your institution?	Competent	4	32	105	141	*19.834
		20.0%	22.7%	40.9%	33.7%	
	Moderate	5	32	112	149	
		25.0%	28.8%	43.6%	35.6%	
	Incompetent	11	67	40	128	
		55.0%	47.5%	15.6%	30.6%	
3. Do you think that the instructors are capable enough to utilize the existing equipments for practical purposes?	Yes	8	91	132	231	* 23.602
		40.00%	64.50%	51.40%	55.3%	
	No	7	43	85	135	
		43.50%	30.50%	33.10%	32.3%	
	No response	5	7	40	52	
		16.50%	5.00%	15.60%	12.40%	

*shows statistically significant mean differences between respondents at $p=0.05$

From Table 30 item 1, 256 (56.5%) of respondents reported that the availability of instructors are moderate; 108 (25.8%) reported as adequate; and 74(17.7%) reported as inadequate respectively. However 80(56.7%) of instructors; and 147(57.2) students were reported that availabilities of instructors is moderate, while 44(31.2%) of instructors; and 28(10.9%) of students reported as inadequate. Contrary to this, 18 (90%) of top management responded as adequate and

moderate. Furthermore from the analysis of chi-square ($\chi^2 = 39.28$, $p < 0.001$) there is statistically significant differences between respondents of each institutes in availabilities of instructors. From the fact that, the daily activities of teaching and learning process, the recognition should be given to the students and instructors that, availability of instructors in each institute are inadequate. Therefore, the work load imposed on instructors could have negative impact on the quality of teaching and learning process.

From Table 30 item2, over all proportion, the majority 149(35.6%) responded as moderate; 141(33.7%) responded as competent ; while 128 (30.6%) reported as an incompetent. However, from the proportions of the respondents, majority of management and instructors 11(55.0%) and 67(47.5%) respectively responded as incompetent while 32(28.8%) of instructors responded as moderate. This shows that majority of top management and instructors have reported the incompetence of students to the required level, while majority students have reported as competent and moderate. Furthermore, the result of chi-square ($\chi^2 = 19.83$, $p < 0.001$) shows that there is statistically significant difference between students and instructors and top managements about academic competence of students. Therefore the responses of instructors can be taken as a valid research as instructors' feedback is believed to be based on evaluation performance of students in class room teaching, workshop practices and academic performances. Hence the academic competency the students can be considered as incompetent to the required level to cope up with the program.

From Table 30 item 3, the majority 231(55.3%) responded as yes; while 137(32.3%) responded as no; and 50(12.4%) responded as no response, respectively. From chi-square result ($\chi^2 = 23.602$, $p < 0.01$), there is statistically significant difference between respondents. From the analyses so far made instructors competence to the required level is not so bad as compared to the competence of students to cope up with the program. However about 48.7% of students are uncertain the competence of their instructors.

Table 31: Institutional Quality Assurance Practices

Items		Soddo	Hawassa	Ambo	Nekampete	Total	χ^2
1 Does your institute have policy and associated procedures for the quality assurance of the program?	Yes	44	41	56	42	183	*18.804
		50.60%	30.59%	61.50%	39.62%	43.77%	
	No	34	72	21	52	179	
		39.10%	53.71%	23.10%	49.08%	42.82%	
	No response	9	21	14	12	56	
		10.30%	15.70%	15.40%	11.30%	13.39%	
2. If your answer to the above item 1 is 'no', how do you rate its impact on quality	High	20	52	15	32	119	*17.591
		59.77%	72.38%	74.72%	62.26%	66.50%	
	Medium	10	17	5	16	48	
		29.88%	23.88%	23.07%	31.13%	26.82%	
	Low	4	3	1	4	12	
		10.34%	3.73%	2.19%	6.60%	6.68%	
3. Does your institute have criteria to appoint and promote the teaching staff?	Yes	5	16	13	22	56	*17.451
		16.1%	32.7%	36.1%	48.9%	34.8%	
	No	25	31	23	21	100	
		80.64%	63.26%	63.88%	46.66%	62.11%	
	No response	1	2	0	2	5	
		3.22%	4.08%	0%	4.44%	3.10%	
4. These days there is a critique that says quality of TVET is declining, do you agree?	Agree	59	116	76	74	325	14.48
		67.81%	86.56%	83.51%	69.81%	77.75%	
	Don't No	18	13	11	21	63	
		20.68%	9.70%	12.08%	19.81%	15.07%	
	Disagree	10	5	4	11	30	
		11.49%	3.73%	4.39%	10.37%	7.17%	

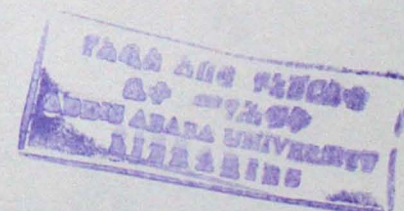
*shows statistically significant mean differences between institutes at $p = 0.05$ 

Table 31 item 1 demonstrates that 43.77% of the institutes reported that their institutes have policy and associated procedures for quality assurance of the program. However, the chi-square result ($\chi^2 = 18.804$, $p < 0.001$) shows that there is statistically significant difference between institutions against this particular item. For instance the majority of Hawassa (53.71%) and the majority of Nekampte (49.08%) responded as no, while majority of Soddo and Ambo (50.60%) and (61.50%) responded as yes, respectively.

From this result it can be argued that there are different practices of quality assurance procedures in each institute or different views among the respondents towards the quality assurance practices.

Item 2 of Table 31 shows that the absence of quality assurance procedure highly affects the quality of training as majority (66.5%) responded. However, the result of chi-square test ($\chi^2 = 17.591$, $p < .05$) shows that there is statistically significant differences between institutes about the impact of TVET quality assurance program. For instance 59.77% of Soddo ; 62.25% of Ambo; 72.38% of Hawassa ; and 74.72% of Nekampte responded as high.

Table 31 of item 3 depicts that majority 212 (50.7%) reported that the institutions have criteria to appoint and promote teaching staff, which shows positive contribution for quality of the program. However, the proportion of the responses in each institute is not the same. For instance, 41(47.1%) of Soddo; 91(67.9%) of Hawassa; 56(61.5%) of Ambo ; and 43 (40.6%) of Nekampte reported, as yes. That means majority of Soddo and Nekampte TVET institutes have reported as no and no response, respectively. Further more the result of chi-square test ($\chi^2 = 17.45$, $p < 0.05$) shows that institutions have no similar responses about appointment and promotion of teaching staff.

Table 31 of item 4 clearly demonstrates that the quality of TVET program is highly declined. Majority of the institutes (77.75%) have agreed that the quality of training has declined. Furthermore the chi-square analysis ($\chi^2 = 14.48$, $p > 0.05$) shows that there is no statistically significant differences observed about the quality of training offered in TVET institution.

4.1.7 Analyses of Major Significant Factors Affecting Quality of TVET Program

In this section shortage of qualified and competent man power, lack of adequate educational facilities and the quality of student joining the program were analyzed to predict the major significant factors that affect the training offered in TVET programs as shown in appendix N.

Appendix N of item1, depicts that, majority of the institutes 42.2 % and 36%, respectively reported that shortage of qualified and competent man power is moderate and significant factor in affecting the quality of TVET programs, while only 2.5 %; 4.3%; and 14.9% of the institutes, respectively reported as highly insignificant, insignificant and highly significant factor in affecting the quality of TVET programs. Furthermore, chi-square result ($\chi^2 = 24.960$, $p < 0.05$) shows that there is statistically significant difference between institutes against this item.

Even though differences in responses against this particular item observed between institutes, from the proportions of the respondents it is possible to argue that shortage of qualified and competent manpower is moderate in affecting the quality of the program.

Item 2 of appendix N, demonstrates that, it is lack of adequate educational facilities which is affecting the quality of TVET program. Accordingly majority of the institutes (58.4%); and (31.10%) respectively reported as highly significant; and significant factor in affecting the quality of the program. From the chi-square analysis ($\chi^2 = 13.182$, $p > 0.05$), there is no statistically significant difference observed between institutes about adequacy of educational facilities. Thus, one can conclude that the quality of TVET is highly affected from lack of adequate training materials.

Item 3 of appendix N shows that, the poor quality of students joining TVET is another chronic problem. According to appendix N, 52.6%% of the institutes reported that the poor quality of students joining the program is considered as highly significant in affecting the quality of the program while 29.2% and 18.6% reported as significant and moderate, respectively. Furthermore the result of chi-square ($\chi^2 = 33.693$, $p < 0.05$) shows that there is statistically significant difference between institutes about the quality of students joining TVET. For instance, 60% of Hawassa reported as highly significant while 32.2% of soddoo; 47.2 % of Ambo ; and 40.9 % of Nekampete reported, too. Even though the proportions of the responses of each TVET are different, from the overall proportion, it is possible to say that the poor quality of students joining TVET is the second most significant factor next to educational facilities in affecting quality of TVET program (see appendix N & figure 2).

4.1.8 Comparison with in Regions

In this case major variables such as institutional management issues, educational facilities, streaming procedures of students to TVET program, teaching approach, and students EGSECE GPA were analyzed using independent t-test as shown in Table 32 below.

Table 32: t-test Analyses of Similarities and Differences between the two Regions in major variables

Variables	Regions	N	Mean	Std. Dev.	t	Sig
Management issues	SNNP	221	20.764	8.589	-1.784	.075
	OROMIA	197	20.785	9.652		
Educational facilities	SNNP	221	25.429	9.115	-1.815	.084
	OROMIA	197	25.475	9.808		
Streaming procedure	SNNP	221	19.823	5.737	-1.724	.097
	OROMIA	197	20.015	5.152		
Teaching learning approach	SNNP	211	21.809	8.171	-1.718	.078
	OROMIA	187	22.096	9.704		
EGSECE GPA	SNNP	141	2.080	.177	**-4.122	.000
	OROMIA	115	2.279	.206		

**shows statistically significant mean differences between regions at $p=0.001$.

As shown in Table 32, the t-test analyses predict that, there are no statistically significant differences observed in all variables except EGSECE GPA. The implication is that all the selected institutions in the two regions have similar problems in all major variables as described in Table 32. However, the analysis of EGSECE GPA ($t=-4.122$, $p=000$), shows that there is statistically significant differences in EGSECE GPA which in turn brings about quality differences of students joining TVET programs in the two regions.

4.2 DISCUSSIONS

4.2.1 Institutional Management Issues

The quality of any training program is influenced by a multitude of factors and among which institutional management issue is the significant factor for the quality of training offered. The quality of training cannot be effectively implemented without the participation of the stakeholders directly involved in and affected by the process, namely instructors and students (Tesfaye, 2004). Effective and efficient management of training institution is often challenging, the most effective management in training institutions are likely to use flexible and innovative institutional system that require a high level of planning and managerial attention (Zenawi, 2007).

In this particular study, the respondents of each institute did not agree against most of the items related to institutional management issues. This means all the selected institutes have their own institutional management problem even though the degree of its seriousness varies from institute to institute. For instance institutes with no clearly identified strategies in place and no involvement of instructors and students in decision making areas, it is difficult to manage the quality of the institutes as a whole and that of training in particular.

Primarily the first stakeholders are students and instructors who know well about what their institutional daily activities. Therefore ignoring these groups from decision making area by itself may affect the quality of training seriously. One of the mechanisms to maintain the quality of training is periodic review and monitoring of

each of the training program. However, majority on the respondents in each institute have shown their disagreements (see Appendix A). The implication is that, there is no responsible body which coordinates such a monitoring and periodical review.

The institute with no well-defined management structure where instructors do not get involved in decision making, it is difficult to apply monitoring and evaluation of their training program. Therefore one can conclude that as the institutions have no clear management structures which involve the stakeholders, in particular students and instructors. Hawassa and Nekampte TVET institutes have shown to practice periodical evaluation of their programs, while Ambo and Soddo have not yet practiced. This institutional management difference observed in respective program evaluation, can cause institutional quality differences

Students and instructors are indispensable parts of the teaching and learning at all levels of education system. Hence, there is no question that they should have the right to participate in both academic as well as administrative decision making process (Tesfaye, 2004). It is expected of training institutions to include students in decision making bodies paying attention to their needs through their participating and opinions which are often relevant to the analysis of the problems and to search for viable solution. It is believed that students recognize that training institution, nowadays, is undergoing profound changes owing to, for instance, increased demand for access, reduce public funding, diversification of institutions and courses, growing globalization and possible persistence of employment crisis, they could identify and define their vision for future that TVET institutes should necessarily consider (Bath, 2003).

However, from the item 2 of appendix D the management of TVET institutes is not participatory. By and large, instructors and students do not fully agreed to institution management issues. It argued to say that, there are no common understandings in between top managements and instructors and students in their respective institutional management issue which might have a negative impact on the quality of training.

In general, the study shows that efforts of institutional management issues to establish a system in terms of ensuring the quality of TVET program strategies for monitoring achievements of institutional goals, placements of stakeholder in decision making, rewards of teaching learning innovation and periodical review of the program are constrained to ensure the quality of TVET program.

4.2.2 Educational Facilities

There should be a mechanism to check the availability and relevancy of learning materials to ensure the quality of the training program. Without sound structure and adequate and updated learning resources institution cannot assure the quality of the training offered (Teklehaimanot, 2002 & Desta, 2005).

Regarding to educational facilities in this particular study, very limited lecturing spaces and workshops, lack of latest books and journals, lack of equipments that are relevant for practical activities, lack of adequate and relevant training modules and lack of relevant factor or serves giving organization are the major chronic problems of TVET program. In all cases, all the selected institutes did not show their agreements against all items related to training facilities as observed in appendix E.

except that Hawassa and Nekampte TVET institutes have shown their agreement in availabilities of relevant factors and serving giving organization available around their institute. From the analysis made at institutional level all have the same views about the problems of educational facilities to promote training. Therefore, in any training institutions where the minimum standard required educational facilities not available, it is difficult to get the minimum required skill.

As a major area of TVET is preparing trainees for skill developments, it is too hard to achieve this goal where there are no adequate training modules and minimum equipments according to the needs for practical activities. From this survey study, all institutes are suffering from lack of lecturing space, practical works and equipments and training modules according to the needs. However, as observed in preceding Tables 10,11 and 12, the degree of the problems various from institute to institute. Ambo and Nekampte and Hawassa have similar problem while Soddo TVET is facing serious problem in lack of training facilities. From this one can conclude that variation in availabilities of training material could cause difference in skill development of the trainees and also differences in institutional quality offering similar training program.

From analyses made at respondents level, in all items concerning training facilities there exist statistically significant difference between top managements; and instructors and students. The fact is that the top managements are the suppliers of these materials while instructors and students are the daily users of these training equipments. This shows that the demanded and supplied educational facilities did not match accordingly. Therefore the researcher argued on the side of the daily

users (demand sides) that institutions are suffering from lack of relevant training equipments. Hence, difficulty to keep the required skills and quality persists to continue.

Therefore, one can deduce that in all the selected institutes, lack of relevant and adequate training equipments adversely affecting the quality of TVET program. Inadequate supply of training equipment, very poor basic equipments lack of workshops will make effective training impossible. More over advanced practical activities will not be exercised because of such shortages of adequate equipments. The World Bank survey of TVET on this critical issue recommended a possible solution on links with business and industries (for dual training arrangements (World Bank, 1993).

However, contrary to the principle of World Bank recommendation, this particular study shows that in addition to lack of training equipments and training manuals, TVET institution are suffering from lack of service giving organizations (factories). Thus, it is possible to conclude based on this survey study that, the government decisions about TVET still stated in terms of quantity (expansion of program) rather than quality. Therefore, it is difficult to get qualified technicians, unless the government decision in general and TVET agencies in particular give their due attentions more on practically attainable quality aspects than quantity of the program.

4.2.3 Streaming Processes of Students to TVET

The success of any teaching learning process is highly affected by the initial interest of students towards the training program. It is believed that in most cases subjects of general education provide a service function for vocational and technical education (Wanna, 2000). In this regard many of the students who have completed grade ten do not want to join TVET. This is because of the fact that there are no interrelated courses of general education with TVET course which encourage students to join TVET stream (see appendix L). Regarding streaming procedures all institutes have disagreed similarly. To this end, many students are not placed according to their interest to the stream they want study. The placements of students in different training areas in the entire selected institute did not balance the needs of these students accordingly.

On the other hand, the physical fitness of the students, manpower demand with respect to stream of study was major area that the respondents of each institute highly disagreed. EGSECE GPA, as a criteria set by the Ministry of Education (MOE, 2003) is still used as a basis and employed by TVET agencies of Oromia and SNNPs regional states. However instructors of each of the selected institute strongly disagreed against these criteria. This idea is based on the facts that only student failed in EGSECE join TVET (see appendix L&M). This discourages other students with better performance in EGSECE to join TVET program. These issues bring about a negative impact on the performance of students and poor quality of students to join TVET is highly encouraged. Furthermore, even though the criterion set by

MOE every year for students who join preparatory program changes from time to time still those who failed to join preparatory are forced to join TVET.

Evidently, partly quality education is attributed to the degree of students' level of preparation during their high school studies and the qualities of courses completed in high school is greater predictors of success in training institutes than test scores, class rank or grade point average (Bath, 2003). In the case of this particular study, it shows that the courses of high school did not raise the students' interest to join TVET program (see Appendix M). The streaming procedures being employed is basically dictated by grade point average of EGSECE and students decision to enroll in either streams, especially to preparatory, would stand of they score above the cutting . Those who have scored below this score are streamed towards TVET. This procedure is demonstrating disfavor towards TVET by putting in place a lower grade requirement for enrollment. This shows that the streaming procedures are becoming to be quite serious. It has resulted in streaming of number of students who have practically failed in EGSECE. Thus it becomes a tangible reason for the program to be considered as opportunity for the failures which in turn brings quality deterioration in respective fields of training offered.

Therefore, the streaming procedure is inherently suffering from the misconception that TVET is meant for those who have failed in the EGSECE, which would result difficulty for the program to attract students with high academic caliber. This situation leads to low quality of students entering TVET which in turn brings low quality of training program.

The most frequently used techniques like entry test to assess academic ability or practical skills, selection interview and recommendation for entry to a particular program, examination of references or collection of evidences of prior-learning in order to make decision that a candidate is able to obtain accreditation of prior learning for specific courses or for the whole program (Yekunoamlak, 2001; king , 1998 & Abraham, 2006). From the analyses made in all the selected institutes, it possible to conclude that the streaming procedures of students to TVET is full of problems that need an immediate correction.

4.2.4 The Delivery of Teaching Learning and Methods of Evaluation Process

It is clearly observed that, there is lack of clarity among the instructors and students as far as the mode of content delivery is concerned (Table 24, item1). The fact is that, the instructors and students is this survey have no common understandings about the subject matters and relevance of courses and problems, that considers the capacity of students to cope with the program.

The development of TVET curriculum needs identifications of training needs that require job analysis. Job analysis, on the other hand, it involves systematic study of what a successful worker and needs to know in practice for occupations (Coe in Abraham, 2006). Thus, the content of the course curriculum and its delivery should be according to the needs of the target groups. However, from this particular study, the content delivery of courses found to be inconsistent with the skill required for all target groups. Furthermore, the analyses in Table 24 shows that there is statistically significant differences between students and instructors ,implying that both of them

have different understanding about the content delivery, which could in turn have a negative impact on the quality of the training program. Therefore, it urges to reconsider the content delivery of courses in each training program. Lack of clearly identified training materials is another major problem observed in all the selected institutes. Both the instructors and students have similar agreement about lack of clearly identified training materials. This could in turn, encourage more of theory laden teaching practices than practical teaching.

The methods of students' performance evaluation, as reported by most students is different from their expectation, as most of the assessment system employed is not related to the program objectives and no frequent feedback on progress is provided. This contradicts with the program objectives that encourage 70% practical assessment and 30% theoretical assessment (MOE, 2003). Almost, all respondents at both intuitional and respondents levels pointed out that final examination is dominantly used as evaluation technique contradicting the program objectives.

As observed in Table 26 and 27, it is possible to recognize that, despite the fact that there are varied ways of evaluating students performance, the dominancy of final examination could entail quality problem as it is focused only on theoretical knowledge, leaving aside the practical and skill required.

4.2.5 Analyses of Issues Related to Availability, Competence and Institutional Quality Assurance Practices in TVET Institutions

It is an appropriate and pertinent that from previous analyses made, to analyze the most significant one among the various factors affecting the quality of training offered in TVET program. The quality and competency of instructors is the major learning resources that students can utilize in their daily career (Aschroft, 2004). From the data of the study in Table 3 the qualifications of the majority of instructors (67%) of the selected institutes was diploma holders, while the minimum requirement was expected to be first degree holders. This is why the respondents in the selected institutions are uncertain about the quality and competency of instructors; for instance 43.5% and 33.1% of students and top managements respectively responded that instructors are unable to utilize the existing training materials while 64.5% of instructors' responses contradict with the responses of the two groups (Table 30). Moreover the chi-square analysis ($\chi^2 = 23.602, p < .05$) shows that there is statistically significant differences observed between students and instructors about the competence of instructors.

From the analyses made at institutional level (Table 29), majority of the selected institutes, (44.8%) are uncertain about the quality and competence of instructors. From analyses of the above Table 29 and 30, a genuine argument can be drawn that, the quality and competence of instructors did not satisfy the students which could in turn entail quality problems of the training. Instructors are one of the most qualities of input for TVET programs as they can play the decisive role in achieving

the quality of training. In line with this (Desalegn, 1996) stated that, since the quality of instructors will have direct effect on the quality of the output (trainee); training and securing of well qualified instructors must precede another consideration. Good TVET requires instructors with technical skills and industrial experience.

According to World Bank(1993) a review of TVET institutions in many countries discovered that inadequate qualification of instructors has negatively affected the quality of training. Similar argument was made by the findings of (Abraham, 2006) the limited qualified instructors in certain TVET institutions will limit the quality of training given in other similar TVET institute offering the same training programs. Similar to the previous studies but with especial emphases to utilization of existing equipments in TVET institutes, lack of industrial experience of instructors in the selected institute is the most significant factor in affecting the quality of TVET program.

As this particular study revealed, majority of top management (55%); and instructors (47.5%) reported that academic competence of their student is poor (Table 30). From the analyses made on entry requirement/admission criteria/ in Table 16 through 22, the researcher is able to conclude that the major factor for students' incompetence is because of the fact that only students with poor performance in EGSECE are encouraged to join TVET as the entry requirement set by ministry of education (MOE, 2003).

As observed in Table 31 item1, some of the institutes seem to be uncertain that their respective institutions has a policy and associate procedures for assurance of the

quality of the training program offered. Since quality comes out of clear policy and procedures it could be difficult to practice internal quality audit against their training program. Furthermore as observed in Table 31, item 2, differences are observed between institutes about the impact of institutional quality assurance practices. This shows that there are institutes without understandings of the impact of quality assurance practices. Hence, in such institute it is difficult to say something about the quality of their training program. However, all institutes have responded that the quality of TVET today is declining. In this particular item, there is no statistically significance difference observed ($\chi^2 = 14.48$, $p > 0.05$). One of the purposes of quality assurance is to ensure the minimum standards required education quality system should consider throughout the world (Ashcroft, 2004). This helps institutions to ensure what programs of study meet the minimum standard through varieties of internal mechanisms which include checks against benchmark, validations and service check lists and so on. However, from this particular study, institutions have not yet fully engaged in practices of institutional quality assurance.

Hence, one can conclude that, even though TVET institutes agreed that, the status of quality of training program is declining, they are uncertain about the impact of quality assurances practices in their respective training program. Had all institutes have practiced quality assurances and associated policy procedures, they would have addressed well about why quality of TVET program declined. Therefore, one can disclose that, it is difficult to determine the missed minimum standard requirements among the varieties of benchmarks at input or process level.

This is why the qualities of training given in TVET institutes have not yet met the required standard. According to this particular study; lack of qualified and competent man power, lack of relevant and adequate training equipments and poor quality of students joining TVET programs are considered as a major factors in affecting training offered in TVET program. However, as observed from this study, the significance of each variable is not similar. According to appendix N, lack of relevant and adequate training facilities and the poor quality of students joining the program are considered as highly significant in affecting the quality of training as compared to lack of qualified and competent manpower(instructors and managements). As illustrated in appendix N and figure 2, all the selected institutes have shown similar agreement regarding to relevant and adequate training facilities from the chi-square analysis ($\chi^2 = 13.182, p > .05$) while institutional differences regarding poor quality of students ($\chi^2 = 33.693, p < .05$) and lack of qualified and competent man power ($\chi^2 = 24.960, p < .05$) observed. The implication is that these institutes have no similar qualified and competent manpower and quality of students joining the same training program.

From the comparison made in between the three major variables (qualified and competent manpower, relevant and adequate training material and the quality of students); it is lack of relevant and adequate training material; and the poor quality of students joining the program, which is adversely affecting the training offered by TVET institutions.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Summary of the Major Findings

The main objective of the study was to investigate major factors affecting the quality of TVET program. To achieve the objective of the study, four TVET institutions (Soddo, Hawassa, Ambo and Nekampete) were selected from Oromia and SNNP regions. These institutes were selected purposively. It was taken that these institutes could relatively be a good representative in offering various training fields, comparable facilities, and qualified human resources and for easy accessibility compared to the rest of TVET institutes in the two regions. A total of 418 respondents participated in the study. The study focused on some aspects of quality indicators at input and process levels. The data for the study was collected through close ended questionnaire.

Based on the basic research questions the study addressed quality affecting variables such as institutional management issues, educational facilities, teaching and evaluation approaches, streaming procedures of students and EGSECE GPA of students joining TVET and competences', availability of instructors and institutional quality assurance practices. The data analyses were made using both descriptive and inferential statistics. The data analyses were made using both descriptive and inferential statistics.

The analyses of the study was made in an integrated manner between institutes and stakeholders (top management, instructors and students) in all the major

variables that have direct impact on quality of training offered in TVET program. Furthermore analysis was made to compare similarities and differences between Oromia and SNNP regions in major variables to infer if incase, statistically significant difference exists.

Based on the result of analyses made, the major findings of the study are presented as follows:

1. Institutional management is not participatory; especially the primary stakeholders (instructors and students) are not involved in decision making areas. These issues created problems in common understandings about institutional management issues to ensure the quality of the program.
2. Regarding competency of top managements; majority of the institutes responded that the competency and qualifications of the top managements is not acknowledged to ensure the clear management structure and to provide conducive training environment.
3. Regarding qualifications of instructors; majority of the instructors' running the teaching- learning process have diploma and first degree holders. As observed in the study, majority of the instructors were far behind the meeting requirements i.e. for TVET programs institutions could have instructors with minimum of first degree holders.

4. Regarding to teaching experiences and competences; most of the instructors have an experiences of five years and above in areas of teaching .However they are not capable enough to utilize the existing training equipments for practical activities as viewed by most of the students and some of the instructors themselves. The implication in that even though the nature training needs industry based experiences; most instructors were viewed as no experience in such an area.
5. Concerning the availability and relevancy of educational facilities; in all the selected institutes there are no adequate and relevant training facilities. This problem forced most of the institutes to depend on theoretical teaching process than practical works. Lack of training manual according to the program objectives and service rendering organization are considered as the major factors affecting the quality of training offered by TVET program.
6. Regarding streaming of students to TVET, all the selected institutes disagreed the criteria set by MOE, for streaming /admission/ procedures of students to TVET. All the literature reviews that support how to stream students to training institute were not applied so far. Students' admission and placement to any fields of study is done without considerations of orientation, interest and students background.
7. The other major problem observed is that all students joining TVET program are those with poor EGSECE achievements. Furthermore the entry requirement did not encourage the good achievers of students in EGSECE.

As a result poor qualities of students are encouraged to join TVET program. This is the major quality declination in TVET, as only students with poor back ground attracted to join the program, which could entail low quality performance of students during their entire career training in TVET institutions.

8. Regarding to the delivery of teaching – learning and evaluation of students performances; the finding of the study shows that mode delivery of teaching learning process did not consider the interest of target groups. In this case instructors and students have different understanding about mode delivery to address the required target. Lecturing teaching method is used frequently, while demonstration and project work are used some times and not at all in most of the institutes. These problems resulted from lack of appropriate instructional resources, which make a look like a curricula for academic stream teaching process. Most of the approaches of teaching methods are theory laden as that of pure academic streams. Because of these teaching methods students' performance evaluation is based on scheduled final examination. In all the selected institutes' final examination is dominantly used as students' performance evaluation methods.
9. Regarding institutional quality assurance practices; Quality assurance is a safeguard for institutions to keep the minimum standard required for the quality of training offered. However, all the selected institutes are uncertain about institutional quality assurance practices. Because of these problems,

the institutions are able to address the minimum standard requirements to evaluate either the quality of input or process in order to offer the quality of training in their respective training programs.

10. Concerning institutional similarities and differences; the findings also demonstrates that institutional differences are observed, especially students quality which could be a result of streaming processes. Even though differences are observed in training materials and quality of instructors to some extent they are not statistically significant.

11. In the case of quality of students entering TVET program no statistically significant differences observed against the criteria of streaming procedures set by MOE. From the analyses made so far all the selected institutes have similar problems, except in few cases like service rendering organization better in Hawwasa and Nekempte as compared to Soddo and Ambo TVET institutes.

12. As observed in the data analyses made so far and summary of the major findings, the researcher is highly argued that the quality of training offered by TVET needs an immediate intervention to promote the quality of training at input and process level.

5.2 Conclusions

Based on the analyses made in the preceding section of the findings of study the following conclusions have been deduced.

The training facility gap concerning the nature of training program and the poor quality of students joining TVET program are found to be among the most significant root cause of quality declination as understood from the respondents of each institutes in this particular study. The problems of institutional management like incompetence of top managements to provide conducive training environment and incompetence of instructors to utilize the existing training materials can be regarded as moderately affecting the quality of the program.

The findings of the study also revealed that the quality of training offered in all the selected institutions in general seems similar to each other. The situation also appears to be worse in relation to educational material relevancy and backgrounds of students streamed to TVET program in all the selected institutes.

The study clearly indicated that the training offered by TVET institutions is not meeting its target as institutions are suffering from lack of quality of inputs and process as a significant factor to promote quality of the program. These problems comes from the fact that quality assurance and associate procedure have not yet practiced at institutional level to promote the minimum quality standard at input and process level which in turn promote the quality of output.

5.3 Recommendation

From the findings of the study, it has been noted that there is a need to recommend a remedial needs to mitigate the significant factors affecting the quality of TVET program. The recommendations are also helpful for an attempt that TVET to establish the new TVET qualification frame work levels. The recommendations forwarded in this particular study are general and specific.

General: Since the quality of training output depends on the quality of input and process, national and regional TVET agencies, and TVET institutes should reconsider the quality of input and process to enhance the quality of training.

Specific:

1. National and regional TVET agencies, in collaboration with MOE must give especial attention and reconsideration to the criteria of streaming (admission) procedures of students joining TVET program.
2. TVET institutes should consider interest of students while streaming them to fields of studies by giving them orientation in each of the program or stream offered. Furthermore TVET institutes should encourage students with better performance in ESGECE and especial ability to join TVET program.
3. Both TVET agencies and TVET institutes should look for the quality and relevance of training materials in accordance with the curriculum designed for each of training field.
4. Appropriate training manual for each practical activities should be available by all TVET institutes

5. Training material provided by TVET institution must be based on the need assessment of each department (fields of study).
6. Both TVET agencies and institutes must provide industrial based on job training especially for industrials (technology) stream instructors that improve their competency to utilize the existing training resources.
7. Institutional managements should be participatory and the top managements should be those equipped with TVET knowledge background.
8. Regional TVET agencies and institutes should reconsider rearrangements of training offered in each fields of study in accordance with service rendering organization or factories to promote practical activities
9. TVET institutions must have police and procedures for assurance of the minimum quality standard required for training offered in their respective program
10. Finally, the researcher would like to recommend further studies with a wide scope at national level in order to gain in-depth understandings of the major factors affecting the quality of TVET program at input and process level which are the basic area to determine the quality of output.

References

Books

- Aggarwal, C.J.(1997). *Development and Planning of Modern Education 6th ed.* Delhi: Vikas Publishing House PLT Ltd.
- Astin, W. A. (1991). *Achieving Educational Excellence* . San Francisco: Jossey -Bass.
- Atchoarena, D. (1994). *Policy and Planning for Vocational Education and Training*. Paris: IIEP.
- Bath, D. (2003). *Systematic Adaption to a Changing Envirnoment:Towards a Next Generation of Quality Assurance Models for Higher Education*. Johannesburg.
- Billin, D. (2003). *Evaluation of Trans -National Quality Assessment Project*. Johannesburg: Higher Education and Open University Press.
- Clarke, M. (2002). *Some Guide Lines for Academic Quality Ranking* . Jhannesburg: AUQA Occasional Publication.
- Clarke, M. (2005). *The Value for Sudent Engagement for Higher Education Quality Assurance* . Buckingman: Open University Press.
- Coe, B. (1973). *What is Quality Vocational Education?* New York: Mass Information Corporation.
- Creswell, W.(2003). *Research Design: Qualitative, Quantitative and Mixed Method Approaches*. London: SAGE Publication.
- Cunningham ,S.(1994). *The Pivotal Problems of Education*. New York: The Mc Milan Company.
- Derebssa, D. (2004). *Fundamentals of Curriculum Development* . Addis Ababa: Addis Ababa University.
- Dill, M. S. (2004). *Academic Quality, League Table and Public Policy*. Bonn: Instiute of Technology.
- Doherty,G.(1994). *Developing Quality System in Education*. London: Open University Press.
- Ecclestone, K. (1996). *How to Assess The Vocational Curriculum*. London: Kogan Page Limited.
- Ellis,P. (1995). *Quality Assurance for Higher Teaching : Issues and Approaches*. Buckingham: Open University Press.

- Forojolla, B.S. (1993). *Educational Planning and Development*. New York: St. Martins Press.
- Gilli, C. A. (1976). *Modern Organization of Vocational Education*. 6th Ed. New York: Longman Publisher.
- Hallak, J. (1990). *Investing in the Future: Setting Educational Priorities in the Developing World*. Paris: Pigman Press PLC.
- Harvey, L. (2004). *Response to Questionnaire on Developing a Quality Rating Mechanisms for African Educational Institutions*. San Francisco: John Wiley and Sons, Inc.
- Harvey, L. (2002). *The End of Quality: Quality in Higher Institutions*. Boemfontein: University of the Free State Press.
- Heilman. (1986). *Quality of Education and Economic Development*. Washington DC: Longman.
- John, O.S. (1993). *Total Quality Management : The Route to Improving Performance*. London: Hope Service Ltd.
- King, K. (1998). *The Planning of Technical and Vocational Education and Training*. Paris: IIEP.
- Knight, H. A (1996). *Quality Monitoring and Student Learning: Quality Assurance in South African Higher Education*. Bloemfontein: University of the Free State Press.
- Larsen, M. (1973). *Strategies for Teaching in Vocational Education*. New York: Mass Information Corporation.
- Lauglo, J. (1993). *Vocational Training : Analysis of Policy Modes*. Paris: IIEP.
- Middleton, J. (1993). *Skills For Productivity*. London: Oxford University Press.
- Mugatroyd, D. (1994). *Total Quality Management in the Public Sector*. Backingham: Open University Press.
- Philip, B.C. (1976). *Quality is Free*. New York: Mentor Books.
- Sallis, H. (1994). *Total Quality Management in Education*. London: Kogak Page Educational Management Series.
- Soo, C. (2004). *Academic Quality and Public Policy*. Bonn: Dublin Institute of Technology.
- Stella, M. (2007). *External Quality Assurance in Higher Education: Making Choices*. IIEP: Paris.
- Todaro, M. (1985). *Economic Development in the Third World*. New York: Longman.

Conference proceedings

- Abraham, G. (2006). TVET Participation, Triggers Perception and Aspiration. *Proceedings of the 4th National Conference on Private Higher Education in Ethiopia* (pp. 263-271). Addis Ababa: St. Mary's University College.
- African Union. (2007). Strategy to Revitalize Technical and Vocational Education Training in Africa. *Meeting of the Bureau of the Conference of Ministers of Educations of African Union* (pp. 12-23). Addis Ababa
- Antonios, B.P. (2006). The Implimentation of TVET program in Addis Ababa : The Case of Entoto TVET College and St. Mary's University College. *Proceedings of the fourth National conference on Private Higher Education in Ethiopia* (pp. 275-277). Addis Ababa: St. Mary's University College.
- Coates, H. (2005). The Value of Students Engagement for Educational Quality Assurance: Paper Presented at Public policy for Academic Quality Research Program. San Francisco: John Wiley and Sons, Inc.
- Derebssa, D. (2005). Quality of Teaching and Learning in Ethiopian Higher Education :Tension between Traditional and Constructivist Teaching Approaches. *The Proceedings of the National Conference on Ethiopian Higher Education to meet the Country's Development Needs* (pp. 128-134). Addis Ababa: Addis Ababa University.
- Nahoma, F. (2006). Streaming of Students to TVET in Ethiopia. *Proceedings of the Fourth National Conference on Private Higher Education in Ethiopia* (pp. 339-356). Addis Ababa: St. Mary's University College .
- Wanna, L. (2001). Primary Education as A Basis for Vocational /Technical Education and Training :An Issues that Deserves Attention. *Quality of Primary Education .The proceedings of the National Conference on Quality of Primary Education* (pp. 209-215). Addis Ababa: Addis Ababa University.

Journals

- Adams, P. (1993). *Defining Educational Quality: Improving Educational Project*. Addis Ababa: Institute of Educational Research, Addis Ababa University.
- Amare, A. (1998). *Teachers Perceptions of Educational Problems in Ethiopia. Quality Education in Ethiopia :Vision for 21st Century*. Addis Ababa: Addis Ababa University.
- Aschroft, K. (2004). Emerging Model of Quality, Relevance and Standards in Ethiopia's Higher Education Institutions. *The Ethiopian Journal of Education*, 12-20.

- Assefa, B. (2002). *Quality : A Higher Education Perspective*. Addis Ababa: Addis Ababa University Press.
- Mosha, J. H. (1990). Twenty Years After Education for Self Reliance: A Critical Review. *International Journal of Educational Development* ,Vol. 10
- Teklehaimanot, H. (2002). *Misconception on Technical and Vocational Education and Training in Ethiopia*. Addis Ababa: Addis Ababa University.
- Tesfaye, S. (2004). Perceptions of Work environment in Ethiopian Higher Learning Institutions: A Search for Antecedents of Organizational Commitment and TurnOver Among Debub University Instructors. *Ethiopian Journal of Education* , 43-57.
- Wanna, L. (1992). Assessing Vocational Education Outcomes: With Special Reference to Ethiopia. *Ethiopian Journal of Education* , 42-45.
- Wanna, L. (1998). The Current Status of Technical Vocational Education in Ethiopia: Problem and Prospects. In Amare et al(eds) .*Quality of Education in Ethiopia: Vision for the 21st Century*. *Ethiopian Journal of Education* .55-64
- Yekunoamlak, A. (2001). A Comparative Analysis of Vocational Training and Employment Opportunities in Governments and Non Governments Schools /training Centers in Ethiopia. *The Ethiopian Development Forum*. Vol.5 No .11.
- Zenawi, Z. (2007). Stakeholders Perceptions of the Quality of Academic Program : The Case of Mekale University. *Journal of Education for Development* ,72-75.

Organizational Documents

- Delluc, D. A. (2002). *Revising Technical and Vocational Education in Sub-Saharan Africa: An Update on Trends, Innovations and Challenges* . Paris: UNESCO Publishing.
- Mosha, J. H. (1998). Quality of Training and Research in Institution in Africa: Achievements, Challenges and Prospects. Dakar: UNESCO.
- UNESCO. (1996). *The Development of Technical and Vocational Education in Africa*. Dakar.
- World Bank. (2005). *Integrating TVET into the Knowledge Economy*. Washington DC: Longman.
- World Bank. (1993). *Access ,Quality and Efficiency in Education*. Washington DC: Longman.

Government Documents

- FDRE. (2000). Interim Poverty Reduction Strategy Paper 2000/01-2002/03 . Addis Ababa.
- MOE. (2006). National Technical and Vocational Education and Training Strategy. Addis Ababa: EDPDE.
- MOE. (2005). *Education Sector Development Program III Action Plan*. Addis Ababa: Berhanena Selam Printing Enterprise.
- MOE. (2004). *Technical and Vocational Education and Training Qualification System*. Addis Ababa: Berhanena Selam Printing Enterprise.
- MOE. (2003). *Financing Technical and Vocational Education and Training : The National Strategy to Raise Resources*. Addis Ababa: Berhanena Selam Printing Enterprise.
- MOE. (2001). Middle Level Technical and Vocational Training Program:Curriculum Guide . Addis Ababa: EDPDE.
- MOE. (1994). *Federal Democratic Republic of Ethiopia :Education and Training Policy* . Addis Ababa.

Unpublished Materials

- Ayalew,S.(1991). *Approches to Educational Organization and Management*. Unpublished MA Thesis. Addis Ababa: Addis Ababa University.
- Befakadu, Z. (1993). *Students Placement into Different Streams of Vocational Education: Their Attitude towards Their field*. Unpublished MA Thesis. Addis Ababa: Addis Ababa University.
- Desalegn, L. (1996). *A Study of Students Selection Streaming and Training in TVET Schools of Ethiopia*. Unpublished MA Thesis. Addis Ababa: Addis Ababa University.
- Desta,B.(2005). *Institutional Factors Afecting the Quality of Private Higher Educational Institutions*:Unpublished MAThesis. Addis Ababa: Addis Ababa University.

APPENDICES

APPENDIX A: DESCRIPTIVE STATISTICS OF INSTITUTIONAL MANAGEMENT ISSUES BY INSTITUTES

Items	Institutes	N	Mean	Std. Dev	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
The institution has specific strategies in place for monitoring achievement of institutional goals and identifying problem areas.	SODDO	87	2.1253	1.23545	.13245	2.1620	2.6886	1.00	5.00
	HAWASSA	134	2.4403	.92996	.08034	2.2814	2.5992	1.00	5.00
	AMBO	91	2.2747	.98957	.10373	2.0686	2.4808	1.00	5.00
	NEKAMPTE	106	2.1132	.89784	.08721	1.9403	2.2861	1.00	4.00
	Total	418	2.3182	1.01154	.04948	2.2209	2.4154	1.00	5.00
Instructors and students are represented in administrative structures.	SODDO	87	2.2862	1.05160	.11274	2.3621	2.8103	1.00	5.00
	HAWASSA	134	2.7687	1.01799	.08794	2.5947	2.9426	1.00	5.00
	AMBO	91	2.5165	.99289	.10408	2.3097	2.7233	1.00	5.00
	NEKAMPTE	106	2.3491	.93648	.09096	2.1687	2.5294	1.00	5.00
	Total	418	2.5694	1.00894	.04935	2.4724	2.6664	1.00	5.00
The institution has qualified and competent deans.	SODDO	87	2.2943	1.03287	.11074	2.2741	2.7144	1.00	5.00
	HAWASSA	134	2.6716	.97160	.08393	2.5056	2.8377	1.00	4.00
	AMBO	91	2.7033	.96026	.10066	2.5033	2.9033	1.00	5.00
	NEKAMPTE	106	2.6038	.96292	.09353	2.4183	2.7892	1.00	5.00
	Total	418	2.6244	.97944	.04791	2.5302	2.7186	1.00	5.00

The institution has experienced and competent supporting staff.	SODDO	31	2.1613	1.03591	.18606	1.7813	2.5413	1.00	4.00
	HAWASSA	50	2.7200	1.06981	.15129	2.4160	3.0240	1.00	4.00
	AMBO	36	2.9167	1.13074	.18846	2.5341	3.2993	1.00	5.00
	NEKAMPTE	45	2.7333	.96295	.14355	2.4440	3.0226	1.00	5.00
	Total	162	2.6605	1.06999	.08407	2.4945	2.8265	1.00	5.00
The institution has developed a criteria for staff recruitment and development	SODDO	31	2.1206	1.02548	.18418	2.2045	2.9568	1.00	5.00
	HAWASSA	50	2.4400	1.18080	.16699	2.1044	2.7756	1.00	5.00
	AMBO	36	2.7222	1.03126	.17188	2.3733	3.0711	1.00	5.00
	NEKAMPTE	45	2.4889	.99138	.14779	2.1910	2.7867	1.00	5.00
	Total	162	2.5432	1.06380	.08358	2.3782	2.7083	1.00	5.00
The institution encourages and rewards teaching and learning innovation.	SODDO	31	2.1774	1.07663	.19337	2.2825	3.0723	1.00	5.00
	HAWASSA	50	2.7200	.94847	.13413	2.4504	2.9896	1.00	5.00
	AMBO	36	2.6389	1.04616	.17436	2.2849	2.9929	1.00	4.00
	NEKAMPTE	45	2.6222	1.00654	.15005	2.3198	2.9246	1.00	5.00
	Total	162	2.6667	1.00310	.07881	2.5110	2.8223	1.00	5.00
The institution has procedures in place for implementation and assessment of programs offered.	SODDO	31	2.2106	1.33602	.23996	2.0906	3.0707	1.00	5.00
	HAWASSA	50	2.6400	1.19112	.16845	2.3015	2.9785	1.00	5.00
	AMBO	36	2.5556	1.08086	.18014	2.1898	2.9213	1.00	5.00
	NEKAMPTE	45	2.5556	1.09867	.16378	2.2255	2.8856	1.00	5.00
	Total	162	2.5864	1.16173	.09127	2.4062	2.7667	1.00	5.00

Evaluation of the institution is periodically done	SODDO	31	2.1335	.83666	.37417	3.1611	5.2389	3.00	5.00
	HAWASSA	50	2.2621	.44721	.20000	3.6447	4.7553	4.00	5.00
	AMBO	36	2.3433	.00000	.00000	4.0000	4.0000	4.00	4.00
	NEKAMPTE	45	2.4231	.54772	.24495	3.7199	5.0801	4.00	5.00
	Total	162	2.2323	.52315	.11698	3.9552	4.4448	3.00	5.00

APPENDIX B: ANOVA FOR INSTITUTIONAL MANAGEMENT ISSUES BY INSTITUTES

Items	Sources of Variations	Sum of Squares	Df	Mean Square	F	Sig.
The institution has specific strategies in place for monitoring achievement of institutional goals and identifying problem areas.	Between Groups	7.622	3	2.541	2.510	.058
	Within Groups	419.060	414	1.012		
	Total	426.682	417			
Instructors and students are represented in administrative structures.	Between Groups	10.746	3	3.582	3.584	.014
	Within Groups	413.742	414	.999		
	Total	424.488	417			
The institution has qualified and competent deans.	Between Groups	2.384	3	.795	.827	.479
	Within Groups	397.647	414	.960		
	Total	400.031	417			
The institution has experienced and competent supporting staff.	Between Groups	10.504	3	3.501	3.182	.026
	Within Groups	173.824	158	1.100		

	Total	184.327	161			
The institution has developed a criteria for staff recruitment and development	Between Groups	1.862	3	.621	.544	.653
	Within Groups	180.335	158	1.141		
	Total	182.198	161			
The institution encourages and rewards teaching and learning innovation.	Between Groups	.262	3	.087	.085	.968
	Within Groups	161.738	158	1.024		
	Total	162.000	161			
The institution has procedures in place for implementation and assessment of programs offered.	Between Groups	.222	3	.074	.054	.984
	Within Groups	217.068	158	1.374		
	Total	217.290	161			
Evaluation of the institution is periodically done	Between Groups	.400	3	.133	.444	.725
	Within Groups	4.800	16	.300		
	Total	5.200	19			

APPENDIX C: DESCRIPTIVE STATISTICS OF INSTITUTIONAL MANAGEMENT ISSUES BY RESPONDENTS

Items	Respondents	N	Mean	Std. Dev	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
The institution has specific strategies in place for monitoring achievement of institutional goals and identifying problem areas.	MANAGEMENTS	20	4.2500	.55012	.12301	3.9925	4.5075	3.00	5.00
	INSTRUCTORS	141	2.0993	.83071	.06996	1.9610	2.2376	1.00	4.00
	STUDENTS	257	2.2879	.97366	.06074	2.1683	2.4075	1.00	5.00
	Total	418	2.3182	1.0115 4	.04948	2.2209	2.4154	1.00	5.00
Instructors and students are represented in administrative structures.	MANAGEMENTS	20	4.4000	.59824	.13377	4.1200	4.6800	3.00	5.00
	INSTRUCTORS	141	2.3688	.92127	.07758	2.2154	2.5222	1.00	5.00
	STUDENTS	257	2.5370	.93937	.05860	2.4216	2.6524	1.00	5.00
	Total	418	2.5694	1.0089 4	.04935	2.4724	2.6664	1.00	5.00
The institution has qualified and competent deans.	MANAGEMENTS	20	4.1500	.48936	.10942	3.9210	4.3790	3.00	5.00
	INSTRUCTORS	141	2.4468	.95936	.08079	2.2871	2.6065	1.00	4.00
	STUDENTS	257	2.6031	.91753	.05723	2.4904	2.7158	1.00	5.00
	Total	418	2.6244	.97944	.04791	2.5302	2.7186	1.00	5.00

The institution has experienced and competent supporting staff.	MANAGEMENTS	20	4.1000	.55251	.12354	3.8414	4.3586	3.00	5.00
	INSTRUCTORS	141	2.4610	.96745	.08147	2.2999	2.6221	1.00	4.00
	Total	161	2.6605	1.0699 9	.08407	2.4945	2.8265	1.00	5.00
The institution has developed a criteria for staff recruitment and development	MANAGEMENTS	20	3.9000	.78807	.17622	3.5312	4.2688	2.00	5.00
	INSTRUCTORS	141	2.3617	.95076	.08007	2.2034	2.5200	1.00	5.00
	Total	161	2.5432	1.0638 0	.08358	2.3782	2.7083	1.00	5.00
The institution encourages and rewards teaching and learning innovation.	MANAGEMENTS	20	4.3000	.47016	.10513	4.0800	4.5200	4.00	5.00
	INSTRUCTORS	141	2.4326	.83071	.06996	2.2943	2.5709	1.00	4.00
	Total	161	2.6667	1.0031 0	.07881	2.5110	2.8223	1.00	5.00
The institution has procedures in place for implementation and assessment of programs offered.	MANAGEMENTS	20	4.4000	.59824	.13377	4.1200	4.6800	3.00	5.00
	INSTRUCTORS	141	2.3262	.98195	.08270	2.1627	2.4897	1.00	5.00
	Total	161	2.5864	1.1617 3	.09127	2.4062	2.7667	1.00	5.00

APPENDIX D: ANOVA FOR INSTITUTIONAL MANAGEMENT ISSUES BY RESPONDENTS

Items	Sources of variations	Sum of Squares	Df	Mean Square	F	Sig.
The institution has specific strategies in place for monitoring achievement of institutional goals and identifying problem areas.	Between Group	81.629	2	40.815	49.088	.000
	Within Groups	345.053	415	.831		
	Total	426.682	417			
Instructors and students are represented in administrative structures.	Between Groups	72.967	2	36.483	43.071	.000
	Within Groups	351.522	415	.847		
	Total	424.488	417			
The institution has developed quality assurance policies and procedures.	Between Groups	60.023	2	30.012	31.576	.000
	Within Groups	394.439	415	.950		
	Total	454.462	417			
The institution has qualified and competent deans.	Between Groups	51.113	2	25.556	30.396	.000
	Within Groups	348.919	415	.841		
	Total	400.031	417			
The institution has experienced and competent supporting staff.	Between Groups	47.492	2	23.746	27.592	.000
	Within Groups	136.835	159	.861		
	Total	184.327	161			
The institution has developed a criteria for staff recruitment and development	Between Groups	43.844	2	21.922	25.194	.000
	Within Groups	138.353	159	.870		

	Total	182.198	161			
The institution encourages and rewards teaching and learning innovation.	Between Groups	61.190	2	30.595	48.255	.000
	Within Groups	100.810	159	.634		
	Total	162.000	161			
The institution has procedures in place for implementation and assessment of programs offered.	Between Groups	75.497	2	37.749	42.330	.000
	Within Groups	141.793	159	.892		
	Total	217.290	161			

APPENDIX E: DESCRIPTIVE STATISTICS OF EDUCATIONAL FACILITY ISSUES BY INSTITUTES

Items	Institutes	N	Mean	Std. Dev	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound	Lower Bound	Upper Bound
The institution has sufficient lecturing spaces to accommodate students	SODDO	86	1.9186	.81479	.08786	1.7439	2.0933	1.00	4.00
	HAWASSA	134	1.8209	.78377	.06771	1.6870	1.9548	1.00	4.00
	AMBO	91	2.0110	.86274	.09044	1.8313	2.1907	1.00	4.00
	NEKAMPTE	106	1.8302	.71009	.06897	1.6934	1.9669	1.00	3.00
	Total	417	1.8849	.79129	.03875	1.8087	1.9611	1.00	4.00
Academic staff and students have access to	SODDO	87	2.4713	.96254	.10320	2.2661	2.6764	1.00	4.00
	HAWASSA	134	2.4328	1.0721	.09262	2.2496	2.6160	1.00	5.00

computer resources	AMBO	91	2.2967	.97176	.10187	2.0943	2.4991	1.00	4.00
	NEKAMPTE	106	2.4717	1.1229	.10907	2.2554	2.6880	1.00	5.00
	Total	418	2.4211	1.0410	.05092	2.3210	2.5211	1.00	5.00
The institution has sufficient workshop facilities, to accommodate students	SODDO	87	2.3218	.94616	.10144	2.1202	2.5235	1.00	5.00
	HAWASSA	134	2.7761	1.0085	.08713	2.6038	2.9484	1.00	5.00
	AMBO	91	2.6264	1.1318	.11865	2.3907	2.8621	1.00	5.00
	NEKAMPTE	106	2.6132	1.1090	.10772	2.3996	2.8268	1.00	5.00
	Total	418	2.6077	1.0590	.05180	2.5058	2.7095	1.00	5.00
Latest books/journals are available in the library	SODDO	87	2.5172	1.0439	.11192	2.2947	2.7397	1.00	5.00
	HAWASSA	134	2.5000	1.0314	.08910	2.3238	2.6762	1.00	5.00
	AMBO	91	2.5934	1.3163	.13799	2.3193	2.8676	1.00	5.00
	NEKAMPTE	106	2.6226	1.1080	.10762	2.4093	2.8360	1.00	5.00
	Total	418	2.5550	1.1180	.05468	2.4475	2.6625	1.00	5.00
Building facilities are adequate for workshops	SODDO	87	2.1494	.97084	.10408	1.9425	2.3563	1.00	4.00
	HAWASSA	134	2.7388	.98048	.08470	2.5713	2.9063	1.00	5.00
	AMBO	91	3.0220	1.2734	.13350	2.7568	3.2872	1.00	5.00
	NEKAMPTE	106	2.7547	1.2174	.11825	2.5203	2.9892	1.00	5.00
	Total	418	2.6818	1.1449	.05600	2.5717	2.7919	1.00	5.00

Equipments are according to the needs of practical works	SODDO	87	2.5402	1.2085	.12957	2.2827	2.7978	1.00	5.00
	HAWASSA	134	2.3433	1.0267	.08870	2.1678	2.5187	1.00	5.00
	AMBO	91	2.9121	1.2169	.12758	2.6586	3.1655	1.00	5.00
	NEKAMPTE	106	2.7170	1.1276	.10952	2.4998	2.9341	1.00	5.00
	Total	418	2.6029	1.1506	.05628	2.4922	2.7135	1.00	5.00
Adequate tools and equipments are available for each course in the program	SODDO	87	1.8046	.83303	.08931	1.6271	1.9821	1.00	4.00
	HAWASSA	134	1.7985	.78309	.06765	1.6647	1.9323	1.00	4.00
	AMBO	91	1.7143	.68776	.07210	1.5711	1.8575	1.00	3.00
	NEKAMPTE	106	1.7453	.74401	.07226	1.6020	1.8886	1.00	5.00
	Total	418	1.7679	.76257	.03730	1.6946	1.8413	1.00	5.00
Adequate and relevant training modules are available	SODDO	31	2.2258	1.0233	.18380	1.8504	2.6012	1.00	4.00
	HAWASSA	50	2.9400	1.1141	.15756	2.6234	3.2566	1.00	5.00
	AMBO	36	2.8333	1.2305	.20509	2.4170	3.2497	1.00	5.00
	NEKAMPTE	45	2.8889	1.1525	.17181	2.5426	3.2351	1.00	5.00
	Total	162	2.7654	1.1558	.09081	2.5861	2.9448	1.00	5.00
Relevant factories or service rendering organizations are available for practices	SODDO	31	2.6452	1.1704	.21021	2.2158	3.0745	1.00	4.00
	HAWASSA	50	3.0800	1.0269	.14524	2.7881	3.3719	1.00	5.00
	AMBO	36	2.7778	.89797	.14966	2.4739	3.0816	1.00	4.00

	NEKAMPTE	45	3.0444	1.1272	.16804	2.7058	3.3831	1.00	5.00
	Total	162	2.9198	1.0630	.08352	2.7548	3.0847	1.00	5.00
Adequate budget is available for field visit	SODDO	31	2.1613	1.0359	.18606	1.7813	2.5413	1.00	4.00
	HAWASSA	50	2.4800	1.1993	.16961	2.1392	2.8208	1.00	4.00
	AMBO	36	1.9444	1.0404	.17341	1.5924	2.2965	1.00	4.00
	NEKAMPTE	45	2.1778	1.0507	.15663	1.8621	2.4935	1.00	5.00
	Total	162	2.2160	1.1017	.08656	2.0451	2.3870	1.00	5.00
Course materials are relevant and up to date	SODDO	31	2.3548	1.0503	.18865	1.9696	2.7401	1.00	4.00
	HAWASSA	50	2.8600	1.1607	.16416	2.5301	3.1899	1.00	4.00
	AMBO	36	2.4167	1.1051	.18420	2.0427	2.7906	1.00	4.00
	NEKAMPTE	45	2.4444	1.0564	.15749	2.1270	2.7618	1.00	5.00
	Total	162	2.5494	1.1092	.08715	2.3773	2.7215	1.00	5.00

ANOVA APPENDIX F: ANOVA FOR EDUCATIONAL FACILITY ISSUES BY INSTITUTES

Items	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.
The institution has sufficient lecturing spaces to accommodate students	Between Groups	2.411	3	.804	1.286	.279
	Within Groups	258.064	413	.625		
	Total	260.475	416			
Academic staff and students have access to computer resources	Between Groups	1.917	3	.639	.588	.623
	Within Groups	449.978	414	1.087		
	Total	451.895	417			
The institution has sufficient workshop facilities, to accommodate students	Between Groups	10.945	3	3.648	3.307	.020
	Within Groups	456.710	414	1.103		
	Total	467.656	417			
Latest books/journals are available in the library	Between Groups	1.149	3	.383	.305	.822
	Within Groups	520.086	414	1.256		
	Total	521.234	417			
Building facilities are adequate for workshops	Between Groups	36.187	3	12.062	9.782	.000
	Within Groups	510.494	414	1.233		
	Total	546.682	417			
Equipments are according to the needs of practical works	Between Groups	19.452	3	6.484	5.040	.002
	Within Groups	532.624	414	1.287		

	Total	552.077	417			
Adequate tools and equipments are available for each course in the program	Between Groups	.558	3	.186	.319	.812
	Within Groups	241.932	414	.584		
	Total	242.490	417			
Adequate and relevant training modules are available	Between Groups	11.403	3	3.801	2.948	.035
	Within Groups	203.684	158	1.289		
	Total	215.086	161			
Relevant factories or service rendering organizations are available for practices	Between Groups	5.047	3	1.682	1.502	.216
	Within Groups	176.910	158	1.120		
	Total	181.957	161			
Adequate budget is available for field visit	Between Groups	6.298	3	2.099	1.754	.158
	Within Groups	189.140	158	1.197		
	Total	195.438	161			
Course materials are relevant and up to date	Between Groups	7.127	3	2.376	1.965	.121
	Within Groups	190.978	158	1.209		
	Total	198.105	161			

APPENDIX G: DESCRIPTIVE STATISTICS OF EDUCATIONAL FACILITY ISSUES BY RESPONDENTS

Items	Respondents	N	Mean	Std. Dev	Std. Error	95% Confidence Interval for Mean		Minimum	maximum
						Lower Bound	Upper Bound		
The institution has sufficient lecturing spaces to accommodate students	MANAGEMENT	19	3.4211	.69248	.15887	2.0873	2.7548	1.00	4.00
	INSTRUCTORS	141	1.8369	.80732	.06799	1.7025	1.9713	1.00	4.00
	STUDENTS	257	1.8716	.77752	.04850	1.7761	1.9671	1.00	4.00
	Total	417	1.8849	.79129	.03875	1.8087	1.9611	1.00	4.00
Academic staff and students have access to computer resources	MANAGEMENT	20	3.8000	.82078	.18353	2.2159	2.9841	1.00	4.00
	INSTRUCTORS	141	1.4397	1.15492	.09726	2.2474	2.6320	1.00	5.00
	STUDENTS	257	2.3969	.99121	.06183	2.2751	2.5186	1.00	5.00
	Total	418	2.4211	1.04100	.05092	2.3210	2.5211	1.00	5.00
The institution has sufficient workshop facilities, to accommodate students	MANAGEMENT	20	3.2500	.96655	.21613	2.7976	3.7024	1.00	5.00
	INSTRUCTORS	141	1.6596	1.13282	.09540	2.4710	2.8482	1.00	5.00
	STUDENTS	257	2.5292	1.00784	.06287	2.4054	2.6530	1.00	5.00
	Total	418	2.6077	1.05900	.05180	2.5058	2.7095	1.00	5.00

Latest books/journals are available in the library	MANAGEMENT	20	3.3500	.87509	.19568	2.9404	3.7596	2.00	5.00
	INSTRUCTORS	141	2.6028	1.12046	.09436	2.4163	2.7894	1.00	5.00
	STUDENTS	257	2.4669	1.11097	.06930	2.3305	2.6034	1.00	5.00
	Total	418	2.5550	1.11802	.05468	2.4475	2.6625	1.00	5.00
Building facilities are adequate for workshops	MANAGEMENT	20	3.4500	.99868	.22331	2.9826	3.9174	2.00	5.00
	INSTRUCTORS	141	1.7801	1.05622	.08895	2.6043	2.9560	1.00	5.00
	STUDENTS	257	2.5681	1.17769	.07346	2.4234	2.7128	1.00	5.00
	Total	418	2.6818	1.14498	.05600	2.5717	2.7919	1.00	5.00
Equipments are according to the needs of practical works	MANAGEMENT	20	3.6000	1.04630	.23396	3.1103	4.0897	1.00	5.00
	INSTRUCTORS	141	1.5603	1.01678	.08563	2.3910	2.7296	1.00	5.00
	STUDENTS	257	2.5486	1.19511	.07455	2.4018	2.6954	1.00	5.00
	Total	418	2.6029	1.15062	.05628	2.4922	2.7135	1.00	5.00
Adequate tools and equipments are available for each course in the program	MANAGEMENT	20	1.9500	.82558	.18460	1.5636	2.3364	1.00	4.00
	INSTRUCTORS	141	1.8723	.73534	.06193	1.7499	1.9948	1.00	4.00
	STUDENTS	257	1.6965	.76630	.04780	1.6024	1.7906	1.00	5.00
	Total	418	1.7679	.76257	.03730	1.6946	1.8413	1.00	5.00
Adequate and relevant training modules are available	MANAGEMENT	20	3.3500	1.30888	.29267	2.7374	3.9626	1.00	5.00
	INSTRUCTORS	141	2.6738	1.11160	.09361	2.4887	2.8588	1.00	5.00

	Total	161	2.7654	1.15583	.09081	2.5861	2.9448	1.00	5.00
Relevant factories or service rendering organizations are available for practices	MANAGEMENT	20	3.3000	.92338	.20647	2.8678	3.7322	1.00	4.00
	INSTRUCTORS	141	1.8582	1.07292	.09036	2.6795	3.0368	1.00	5.00
	Total	161	2.5198	1.06309	.08352	2.7548	3.0847	1.00	5.00
Course materials are relevant and up to date	MANAGEMENT	20	3.6000	.82078	.18353	3.2159	3.9841	1.00	4.00
	INSTRUCTORS	141	2.4043	1.06890	.09002	2.2263	2.5822	1.00	5.00
	Total	161	2.5494	1.10926	.08715	2.3773	2.7215	1.00	5.00

APPENDIX H: ANOVA FOR EDUCATIONAL FACILITY ISSUES BY RESPONDENTS

Items	Sources of variations	Sum of Squares	Df	Mean Square	F	Sig.
The institution has sufficient lecturing spaces to accommodate students	Between Groups	5.832	2	2.916	4.741	.009
	Within Groups	254.642	414	.615		
	Total	260.475	416			
Academic staff and students have access to computer resources	Between Groups	.840	2	.420	.386	.680
	Within Groups	451.055	415	1.087		
	Total	451.895	417			

The institution has sufficient workshop facilities, to accommodate students	Between Groups	10.215	2	5.107	4.634	.010
	Within Groups	457.441	415	1.102		
	Total	467.656	417			
The institution has procedures in place to attract funding.	Between Groups	8.859	2	4.429	1.268	.283
	Within Groups	1449.842	415	3.494		
	Total	1458.701	417			
Clearly specified budgetary procedures are in place to ensure allocation of limited resources	Between Groups	2.984	2	1.492	1.659	.192
	Within Groups	373.268	415	.899		
	Total	376.251	417			
Latest books/journals are available in the library	Between Groups	14.957	2	7.478	6.130	.002
	Within Groups	506.278	415	1.220		
	Total	521.234	417			
Building facilities are adequate for workshops	Between Groups	16.489	2	8.245	6.453	.002
	Within Groups	530.193	415	1.278		
	Total	546.682	417			
Equipments are according to the needs of practical works	Between Groups	20.897	2	10.448	8.163	.000
	Within Groups	531.180	415	1.280		
	Total	552.077	417			
Adequate tools and equipments are available for	Between Groups	3.511	2	1.756	3.049	.048
	Within Groups					
	Total					

each course in the program	Within Groups	238.979	415	.576		
	Total	242.490	417			
Adequate and relevant training modules are available	Between Groups	9.544	2	4.772	3.691	.027
	Within Groups	205.543	159	1.293		
	Total	215.086	161			
Relevant factories or service rendering organizations are available for practices	Between Groups	4.594	2	2.297	2.059	.131
	Within Groups	177.363	159	1.115		
	Total	181.957	161			
Adequate capital budget is available for machines and equipments	Between Groups	4.131	2	2.065	1.980	.141
	Within Groups	165.869	159	1.043		
	Total	170.000	161			
Adequate budget is available for field visit	Between Groups	14.828	2	7.414	6.527	.002
	Within Groups	180.610	159	1.136		
	Total	195.438	161			
Course materials are relevant and up to date	Between Groups	25.347	2	12.674	11.664	.000
	Within Groups	172.757	159	1.087		
	Total	198.105	161			

APPENDIX I: DESCRIPTIVE STATISTICS OF ADMISSION ISSUES OF STUDENT TO TVET BY INSTITUTES

Items	Institutes	N	Mean	Std. Dev	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
The institution gives opportunity to students how to choose a field of study on the basis of their interest	SODDO	87	1.8851	.82723	.08869	1.7088	2.0614	1.00	4.00
	HAWASSA	134	1.9925	.87140	.07528	1.8436	2.1414	1.00	4.00
	AMBO	91	1.8462	.81545	.08548	1.6763	2.0160	1.00	4.00
	NEKAMPTE	106	2.0283	.97059	.09427	1.8414	2.2152	1.00	5.00
	Total	418	1.9474	.87716	.04290	1.8630	2.0317	1.00	5.00
EHEECE/ EGSECE are basic criteria of the MOE to determine the admission of trainees to TVET is acceptable.	SODDO	87	2.1149	.96960	.10395	1.9083	2.3216	1.00	5.00
	HAWASSA	134	2.3209	.94671	.08178	2.1591	2.4827	1.00	4.00
	AMBO	91	2.2527	1.0498	.11005	2.0341	2.4714	1.00	4.00
	NEKAMPTE	106	2.6792	1.0469	.10169	2.4776	2.8809	1.00	4.00
	Total	418	2.3541	1.0173	.04976	2.2563	2.4519	1.00	5.00
Students are given orientation during admission about fields of study	SODDO	87	2.3563	1.0227	.10965	2.1383	2.5743	1.00	4.00
	HAWASSA	134	2.3955	1.1504	.09939	2.1989	2.5921	1.00	5.00
	AMBO	91	2.3846	1.0828	.11352	2.1591	2.6101	1.00	5.00

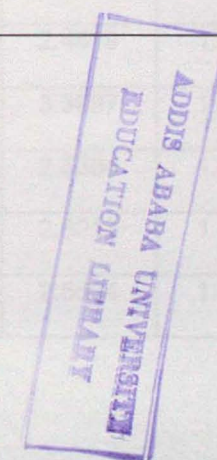
	NEKAMPTE	106	2.6792	1.1258	.10935	2.4624	2.8961	1.00	4.00
	Total	418	2.4569	1.1077	.05418	2.3504	2.5634	1.00	5.00
The courses of high school encourage the students to join TVET	SODDO	87	2.1954	.97455	.10448	1.9877	2.4031	1.00	4.00
	HAWASSA	134	2.2090	.99680	.08611	2.0386	2.3793	1.00	4.00
	AMBO	91	2.2967	1.0487	.10994	2.0783	2.5151	1.00	5.00
	NEKAMPTE	106	2.4434	1.1048	.10731	2.2306	2.6562	1.00	5.00
	Total	418	2.2847	1.0331	.05053	2.1854	2.3840	1.00	5.00
Only students who failed in EHEECE/ EGSECE can join TVET	SODDO	87	2.1379	1.0249	.10989	1.9195	2.3564	1.00	4.00
	HAWASSA	134	2.4403	1.0796	.09327	2.2558	2.6248	1.00	5.00
	AMBO	91	2.4066	1.0747	.11266	2.1828	2.6304	1.00	4.00
	NEKAMPTE	106	2.6604	1.2180	.11830	2.4258	2.8950	1.00	5.00
	Total	418	2.4258	1.1147	.05452	2.3187	2.5330	1.00	5.00
EHEECE/ EGSECE can determine the quality of students entering TVET	SODDO	87	2.1264	1.0762	.11538	1.8971	2.3558	1.00	5.00
	HAWASSA	134	2.2985	1.2203	.10542	2.0900	2.5070	1.00	5.00
	AMBO	91	2.1648	.99179	.10397	1.9583	2.3714	1.00	4.00
	NEKAMPTE	106	2.1132	1.1068	.10751	1.9000	2.3264	1.00	4.00
	Total	418	2.1866	1.1139	.05448	2.0795	2.2937	1.00	5.00
Physical fitness used as a	SODDO	87	1.9770	1.0452	.11206	1.7542	2.1998	1.00	4.00

criteria during admission of students to TVET	HAWASSA	134	2.3731	1.1676	.10087	2.1736	2.5727	1.00	5.00
	AMBO	91	2.4615	1.1285	.11830	2.2265	2.6966	1.00	5.00
	NEKAMPTE	106	2.8019	1.1581	.11249	2.5788	3.0249	1.00	5.00
	Total	418	2.4187	1.1627	.05687	2.3069	2.5304	1.00	5.00
Admission of students depends on man power demand with respect to each field/stream of study/	SODDO	87	1.8506	.95879	.10279	1.6462	2.0549	1.00	4.00
	HAWASSA	134	2.1642	1.1838	.10227	1.9619	2.3665	1.00	5.00
	AMBO	91	2.2418	1.1386	.11936	2.0046	2.4789	1.00	5.00
	NEKAMPTE	106	2.4057	1.0759	.10451	2.1984	2.6129	1.00	4.00
	Total	418	2.1770	1.1155	.05456	2.0698	2.2843	1.00	5.00
Merit is observed during admission of students to TVET	SODDO	87	2.2529	1.1735	.12582	2.0028	2.5030	1.00	5.00
	HAWASSA	134	2.2313	1.1233	.09704	2.0394	2.4233	1.00	5.00
	AMBO	91	1.8791	.95260	.09986	1.6807	2.0775	1.00	4.00
	NEKAMPTE	106	2.1321	.96684	.09391	1.9459	2.3183	1.00	4.00
	Total	418	2.1340	1.0667	.05217	2.0314	2.2365	1.00	5.00

APPENDIX J: ANOVA FOR ADMISSION ISSUES OF STUDENTS TO TVET PROGRAMS BY INSTITUTES

Items	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.
The institution gives opportunity to students how to choose a field of study on the basis of their interest	Between Groups	2.238	3	.746	.969	.407
	Within Groups	318.604	414	.770		
	Total	320.842	417			
EHEECE/ EGSECE are basic criteria of the MOE to determine the admission of trainees to TVET is acceptable.	Between Groups	17.265	3	5.755	5.750	.001
	Within Groups	414.333	414	1.001		
	Total	431.598	417			
Students are given orientation during admission about fields of study	Between Groups	7.101	3	2.367	1.942	.122
	Within Groups	504.624	414	1.219		
	Total	511.725	417			
The courses of high school encourage the students to join TVET	Between Groups	4.145	3	1.382	1.297	.275
	Within Groups	440.977	414	1.065		
	Total	445.122	417			
Only students who failed in EHEECE/ EGSECE can join TVET	Between Groups	13.104	3	4.368	3.580	.014
	Within Groups	505.097	414	1.220		
	Total	518.201	417			

EHEECE/ EGSECE can determine the quality of students entering TVET	Between Groups	2.607	3	.869	.699	.553
	Within Groups	514.838	414	1.244		
	Total	517.445	417			
Physical fitness used as a criteria during admission of students to TVET	Between Groups	32.982	3	10.994	8.576	.000
	Within Groups	530.752	414	1.282		
	Total	563.734	417			
Admission of students depends on man power demand with respect to each field/stream of study/	Between Groups	15.216	3	5.072	4.169	.006
	Within Groups	503.683	414	1.217		
	Total	518.900	417			
Merit is observed during admission of students to TVET	Between Groups	8.411	3	2.804	2.490	.060
	Within Groups	466.086	414	1.126		
	Total	474.498	417			



APPENDIX K: DESCRIPTIVE STATISTICS OF ADMISSION ISSUES OF STUDENT TO TVET BY RESPONDENTS

Items	Respondents	N	Mean	Std. Dev	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
The institution gives opportunity to students how to choose a field of study on the basis of their interest	MANAGEMENTS	20	2.1500	.98809	.22094	1.6876	2.6124		4.00
	INSTRUCTORS	141	1.8582	.80695	.06796	1.7238	1.9925	1.00	4.00
	STUDENTS	257	1.9805	.90334	.05635	1.8696	2.0915	1.00	5.00
	Total	418	1.9474	.87716	.04290	1.8630	2.0317	1.00	5.00
EHEECE/ EGSECE are basic criteria of the MOE to determine the admission of trainees to TVET is acceptable.	MANAGEMENTS	20	2.6000	.88258	.19735	2.1869	3.0131	1.00	4.00
	INSTRUCTORS	141	2.0567	.99120	.08347	1.8917	2.2218	1.00	4.00
	STUDENTS	257	2.4981	1.0082	.06289	2.3742	2.6219	1.00	5.00
	Total	418	2.3541	1.0173	.04976	2.2563	2.4519	1.00	5.00
Students are given orientation during admission about fields of study	MANAGEMENTS	20	2.8000	1.2814	.28654	2.2003	3.3997	1.00	5.00
	INSTRUCTORS	141	2.3475	1.1463	.09654	2.1567	2.5384	1.00	5.00
	STUDENTS	257	2.4903	1.0684	.06665	2.3590	2.6215	1.00	4.00
	Total	418	2.4569	1.1077	.05418	2.3504	2.5634	1.00	5.00

The courses of high school encourage the students to join TVET	MANAGEMENTS	20	2.3000	.92338	.20647	1.8678	2.7322	1.00	4.00
	INSTRUCTORS	141	2.1206	.98180	.08268	1.9571	2.2840	1.00	5.00
	STUDENTS	257	2.3735	1.0609	.06618	2.2432	2.5039	1.00	5.00
	Total	418	2.2847	1.0331	.05053	2.1854	2.3840	1.00	5.00
Only students who failed in EHEECE/ EGSECE can join TVET	MANAGEMENTS	20	2.3500	1.2680	.28354	1.7565	2.9435	1.00	5.00
	INSTRUCTORS	141	2.2482	1.0361	.08726	2.0757	2.4207	1.00	5.00
	STUDENTS	257	2.5292	1.1354	.07083	2.3897	2.6687	1.00	5.00
	Total	418	2.4258	1.1147	.05452	2.3187	2.5330	1.00	5.00
EHEECE/ EGSECE can determine the quality of students entering TVET	MANAGEMENTS	20	2.4500	1.1459	.25624	1.9137	2.9863	1.00	4.00
	INSTRUCTORS	141	2.2340	1.1627	.09792	2.0404	2.4276	1.00	5.00
	STUDENTS	257	2.1401	1.0842	.06763	2.0069	2.2733	1.00	5.00
	Total	418	2.1866	1.1139	.05448	2.0795	2.2937	1.00	5.00
Physical fitness used as a criteria during admission of students to TVET	MANAGEMENTS	20	2.2500	1.2926	.28905	1.6450	2.8550	1.00	4.00
	INSTRUCTORS	141	2.1631	1.0929	.09205	1.9811	2.3451	1.00	5.00
	STUDENTS	257	2.5720	1.1674	.07282	2.4286	2.7154	1.00	5.00
	Total	418	2.4187	1.1627	.05687	2.3069	2.5304	1.00	5.00
Admission of students depends on man power demand with respect to each	MANAGEMENTS	20	2.8000	1.2814	.28654	2.2003	3.3997	1.00	5.00
	INSTRUCTORS	141	1.9433	.99838	.08408	1.7770	2.1095	1.00	4.00

field/stream of study/	STUDENTS	257	2.2568	1.1371	.07094	2.1171	2.3965	1.00	5.00
	Total	418	2.1770	1.1155	.05456	2.0698	2.2843	1.00	5.00
Merit is observed during admission of students to TVET	MANAGEMENTS	20	2.1500	1.2258	.27410	1.5763	2.7237	1.00	5.00
	INSTRUCTORS	141	1.9007	1.0163	.08559	1.7315	2.0699	1.00	5.00
	STUDENTS	257	2.2607	1.0634	.06634	2.1301	2.3913	1.00	5.00
	Total	418	2.1340	1.0667	.05217	2.0314	2.2365	1.00	5.00

APPENDIX L: ANOVA FOR ADMISSION ISSUES OF STUDENTS TO TVET PROGRAMS BY RESPONDENTS

Items	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.
The institution gives opportunity to students how to choose a field of study on the basis of their interest	Between Groups	2.226	2	1.113	1.450	.236
	Within Groups	318.616	415	.768		
	Total	320.842	417			
EHEECE/ EGSECE are basic criteria of the MOE to determine the admission of trainees to TVET is acceptable.	Between Groups	19.003	2	9.501	9.557	.000
	Within Groups	412.595	415	.994		
	Total	431.598	417			
Students are given orientation during admission about fields of study	Between Groups	4.328	2	2.164	1.770	.172
	Within Groups	507.397	415	1.223		
	Total	511.725	417			

The courses of high school encourage the students to join TVET	Between Groups	5.832	2	2.916	2.755	.065
	Within Groups	439.290	415	1.059		
	Total	445.122	417			
Only students who failed in EHEECE/ EGSECE can join TVET	Between Groups	7.308	2	3.654	2.968	.052
	Within Groups	510.893	415	1.231		
	Total	518.201	417			
EHEECE/ EGSECE can determine the quality of students entering TVET	Between Groups	2.261	2	1.131	.911	.403
	Within Groups	515.184	415	1.241		
	Total	517.445	417			
Physical fitness used as a criteria during admission of students to TVET	Between Groups	15.818	2	7.909	5.990	.003
	Within Groups	547.917	415	1.320		
	Total	563.734	417			
Admission of students depends on man power demand with respect to each field/stream of study/	Between Groups	17.103	2	8.551	7.072	.001
	Within Groups	501.797	415	1.209		
	Total	518.900	417			
Merit is observed during admission of students to TVET	Between Groups	11.805	2	5.902	5.294	.005
	Within Groups	462.693	415	1.115		
	Total	474.498	417			

APPENDIX M : EGSECE GPA BY INSTITUTES

SODDO			HAWWASA					AMBO			NEKAMPTE		
2.1	2.1	2	1.9	1.7	1.9	1.9	2.1	2	1.9	1.9	2.1	2	2.1
2	2	2	2.3	2.1	1.9	2.1	2.1	2.3	2.3	2.3	2	2.2	2.2
2.3	2.1	2	2.1	2.3	2.1	1.9	2	1.8	2.1	2.1	2.3	2.2	2.3
2.1	2	2	2.2	2.5	1.8	2.4	2	2.2	2.1	1.9	2	2.9	2.2
2.3	2	2	1.8	1.9	2.1	2.2	1.8	1.9	2	2.1	2.2	2.1	2
2.1	2	1.9	2	1.9	2.4	2.2	2	2.3	2.3	2.1	2.4	2.4	2.2
2.1	2.2	1.9	2.1	2	2.1	2	2	2.1	2.2	2.1	2.1	2.4	2.3
2.3	2.2	2	2.2	2.1	1.9	2	1.9	2.1	2.2	2.1	2.3	2	2.3
2	1.8	1.9	1.8	2.3	2.1	2.1	2	2.2	2	2.1	2.1	2.3	2
2.1	2.1	2	2.2	2	2	2	2	1.9	2.3	2	2.1	2.2	2.6
2	2	2.1	1.8	2.2	2.4	2.1	2.4	2.3	2	2.6	2.5	2.5	2.3
2.3	2.3	2	2.1	2	2.2	2.1	2.1	2.1	2	2	2.3	2.7	2.5
1.9	2	2.1	2.1	2.2	2.3	2.3		1.8	1.9	3	2.1	2.5	2.2
2.1	2	2.1	2.3	1.9	2.3	2.2		2	2.3	2.3	2.3	2	2
2.2	1.9	2	2.1	2	2.1	1.9		2	2.3	2.3	2.2	2.1	2.6
2.4	2.2	2.1	2.3	2.3	2.3	2		1.9	2.1	2	2.3	2.4	2.4
2	2	2.1	2.2	2	1.9	2.3		2	2.1	1.8	2.3	2	2.3
2	2.2	1.9	1.9	2.3	1.8	2.2		1.9	2.3	2.3	2.4	2.4	2.2

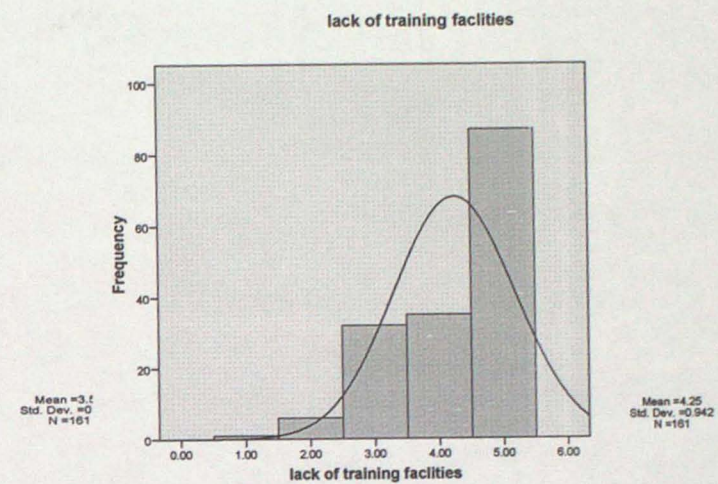
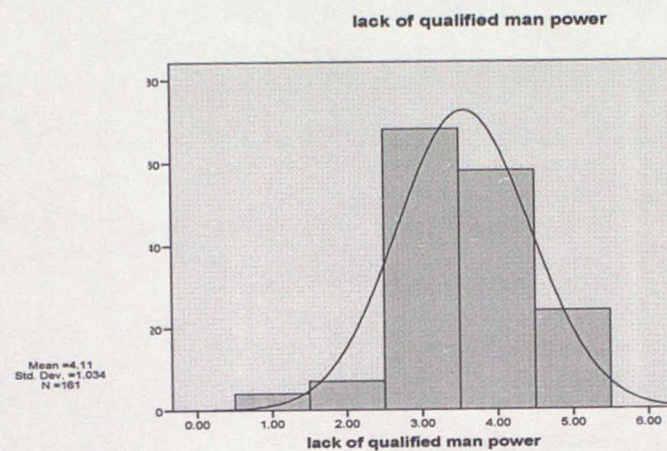
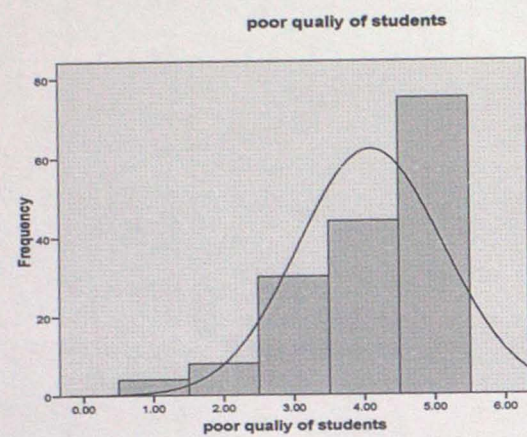
Appendix N: Analyses of Significant Factors Affecting the Quality of TVET Programs

		INSTUTES				Total	χ^2
Items		Soddo	Hawassa	Ambo	Nekampte		
1. Shortage of qualified and competent man power	highly insignificant	0	0	0	4	4	*24.960
		.0%	.0%	.0%	9.1%	2.5%	
		0	1	2	4	7	
	insignificant	.0%	2.0%	5.6%	9.1%	4.3%	
		12	25	13	18	68	
	moderate	38.7%	50.0%	36.1%	40.9%	42.2%	
		11	20	12	15	58	
	significant	35.5%	40.0%	33.3%	34.1%	36.0%	
	highly significant	8	4	9	3	24	
		25.8%	8.0%	25.0%	6.8%	14.9%	
2. Lack of adequate educational facilities	highly insignificant	0	0	0	0	0	13.182
		.0%	.0%	.0%	.0%	.0%	
		0	2	2	2	6	
	insignificant	.0%	4.0%	5.6%	4.5%	3.7%	
		5	8	3	2	18	

3.The poor quality of student joining the program	moderate	16.1%	16.0%	8.3%	4.4%	11.2%	
		7	13	9	14	50	
	Significant	22.6%	26.0%	25.0%	31.1%	31.1%	
	highly significant	19	27	22	26	94	
		61.3%	54.0%	61.1%	57.7%	58.4%	
	highly insignificant	0	0	0	4	4	
		.0%	.0%	.0%	9.1%	2.5%	
		2	1	0	5	8	
	insignificant	6.5%	2.0%	.0%	11.4%	5.0%	
		5	3	6	3	17	*33.693
	Moderate	16.1%	6.0%	16.7%	22.7%	10.6%	
		11	16	13	7	47	
	Significant	35.5%	32.0%	36.1%	15.9%	29.2%	
	highly significant	13	30	17	25	85	
		41.9%	60.0%	47.2%	40.9%	52.7%	

*p < 0.05

Figure 2



Addis Ababa University

School of Graduate Studies

Questionnaire to be filled by TVET Deans, Vice Deans, Counselors and Registrars

Introduction: The purpose of this questionnaire is to collect basic data to Study Major Factors Affecting the Quality of TVET Program in selected institutions. Your co-operation to offer relevant and honest information is highly important for the success of the study. Hence, be frank and respond to each item accurately and thoroughly as much as possible. Please, give precise and brief answers on the space provided for the open-ended questions. Thank you in advance for taking time to complete this questionnaire.

Part one: Background information

Region _____ Name of Institute _____ Fields of Study _____

Educational Qualifications/Dip/BA/BSc/MA/PhD/ _____ work Experience _____ Position _____

Please mark (√) in the following items in the appropriate column.						
Strongly Agree=5, Agree=4, Undecided=3, Disagree=2, Strongly Disagree=1						
1	Items related to Management issues	1	2	3	4	5
1.1	The institution has specific strategies in place for monitoring achievement of institutional goals and identifying problem areas.					
1.2	Staff and students are represented in administrative structures.					
1.3	The institution has developed quality assurance policies and procedures.					
1.4	The institution has put a management information system in place to manage student and staff data, and to track student performance.					
1.5	The institution has specific procedures in place to ensure and support diversity of staff and students.					
1.6	The institution has a policy and standard procedures in place to ensure staff and student welfare.					
1.7	The institution has qualified and competent deans.					
1.8	The institution has experienced and competent supporting staff.					
1.9	The institution has developed a criteria for staff recruitment and development					
1.10	The institution encourages and rewards teaching and learning					

	innovation.					
1.11	The institution has procedures in place for implementation and assessment of programs offered.					
1.12	Evaluation of the institution is periodically done					
1.13	Teachers get involved in decision making process					
2	Items related to Infrastructure and Resource	1	2	3	4	5
2.1	The institution has sufficient lecturing spaces to accommodate students					
2.2	Academic staff and students have access to computer resources					
2.3	The institution has sufficient workshop facilities, to accommodate students					
2.4	The institution has procedures in place to attract funding.					
2.5	Clearly specified budgetary procedures are in place to ensure allocation of limited resources					
2.6	Latest books/journals are available in the library					
2.7	Building facilities are adequate for workshops					
2.8	Equipments are according to the needs of practical works					
2.9	Adequate tools and equipments are available for each course in the program					
2.10	Adequate and relevant training modules are available					
2.11	Relevant factories or service rendering organizations are available for practices					
2.12	Adequate capital budget is available for machines and equipments					
2.13	Adequate budget is available for field visit					
2.14	Course materials are relevant and up to date					
3	Items related to Admission issues	1	2	3	4	5
3.1	The institution gives opportunity to students how to choose a field of study on the basis of their interest					

3.2	EHEECE/ EGSECE are basic criteria of the MOE to determine the admission of trainees to TVET is acceptable.					
3.3	Students are given orientation during admission about fields of study					
3.4	The courses of high school encourage the students to join TVET					
3.5	Only students who failed in EHEECE/ EGSECE can join TVET					
3.6	EHEECE/ EGSECE can determine the quality of students entering TVET					
3.7	Physical fitness used as a criteria during admission of students to TVET					
3.8	Admission of students depends on man power demand with respect to each field/stream of study/					
3.9	Merit is observed during admission of students to TVET					

Please mark (✓) in the following items in the appropriate column.

4	Items Related Availability, Competences and Others	Adequate	Moderate	Inadequate
4.1	How do you rate the availability of instructors in your institution?			
4.2	How do you rate the availability of supporting staff in your institution?			
4.3	How competent academically are most instructors at your institution?	competent	moderate	Incompetent
4.4	How competent academically are most students at your institution?			
4.5	How experienced are your instructors?	experienced	moderate	Not experienced
4.6	Does your institute have criteria to appoint and promote the teaching staff	Yes	No	No response

4.7	If your answer to question 4.6 is 'no' its impact on the quality of education is?	High	Medium	Low
4.8	Do you think that the instructors are capable enough to utilize the existing equipments for practical purposes?	Yes	No	No response
4.9	Does your institute have policy and associated procedures for the quality assurance of the program?			
4.10	If your answer to the above item 4.9 is 'no', how do you rate its impact on quality	High	Medium	Low
4.11	These days there is a critique that says quality of TVET is declining, do you agree?	Agree	Don't know	Disagree

5. Rate the major factors that are negatively affecting the quality of training in your institution.

Please mark (✓) by ranking the following items 1 to 5 in priority order.

Highly significant=5, significant=4, moderate=3, insignificant = 2, highly insignificant=1

Items	1	2	3	4	5
5.1 Shortage of qualified and competent man power					
5.2 Lack of financial and adequate facilities					
5.3 The poor quality of student joining the program					

Addis Ababa University
School of Graduate Studies

Questionnaire to be filled by TVET Instructors

Introduction: The purpose of this questionnaire is to collect basic data to Study Major Factors Affecting the Quality of TVET Program in selected institutions of Oromia and SNNP Regions. Your co-operation to offer relevant and honest information is highly important for the success of the study. Hence, be frank and respond to each item accurately and thoroughly as much as possible. Please, give precise and brief answers on the space provided for the open-ended questions. Thank you in advance for taking time to complete this questionnaire.

Part one: Background information

Region _____ **Name of Institute** _____ **field, of study** _____

Educational Qualifications/Dip/BA/BSc/MA/PhD/ _____ **Years of teaching experience** _____

Please mark (✓) in the following items in the appropriate column.						
Strongly Agree=5, Agree=4, Undecided=3, Disagree=2, Strongly Disagree=1						
1	Items related to Management issues	1	2	3	4	5
1.1	The institution has procedures in place for monitoring achievement of institutional goals and identifying problem areas.					
1.2	Instructors are represented on administrative structures.					
1.3	The institution has developed quality assurance policies and procedures.					
1.4	The institution has information system in place to manage instructors' data and performance.					
1.5	The institution has procedures in place to ensure and support diversity of academic staff.					
1.6	The institution has qualified and competent Deans/Principals.					
1.7	The institution has experienced and competent supporting staff.					
1.8	The institution has developed a criteria for staff recruitment and development					
1.9	The institution encourages and rewards teaching and learning innovation.					
1.10	The institution has procedures in place for implementation and assessment of programs offered.					

1.11	Evaluation of the institution is periodically done					
2	Items related to Infrastructure and Resource	1	2	3	4	5
2.1	The institution has sufficient lecturing spaces to accommodate student					
2.2	Instructors have access to computer resources					
2.3	The institution has sufficient workshop facilities, to accommodate students					
2.4	The institution has procedures in place to attract funding.					
2.5	Clearly specified budgetary procedures are in place to ensure allocation of limited resources					
2.6	Latest books/journals are available in the library					
2.7	Building facilities are adequate for workshops					
2.8	Equipments are according to the needs of practical works					
2.9	Adequate tools and equipments are available for each course in the program					
2.10	Adequate and relevant training modules are available					
2.11	Relevant service rendering organizations are available for practices					
2.12	Adequate capital budget is available for machines and equipments					
2.13	Adequate budget is available for field visit					
2.14	Course materials are relevant and up to date					
3	Items Related to Admission Issues	1	2	3	4	5
3.1	The institution gives opportunity to students how to choose a field of study on the basis of their interest					
3.2	EHEECE/ EGSECE are basic criteria of the MOE to determine the admission of trainees to TVET is acknowledged					
3.3	Students are given orientation during admission about fields of study					
3.4	The courses of high school encourage the students to join TVET					
3.5	Merit is observed during admission of students to TVET					
3.6	Only students who failed in EHEECE/ EGSECE can join TVET					
3.7	EHEECE/ EGSECE can determine the quality of students entering TVET					
3.8	Physical fitness used as a criteria during admission of students to TVET					

3.9	Admission of students depends on man power demand with respect to each field/stream of study/					
-----	---	--	--	--	--	--

Please mark (✓) in the following items in the appropriate column.

4	Item; Related Availability, Competence; and Other;	competent	Moderate	Incompetent
4.1	How competent academically are most student; at your Institution?			
4.2	How competent are most the top management; of your institution?			
4.3	Do you think that the EHEECE/ EGSECE result should be the only criteria to stream student; to TVET?	Yes	No	No response
4.4	Do you think that teachers; are willing to teach in TVET institutions?	High	Medium	Low
4.5	Does your institute have criteria to appoint and promote the teaching staff?	Yes	No	No response
4.6	Do you think that the instructor; are capable enough to utilize the existing equipment; for practical purpose;?			
4.7	Does your institute have policy and associated procedure; for the quality assurance of the program?			
4.8	If your answer to the above item 4.7 is 'no', how do you rate its impact on quality	High	Medium	Low
4.9	These day; there is a critique that say; quality TVET is declining, do you agree?	Agree	Don't know	Disagree

Please mark (✓) in the following items in the appropriate column.						
Strongly Agree=5, Agree=4, Undecided=3, Disagree=2, Strongly Disagree=1						
5	Teaching and Learning Process	1	2	3	4	5
5.1	The mode of delivery takes account of the needs and challenges of all target students					
5.2	The institution has procedures, to support the induction to teaching, pedagogy, upgrading of staff teaching and learning skills.					
5.3	Academic staff average workloads are in line with acceptable norms.					
5.4	The teaching-learning process is supported by technology in a manner appropriate to the program.					
5.5	A clear procedure is in place to identify the learning materials needed to support program delivery.					
5.6	The language level of the learning materials is appropriate for the targeted students.					
5.7	The learning materials have been designed with the purpose of engaging students practically.					
5.8	Clear information about mode of assessment is provided for all courses/modules making up the program.					
5.9	Assessment is used as an integral part of the teaching and learning process					
5.10	A variety of assessment methods are used in the program.					
5.11	Teaching-learning process is more of practical					
5.12	Clear guidelines are provided for all assessment tasks					

5.13 Rate the frequency of the utilization of methods of teaching in the table below with a tick mark (✓)

Teaching method	Frequency		
	Always	Sometimes	Not at all used
Demonstration			
Lecture			
Group discussion			
Project/term papers			

5.14 The followings are among the different ways of evaluating students' performance. Please, show how frequently you make use of each.

Evaluation method	Frequency		
	Always	Sometimes	Not at all used
mid term exams			
Final exam			
Continuous tests			
Assignments (project term paper)			

6. Rate the major factors that are negatively affecting the quality of training in your institution.

Please mark (✓) by ranking the following items 1 to 5 in priority order.

Highly significant=5, significant=4, moderate=3, insignificant = 2, highly insignificant=1

Items	1	2	3	4	5
6.1 Shortage of qualified and competent man power					
6.2 Lack of financial and adequate facilities					
6.3 the poor quality of student joining the program					

Addis Ababa University
School of Graduate Studies

Questionnaire to be filled by TVET Students

Introduction: The purpose of this questionnaire is to collect basic data to Study Major Factors Affecting the Quality of TVET Program in selected institutions of Oromia and SNNP Regions. Your co-operation to offer relevant and honest information is highly important for the success of the study. Hence, be frank and respond to each item accurately and thoroughly as much as possible. Please, give precise and brief answers on the space provided for the open-ended questions. Thank you in advance for taking time to complete this questionnaire.

Part one: Background information

Region _____ Name of Institute _____ fields of study _____

Year of study 2nd/3rd/Level/ _____ EHEECE/ EGSECE Result G.P.A _____

Please mark (✓) in the following items in the appropriate column.						
Strongly Agree=5, Agree=4, Undecided=3, Disagree=2, Strongly Disagree=1						
1	Items related to Management issues	1	2	3	4	5
1.1	Students are represented in administrative structures.					
1.2	The institution has put a management information system in place to manage student performance.					
1.3	The institution has procedures in place to ensure and support diversity of students.					
1.4	The institution has qualified and competent deans.					
1.5	The institution has experienced and competent supporting staff.					
1.6	Evaluation of the institution is periodically done					
1.7	The institution has partnerships with other educational institutions to enhance the quality of education.					
2	Items Related to Infrastructure and Resource	1	2	3	4	5
2.1	The institution has sufficient lecturing spaces to accommodate					

	students.						
2.2	The institution has sufficient workshop facilities, to accommodate students						
2.3	The institution makes provision for managing and maintaining utilities						
2.4	The institution provides financial support to deserving students.						
2.5	Latest books/journals are available in the library						
2.6	Building facilities are adequate for workshops						
2.7	Equipments are according to the needs of practical works						
2.8	Sufficient computer facilities are available for students						
2.9	Adequate budget is available for field visit						
Please mark (✓) in the following items in the appropriate column. Strongly Agree=5, Agree=4, Undecided=3, Disagree=2, Strongly Disagree=1							
3	Items related to Admission /streaming/ of Students to TVET	1	2	3	4	5	
3.1	The institution gives opportunity to students how to choose a field of study on the basis of their interest						
3.2	EHEECE/ EGSECE as basic criteria of the MOE to determine the admission of trainees to TVET is acceptable						
3.3	Students are given orientation to choose their interest field of study						
3.4	The courses of high school encourage the students to join TVET						
3.5	Merit is observed during admission of students to TVET						
3.6	Only students who failed in EHEECE/ EGSECE can join TVET						
3.7	EHEECE/ EGSECE can determine the quality of students entering TVET						
3.8	Physical fitness used as a criteria during admission of students to TVET						
3.9	Admission of students depends on man power demand with respect to each field/stream of study/						

EGSECE: Ethiopian General Secondary Education Certificate Examination

EHEECE: Ethiopian Higher Education Entrance Certificate Examination

Please mark (✓) in the following items in the appropriate column.

4	Items Related Availability, Competences and Others	Highly	Moderately	Low
4.1	How interested are you to attend the training program?			
4.2	How do you rate the availability of instructors in your institution?	Adequate	Moderate	Inadequate
4.3	How competent academically are most instructors in your department?	competent	moderate	Incompetent
4.4	How do you assess the marketability of fields of study in your department or institution?	Satisfactory	Moderate	Not satisfactory
4.5	To what extent are the programs that you are studying relevant to the world of work?	Relevant	moderate	Not relevant
4.6	Do think that the instructors are capable enough to mobilize the existing equipments for practical purposes?	Yes	No	No response
4.7	Do you think that the EHEECE/ EGSECE result of students satisfactory to stream them to TVET?			
4.8	Is your Institute's management competent enough to properly manage the institute?			
4.9	Does your institute have policy and associated procedures for the quality assurance of the program?			
4.10	If your answer to the above item (5.9) is 'no', how do you rate its impact on quality	High	Medium	Low
4.11	These days there is a critique that says quality of education is declining, do you agree?	Agree	Don't know	Disagree

EGSECE: Ethiopian General Secondary Education Certificate Examination

EHEECE: Ethiopian Higher Education Entrance Certificate Examination

Please mark (✓) in the following items in the appropriate column.						
Strongly Agree=5, Agree=4, Undecided=3, Disagree=2, Strongly Disagree=1						
5	Teaching and Learning Process	1	2	3	4	5
5.1	The mode of delivery takes account of the needs and challenges of all targeted students.					
5.2	The teaching-learning process is regularly subjected to internal and external review.					
5.3	The teaching-learning process is supported by technology in a manner appropriate to the program.					
5.4	Clearly identified learning materials are available to support program delivery.					
5.5	The language level of the learning materials is appropriate for the targeted students.					
5.6	The learning materials have been designed with the purpose of engaging students practically.					
5.7	Innovative teaching and learning materials are provided for students.					
5.8	Clear information about mode of assessment is provided for all courses/modules making up the program.					
5.9	Assessment is used as an integral part of the teaching and learning process to ensure that students have mastered specific outcomes.					
5.10	Teaching-learning process is more of practical.					
5.11	Instructors make clear the practical application of each course					
5.12	Instructors are well prepared before delivering the lecture					
5.13	Instructors are very regular and punctual in taking classes					
5.14	Instructors give proper time for discussion in the classrooms					
5.15	Instructors provide proper feedback after checking the assignments					

5.16 Rate the frequency of the utilization of methods of teaching in the table below with a tick mark (✓)

Teaching method	Frequency		
	Always	Sometimes	Not at all used
Demonstration			
Lecture			
Group discussion			
Project/term papers			

5.17 The followings are among the different ways of evaluating students' performance. Please, show how frequently most of the instructors make use of each.

Evaluation method	Frequency		
	Always	Sometimes	Not at all used
Mid term exams			
Final exam			
Continuous tests			
Assignments (project term paper)			