Relevance of Technical and Vocational Education and Training (TVET) to market demands: Skills for Employability: Paper presented to the
JOINTE EDUCATION SECTOR ANNUAL REVIEW 2010

THEMATIC PAPER

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<td>Description</td>
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<tr>
<td>CBET</td>
<td>Competence Based Education and Training</td>
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<td>ETP</td>
<td>Education and Training Policy</td>
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<td>FBO</td>
<td>Faith Based Organisation</td>
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<td>FTC</td>
<td>Full Technician Certificate</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GTZ</td>
<td>German Foundation for Technical Cooperation</td>
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<td>ILFS</td>
<td>Integrated Labour Force Survey</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<td>LITI</td>
<td>Livestock Training Institute</td>
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<td>KBET</td>
<td>Knowledge Based Education and Training</td>
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<td>MDG</td>
<td>Millennium Development Goal</td>
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<td>LMIS</td>
<td>Labour Market Information System</td>
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<td>MATI</td>
<td>Ministry of Agriculture Training Institute</td>
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<td>MDG</td>
<td>Millennium Development Goals</td>
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<td>MKUKUTA</td>
<td>Mkakati wa Kukuza Uchumi na Kutokomeza Umaskini Tanzania</td>
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<td>MoLYDS</td>
<td>Ministry of Labour, Youth Development and Sports</td>
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<td>NEP</td>
<td>National Employment Policy</td>
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<td>NGO</td>
<td>Non Government Organisation</td>
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<td>NSGRP</td>
<td>National Strategy for Growth and Reduction of Poverty</td>
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<td>PEDP</td>
<td>Primary Education Development Programme</td>
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<td>PO-RALG</td>
<td>President’s Office - Regional Administration and Local Government</td>
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<td>SEDP</td>
<td>Secondary Education Development Programme</td>
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<td>SME</td>
<td>Small and Medium-sized Enterprises</td>
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<td>TET</td>
<td>Technical Education and Training</td>
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<td>TVET</td>
<td>Technical and Vocational Education and Training</td>
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<td>VET</td>
<td>Vocational Education and Training</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organisation</td>
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1.0 INTRODUCTION

All over the world, many countries are looking for better ways of educating their people and organising their education and training systems so as to meet the challenges of a competitive economic global environment. This is important from the fact that the world is an ever-changing place, politically, geographically and technologically. These rapid technological advances have placed education systems under extreme pressure while trying to adapt and incorporate these changes in an effort to produce more creative, effective and adaptable people.

Many countries, including Tanzania, have thus come to realise the need for a shift in thinking on the purpose of education, that is, from education for employment to education for employability. This means changing from developing the ability to do a specific job to developing the ability to adapt acquired skills to new working environments. This poses a big challenge to the education sector in terms of developing curricula to address this need. It also necessitates the concept of continuing Professional Development (CPD) and life-long learning.

Many countries have come to realise that Technical and Vocational Education and Training (TVET) inherently contributes to solving particular issues of sustainable development through alleviating poverty and providing skills for employability. This paper sets out to shade light on the relevance of TVET to market demands thus providing the much needed skills for employability. The paper explores the context of TVET in Tanzania in terms of prevailing policies, strategies, Acts and regulatory and legal frameworks to support provision of TVET programmes. An overview of the Tanzania economy, the employment trends and the role TVET for skills development takes in support of economic growth is also looked at.

The paper also attempts to discuss the design and management of TVET and propound on the need for the Public and Private sector partnerships while considering the formal, informal and non-formal sectors. In so doing the paper focuses on the identification of market demands as having a major influence on the development of curricula for the provision of hard skills and soft skills (employability skills) in TVET both public and private institutions in Tanzania. It further touches on issues pertaining to coordination aimed at meeting multi-sectoral technological demands.

The paper attempts also to identify gaps of the current TVET system which needs filling in order to respond to the dynamic market demands for employability. Taking cognisance of the existence of a highly competitive labour market, the paper makes an appeal to TVET providers to cherish the provision of quality assured qualifications. The Role of TVET for research and innovation to respond to market demands and alternative modes of TVET that will enhance employment creation and poverty reduction are also be dealt with.

As way forward the main challenges pertaining to relevance of TVET towards addressing the current dynamic market demands are unveiled and mitigation measured based on best practices recommended. A proposal of suitable employability skills, including an outline of assessment, certification and reporting of performance, options that suit both industry and education are also provided.
2.0 THE CONTEXT OF TVET IN TANZANIA

The acquisition of relevant knowledge, practical skills and attitudes for gainful employment in a particular trade or occupational area is considered to be the primary objective of all technical and vocational education and training (TVET) programmes. Skills acquisition is therefore vital for an economy to compete and grow, particularly in an era of economic integration and rapid technological changes. This section examines the context of TVET in Tanzania.

2.1 The Rationale for TVET

2.1.1 Global Human Resource Development Agenda:
(a) After years of neglect, technical and vocational education and training is back on the human resources development agenda in all countries including Tanzania. One of the most important features of TVET is its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills. TVET delivery systems are well placed to train the skilled and entrepreneurial work force that Tanzania needs to create wealth and emerge out of poverty.

(b) Another important characteristic of TVET is that it can be delivered at different levels of sophistication. This means that TVET Institutions can respond to the different training needs of learners from different socio economic and academic back grounds and prepare them for gainful employment and sustainable livelihood. The youth, the poor and the vulnerable of society can therefore benefit from TVET.

2.1.2 National stability
(a) Poor people, especially women and children, suffer most from various forms of social and economic deprivation, including hunger and malnutrition, inadequate health care, limited access to education and low self esteem. Young unemployed people without any productive usage of their time are easily entrained into crime and violence. The risk is greatest with unemployed youth in disadvantaged areas.

(b) Poverty is therefore a threat to national stability and good governance. All over the world, countries have embraced the UN millennium development goals that aim at significantly reducing the number of people living below poverty line, improve access in education, promote gender equity, improve maternal and child health, ensure environmental sustainability and promote global partnership between developed and developing countries.

The key to poverty alleviation is economic growth and the creation of employment for all. However, people without employable skills can not benefit from the growth process. The challenge then is to raise the productive capacity of the youth and the vulnerable groups of society through acquisition of job specific competences.

2.2 Current status of TVET in Tanzania:
In Tanzania talking about the Technical and Vocational Education and Training (TVET) system entails speaking about a cocktail brand of Vocational Education and Training (VET) and Technical Education and Training (TET) systems each of which has its own history, legal mandate and status. VET is under the mandate of the Vocational Education and Training Authority (VETA), a statutory body established by Act No.1 of 1994. TET is under the National Council for Technical Education (NACTE), a statutory body established by Act No.9 of 1997. VETA and NACTE were established respectively pursuant to the VET Policy.
paper (1993) and TET Policy (1996). Both VETA and NACTE are accountable to the Ministry of Education and Vocational Training (MoEVT).

Both vocational education and technical education are defined by their respective establishing instruments to portray contextual perceptions. Vocational education and training is “training leading to a skilled occupation” (Government of the United Republic of Tanzania, 1994, p.6). Technical education on the other hand is “education and training undertaken by students to equip them play roles requiring higher levels of skill, knowledge and understanding and in which they take responsibility for their area of specialisation” (Government of the United Republic of Tanzania, 2002a, p.200). Its scope is thus multi-disciplinary and covers many sectors.

TVET in Tanzania is delivered by public and non-public providers, which include: faith based organisation (FBOs), private individuals, profit and non-profit institutions (NGOs). Public TVET providers fall under sector ministries (e.g. Ministries responsible for Health and Social Welfare; Agriculture; Finance; etc.). Of recent, MoEVT has established a division to coordinate TVET. The division’s role is to ensure the provision of qualified technical manpower ensuing from VET and TET institutions to support the economy. As it is often spoken the primary objective of TVET programmes is the acquisition of relevant knowledge, practical skills and attitudes for gainful employment in a particular trade or occupational area. Skills acquisition is considered as vital for a vibrant economy in order to compete and grow, particularly in an era of economic integration and technological change. TVET is a direct means of providing workers with skills more relevant to the evolving needs of employers and the economy.

In its search for definition MoEVT opted to adopt that resolved by the World Congress on TVET, held in Seoul in 1999 and endorsed by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and International Labour Organisation (ILO); (UNESCO and ILO, 2001) according to which TVET: ‘is a comprehensive term referring to those aspects of the educational process that involve, in addition to general education, the study of technologies and related sciences, as well as the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life’. The scope of TVET is thus multi-disciplinary, covering many sectors and delivered through many institutions including:-

(a) The Vocational Education and Training (VET) subsystem with over 900 centres owned by VETA (22) and the rest owned by religious bodies, NGOs and Private persons.
(b) The Technical Education (TE) subsystem with 215 registered Technical Institutions.
(c) The Folk Development College (FDC) subsystem with 58 Colleges.
(d) The Agricultural subsystem with 9 centres (the MATIs and LITIs) (part of TE).
(e) The Non-formal subsystem: Various Government and NGO projects as non-certificate training either as stand alone activities or embedded in community development and/or income generating projects.
(f) Post primary technical training centres as run by several district authorities.
Table 1: Total Subsector Overview

<table>
<thead>
<tr>
<th>VET</th>
<th>TE</th>
<th>Agriculture (For Emphasis only, but part of TE)</th>
<th>FDC</th>
<th>Non Formal Integrated</th>
<th>Post Primary TTC</th>
</tr>
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<tr>
<td>Over 900 centres</td>
<td>130,000 students per year.</td>
<td>215 registered Institutes and 31,556 trainees.</td>
<td>9 centres (MATIs/LITIs) 1200 trainees + unknown in short courses</td>
<td>58 colleges 24,708 students per year.</td>
<td>No national data Ex. Morogoro 21 circles; 280 participants</td>
</tr>
</tbody>
</table>

2.3 Main strengths and weaknesses:

2.3.1 Main strengths:
(i) National policies and strategies recognize TVET as one of the main tools for economic growth and poverty reduction.

(ii) The TVET system has a diverse set of providers: Non-government providers make up a significant share of the number, enrollments and outputs of the TVET system.

(iii) The system has overall coordinating bodies (VETA and NACTE) which are better placed to respond to changing needs of the economy in general and the labour market in particular. The structure of VETA and NACTE incorporates a variety of stakeholders including employers, workers organisations and the Government.

(iv) Adoption of the Competence Based Education and Training (CBET) approach which provides a mechanism for developing training according to labour market requirements as well as a system for identifying occupational standards and translating them into curricula.

2.3.2 Main weaknesses:
(i) TVET institutions yet to develop stronger partnership with workplaces in order to enhance training relevance.

(ii) Weak placement services for trainees and inadequate tracer studies to confirm the relevance of training being offered.

(iii) Over-reliance of TVET on Institutional based training, neglecting the importance of work based learning through apprenticeship training (formal and informal).

(iv) Training delivery is still traditional, focusing on the same type of long courses year in and year out. Least attention is being paid to short and tailor made courses for those already working in order to enhance productivity and quality of products and service delivery.

(v) The TVET provision and adaptation to the requirements of the informal sector remains low. The adaptation and provision need to be based in need identification, short term training, flexible training delivery, integration of business skills into technical training and focusing on outreach provision.

(vi) Poor TVET training infrastructures, inadequate TVET teachers with industrial experience and inadequate TVET management personnel (i.e. teachers recruited directly from training institutions / universities).
3.0 OVERVIEW OF THE TANZANIA ECONOMY AND DEVELOPMENT STRATEGIES

Globally there is an increasing recognition that technical and vocational competencies are crucial in enhancing competitiveness and contributing to social inclusion, decent employment and poverty reduction. The inclusion of a skills-development component in a country’s poverty reduction strategy and national development plans is increasingly becoming a common phenomenon, pursued though repositioning TVET within the framework of educational reform. Competencies can be acquired either through structured training in public or private TVET institutions, or through practical experience on the job in enterprises (work-place training in the formal sector and informal apprenticeship), or both (the so-called “dual” training, involving a combination of work-place and institution based training, popular in Germany). This chapter surveys national policies and strategies aimed at creating highly skilled workforce needed for socio-economic development of Tanzania.

3.1 National Policies and strategies for TVET
Examined globally, technical and vocational education and training (TVET) is regarded as one of the most effective human resource development strategies for building a vibrant economy. Tanzania and other developing countries need to improve their TVET systems in order to modernize their technical workforce for rapid socio-economic development. However, to be effective provision of TVET need to go hand in hand with government strategies that stimulate the economy and grow efficient enterprises demanding highly skilled workforce. Consequently this will challenge TVET systems to create opportunities for further technical education and training at a higher level. This implies that to become effective TVET policies need to be in line with overall development policies and the needs of the labour market.

It is often argued that TVET policies are most effective when they are in line with overall development policies and the needs of the labour market. In Tanzania there is an increasing awareness among policy makers of the critical role that Technical and Vocational Education and Training (TVET) can play in national development. The increasing importance is reflected in the various Government development strategies related to economic growth and poverty reduction. One of the most important features of TVET is its orientation towards the world of work and the emphasis of the curriculum on acquisition of employable skills. TVET delivering systems are therefore well placed to train the skilled and entrepreneurial workforce that Tanzania requires to create wealth and emerge out of poverty. This chapter examines some policies from which TVET strategies ought to be pegged to enhance economic development in Tanzania.

In its development endeavours Tanzania is guided by the development vision 2025. The vision sums up key economic problems facing the country as low productivity accompanied by weak application of science and technology to productive activities, accompanied by a lack of initiative, ingenuity, creativity and innovativeness. It therefore envisages an economy characterised by

i) Macroeconomic stability
ii) Accelerated industrialisation that produces a diverse, semi-industrialized economy.
iii) Average annual growth rates increased.
iv) A world class infrastructure.
v) Interventions that allow the poor to benefit from economic growth.
vi) Active and competitive participation in the regional and global markets.
3.1.1 The 1995 Education and Training Policy (ETP)
The 1995 ETP summarizes the main objectives of Technical and Vocational Education and Training (TVET) as being the provision and acquisition of a wider range of employable skills which lead to enhanced productivity in the economy and improved earnings and welfare of the people in all walks of life. The policy further emphasizes the importance of apprenticeship training as an alternative cost effective training system, urging employers to provide apprenticeship training opportunities for a larger proportion of the labour force. The policy also focuses on increased enrolments, provide equitable access and improve quality of education and training at all levels.

3.1.2 The 2008 National Employment Policy (NEP)
The policy recognizes the need for human resources development opportunities for the acquisition of demand driven skills and competencies for wage and self employment through developing a demand driven Vocational and technical education and training system. It calls for the development of mechanisms for skills development to be used as guidelines for formal and informal skills training programmes to enhance employability of the national labour force both for formal and self-employment. Entrepreneurship training should form part of training curricula to in-calculate entrepreneurial ability and promote self employment. On the job training should be intensified to enhance employability and productivity of the national labour force.

3.1.3 The National Small and Medium Enterprises (SME) Policy.
The SME policy of 2003 recognizes the SMEs as a significant sector in employment creation, income generation, poverty reduction and as a base for industrial development. The policy bears the following objectives and strategies which are pertinent to Technical and Vocational Education and Training (TVET):

Table 2: SME Policies and Strategies

<table>
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<tr>
<th>Policy Objective</th>
<th>Strategies Pertinent to TVET</th>
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| To promote entrepreneurship development through facilitating improved access of SMEs to financial and non-financial services. | (i) Inculcate through education, training and other programmes value and attitudes that are conducive to development of entrepreneurship.  
(ii) Introduce entrepreneurship programmes in Technical and Vocational Education and Training.  
(iii) Create conducive environment for entrepreneurial services e.g. soft bank loans / provision of capital, government to be guarantor. |
| To enhance the capacity of institutions providing business training to SMEs. | (i) Capacity building of business training institutions aimed at improving quality services provided.  
(ii) Facilitate tailor made business training programmes for start ups and for strengthening existing ones. |

There are also other sectoral policies whose implementation is relevant to TVET, among them are the National Tourism Policy, the revised Mining Policy and the Construction sector Development Policy.

3.1.4 MKUKUTA
The National Strategy for Growth and Reduction of Poverty (MKUKUTA) is a strategy which directs national efforts towards poverty reduction in order to realize Tanzania vision 2025 and it links with Millennium Development Goals (MDGs). It is an important strategy both nationally and internationally. Vocational and Technical Education and Training should make a significant contribution towards the implementation of MKUKUTA.
(a) Reduction of Unemployment
The aim is reduction of unemployment and addressing underemployment in rural areas. TVET need to provide demand driven training required for formal and self employment. This will enable more school leavers and other unemployed persons to either access formal employment or become self employed and earning decent incomes. Special focus needs to be paid to skills development for the informal sector especially the agricultural informal sector.

(b) Reduction of Poverty
At rural level TVET should contribute to improvement of agricultural production through improvement of production skills and practice. Increased food production and income will reduce the proportion of rural population below the basic poverty line. In urban areas, TVET should address both formal and informal employment sectors by providing young people and adults with skills for formal and informal employment targeting school leavers and those already working in the formal and informal sectors.

3.1.5 The Education Sector Development Programme.
The Education and Training Policy focuses on increasing enrolments, provide equitable access and improve quality of education and training at all levels. This calls for expansion and optimum utilization of facilities towards achieving operational efficiency throughout the system. The policy is being implemented through various national programmes and for basic education, there are two programmes:-

(i) The Primary Education Development programme (PEDP) was launched in 2001 and targets to expand and improve comprehensive early childhood care and education and ensure that all children of primary school age (7 - 13) have access to and complete compulsory primary education of good quality. As a result of the expansion, the level of admission to primary school education has increased significantly, now reaching about 1.35 million pupils in standard one from 800,000 in 2000.

(ii) The Secondary Education Development Programmes (SEDP) aims at improving access to Secondary education whereby at least 50% of the age group (14 - 17) can joint Ordinary Secondary education (From I - IV) and 25% of the Form IV graduates be enrolled in high schools (Form V - VI). Admission to secondary education (Form I) has therefore also increased to about 450,000. However, the effect of relatively low enrolments in secondary schools before and immediately after the inception of SEDP has impact on the number of candidates without education beyond standard VII. Current data indicate an average of up to 1,062,000 primary school leavers and 264,700 ordinary school leavers terminate their education journey every year. The impact on efforts to achieve economic growth and reduce poverty is thus very apparent unless there are other opportunities to develop and empower the respective candidates. One such major opportunity available for post primary and secondary education is skills development through Technical and Vocational Education and Training (TVET).

(iii) The current TVET capacity (both public and non-public Institutions) is far from meeting the actual needs. While up to 1,060,000 primary school leavers on the average may not have the opportunity to join secondary education and 264,000 form IV school leavers may not get the opportunity for further formal education, there are only about 200,000 possible openings within the current TVET Institutions.
3.2 Legal Frameworks

3.2.1 The 1974 Vocational Training Act

(a) The first Vocational Training Act was passed in 1974 which established:-

(i) A National Vocational Training Council and a National Vocational Training Division under the Ministry of Labour. The main function of the Council was to ensure an adequate supply of properly trained manpower at all levels in industry and secure the greatest improvement in the quality and efficiency of vocational training.

(j) The training system was dual, with the first part based on a one to two years of institutional basic training followed by two to three years of apprenticeship training in industry.

(b) After twenty (20) years of implementing the Act, the following challenges emerged:-

(i) The training centres operated in isolation from the industry they were supposed to serve (following privatization of Parastatal industries, the main employer of apprentices).

(ii) The National Vocational Training Council did not have the power to assert itself as a forum for policy dialogue and system development.

(iii) The centralized VET management had resulted in an unresponsive system and the development of Regional initiatives to meet regional market demands was restricted.

(iv) Curriculum development was not in harmony with demands of the labour market.

(v) Inadequate funds from the government for both capital and recurrent expenditure created an uneven development of the training infrastructure.

3.2.1 The 1994 Vocational Education and Training Act.

The 1994 Vocational Education and Training Act was designed to address the challenges arising from the introduction of market economy in Tanzania by:-

(a) Providing for the creation of a Vocational Education and Training Board with overall implementation authority of the VET system. The Board has broader powers and wider terms of reference than its predecessor (National Vocational Training Council). The main responsibility is to ensure that the VET System meets the needs of the economy through developing appropriate policies for the system and supervising their implementation.

(b) Providing for the establishment of the Vocational Education and Training Authority (VETA) to assume day-to-day operational responsibility for implementation. To respond to the needs of the economy, requires a degree of freedom from short-term bureaucratic control which is difficult to achieve in line-ministries. National Vocational Training Authorities have been effective in this respect in several countries.

(c) Providing for the establishment of a VET Fund the use of which is supervised by the VET Board. The main source of the Fund is from $1/3$ of the 6% Skills and Development Levy paid by employers. Training Funds enable training Authorities to support training Institutions according to established criteria; provide an effective mechanism for adjusting training response to meet changing market needs; facilitate use of resources for curriculum adjustments, staff development, new equipment and (on occasion) renovating or providing new facilities. Organizing training interventions to facilitate economic
change often requires similar support including experiments in new training approach such as those for rural or urban informal sector.

(d) Providing for a decentralized implementation authority to the regions so as to achieve optimum utilization of resources and ensure relevance of training programmes. Regional Vocational Education and Training Boards have been established by the Act whose main functions include determination of regional training proprieties according to needs and approve budgets in relation to established priorities.

(e) Providing for a demand driven training system. Meeting the demand for skills training efficiently requires that planning systems identify and respond quickly to changing employment opportunities and skills demand. A Labour Market and Planning department within VETA has been charged with the task of Labour Market monitoring through the collection, collation and analysis of information on labour Market signals and trends. The department is also engaged in monitoring the efficacy of training programmes through follow-ups and tracer studies. Its activities form an integral part of forward planning of training provision.

3.2.2 The Envisaged changes:
The envisaged changes are summarized below:-

Table 3: The envisaged changes

<table>
<thead>
<tr>
<th>OLD SYSTEM</th>
<th>NEW SYSTEM</th>
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<tr>
<td>Supply driven approach.</td>
<td>Demand driven approach</td>
</tr>
<tr>
<td>Ministry driven</td>
<td>Autonomous government agency</td>
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<tr>
<td>Highly centralised management</td>
<td>Decentralised to regions</td>
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<tr>
<td>Government financed</td>
<td>User financed (2% payroll levy)</td>
</tr>
<tr>
<td>Formal sector based</td>
<td>Formal and informal sector based</td>
</tr>
<tr>
<td>Examination driven</td>
<td>Competence based system</td>
</tr>
<tr>
<td>Fixed entry and exit points</td>
<td>Flexible entry and exit points</td>
</tr>
<tr>
<td>No recognition for prior experiences</td>
<td>Recognition of prior experiences</td>
</tr>
<tr>
<td>Organised according to subjects</td>
<td>Occupational focus</td>
</tr>
<tr>
<td>Division between education/training</td>
<td>Integrated approach</td>
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<tr>
<td>Long institutionally based training</td>
<td>Dual system short course approach</td>
</tr>
<tr>
<td>Civil service culture</td>
<td>Market oriented culture</td>
</tr>
<tr>
<td>No clear career path</td>
<td>Clear career path</td>
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3.2.3 Strategic Action Plans:
(a) Strategic Action Plan I: 1996 - 1999
The first strategic Action Plan for implementation of the Act, outline development priorities to be implemented over a period of four years, 1996 - 1999. The overall objective of the plan was to ensure that VETA institutional and management systems are functioning as provided for under the Act, and that training provided meets the needs of the labour market both in the formal and informal sectors of the economy. Five development component were identified as follows:

Component: 1
Development of Institutional Structures and Management System
The objective was to secure a VETA secretariat and a Head Office which would be fully functional including ensuring that the governance and major tools for management of the system were developed and functioning in accordance with the Act.
Component: 2
Development of Regional Boards and Core Regional Vocational Training and Service Centres (RVTSC)
The objective was to ensure that the core RVTSC’s and the Regional Boards function as intended in the Act, promoting vocational education training in line with local and regional labour market needs. The component would have ensured that the main management and physical instruments through which VETA would have executed its mandate were developed and functioning in accordance with the Act.

Component: 3
Training System Development
The objective was to secure the development and implementation of a training and testing system based on a modular approach. This component was to ensure that the main instruments for skills formation, testing and certification through which VETA operate were developed and function in accordance with VET Act.

Component: 4
Development of Morogoro Vocational Teachers Training College
The objective was to ensure that the Morogoro Vocational Teachers Training College would provide teacher education and training responding to training needs and providing research and development in the field of Vocational Education and Training including contributing to the development of a systematic capacity for self-renewal and progress. It was to enable VETA to develop training programmes and be the main instrument for the sector’s internal needs for human resource development.

Component: 5
Gender issues and promotion of Entrepreneurship and Preventive Maintenance
The objective of this component was to secure the development of VETA long term strategy as regards gender, entrepreneurship and Preventive Maintenance.

(b) Strategic Action Plan (SAP) II: 2000 - 2004
After evaluations on what has been achieved under SAP - I, a second Strategic Action Plan was launched covering the period 2000 - 2004. The overall objective of the plan was to ensure that the system of Vocational Education and Training is efficient, effective, able to balance the supply of skilled labour force according to demands of the economy and to act as vehicle for improved productivity. The plan aimed at the following expected outputs:

Table 4: The Expected Outputs

<table>
<thead>
<tr>
<th>Outputs</th>
<th>Main indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demand driven VET system developed and implemented</td>
<td>Occupational Unit Standards/Training and Learning Elements and quality assurance system are in place and being used.</td>
</tr>
<tr>
<td>2. Effective National VET provision support system developed and operational</td>
<td>The infrastructure and facilities for training institutions adjusted to meet identified needs and training provision is equitable.</td>
</tr>
<tr>
<td>3. VETA financially sustainable</td>
<td>Financial management policy, sustainability strategies and system for the allocation of VET fund are in place.</td>
</tr>
<tr>
<td>4. Organisational and management systems developed and implemented</td>
<td>Decentralization policy/guidelines, system for monitoring and evaluating organizational performance, staff development and</td>
</tr>
</tbody>
</table>
The achievements of the two first strategic plans have been quite positive and VETA is now implementing its 3rd Strategic Action Plan (now referred to as VETA Corporate Plan) which aims at consolidating management systems, implementation of the CBET system, and capacity building of Vocational Teachers and management personnel to drive the system. The 3rd plan comes to an end in June 2011, and preparations have started for the 4th plan which includes a thorough analysis of what has been achieved under plans I, II and III to identify gaps which need to be carried forward.

3.2.4 Influence of the 1994 Act on Curriculum Development Process

The Act requires training to be demand driven and this requires a curriculum development process which takes into account information from the labour market. The following is a diagram summary of the VET curriculum development process:
Figure I: VET Curriculum Development Process

VET Curriculum Development Process in a nutshell

- **Labour Market Analysis**
- **Developing dacum charts, OUS, Curriculum, & Curriculum guides**
- **Curriculum Approval**
- **Curriculum Implementation & Monitoring**
- **Evaluation and Review**
- **Signals From the labour market**
- **Customers – formal & informal sector**
- **Field experts**
- **CDS, teachers**
- **LES**
- **Zones**
- **Centres**
- **CDS**
- **TACs**
- **VETB**

Relevance of TVET to Market Demands - JESR 2010
3.2.5 The 1997 NACTE Act

The National Council for Technical Education Act, 1997, established the National Council for Technical Education (NACTE). The Act provides a legal framework for the Council to establish an efficient National Qualifications Framework that will ensure that products from technical institutions are of high quality and respond to changing needs of our country as well as technological advancements in the world.

The Act defines technical education as “education and training undertaken by students to equip them to play roles requiring higher levels of skills and knowledge, and in which they take responsibility for their areas of specialisation”. NACTE is thus a multi-disciplinary and multi-sectoral body empowered to oversee and coordinate the provision of technical education and training in Tanzania.

The role of NACTE is to oversee and coordinate technical education and training in all post secondary, non-university tertiary education institutions in the country. Pursuant to Section 11 of the NACTE Act, NACTE has within its scope all tertiary education institutions, other than universities and their affiliated colleges, delivering courses at technician, semi professional and professional levels, with entry qualifications of Form IV or above leading to awards of certificates, diplomas, degrees, and other related awards. The Act also gives power to the Council to approve curricula, examinations, and awards for autonomous non-university institutions and to conduct and set examinations for other non-autonomous institutions; confer certificates, diplomas, degrees, and other related awards. The duality of the mandate of NACTE, therefore, is manifested in its regulatory and awarding powers.

The establishment of NACTE emanates from reports on various studies commissioned by the government and the Technical Education Policy of 1996. The following section narrates the reasons that led to the establishment of NACTE as per aforementioned studies.

(i) Lack of Coordination of Tertiary Technical Education and Training

Reports on the study of the situation of technical education and training in the country conducted by the Eastern and Southern African Universities Research Programme (ESAURP) and the Ministry of Science, Technology and Higher Education published in 1994 and 1996 respectively, indicate that tertiary education system in Tanzania has grown significantly since independence (1961), especially in terms of general number of tertiary institutions. The increase in the number of tertiary technical education institutions is a result of:

(a) Increased social demand for education,
(b) The need for specialised skills, and
(c) Impact on the new and emerging areas of science and technology, such as information and communication technology.

The situational analysis of the ESAURP indicated that the Ministry of Science, Technology and Higher Education, which has formal responsibility for tertiary education in the country, controls only three (3) out of 170 tertiary education institutions. The majority of the tertiary education institutions are controlled and managed by other ministries, parastatals and the private sector, which established them to suit their respective manpower needs.
This large number of training institutions has caused serious concerns. Some of these institutions, especially the sector specific ones, are based on very limited and short-term objectives as unilaterally determined by the owner. The absence of a central coordinating body has had serious impact on the quality of outputs, whereby in some cases, unfortunate tendencies of distorting awards have been observed. A typical example is the case where two institutions with different entry requirements to its programmes, different degrees of contents and contexts but outputting graduates with the same qualifications. Thus a diploma from one institution is not necessarily comparable in standard to that offered by another.

(iii) Lack of Uniformity in Standards and Consistent Pattern of Awards

Standards describe the skills, knowledge and values required for a person to perform effectively at the workplace. Standards portray quality. They help the training provider and the learner to be focused in their training bearing in mind that whatever goes on in the classroom/workshop or laboratory, the learner will be assessed against the standards. Course programmes and teaching, therefore, need to be evaluated against set standards. The absence of a single body responsible for setting and ensuring the maintenance of standards of training programmes offered by the non-university tertiary institutions contributed to the lack of a consistent pattern of awards. This deficiency calls for the need to establish a unified structure of nationally recognised and acceptable qualifications (also known as an organisational structure of learning pathways). A popular name for this structure is the National Qualifications Framework (NQF).

NQF is required to indicate the levels of technical education and training qualifications. Each qualification in technical education and training is assigned to one of these qualification levels and each level is identified by its qualification descriptor. Thus the purpose of the NQF is to bring consistency in the nomenclature used for technical education qualifications and to clarify the relationship between qualifications. The NQF is necessary for a quality technical education and training system required for the development of highly skilled and knowledgeable people. Hence, the establishment of a National Qualifications Framework is one of the key issues that NACTE is required to address.

(iv) The Lack of Nationally Recognised and Transferable Set of Qualifications in Tertiary Education

Qualifications are specific descriptions of learning achievements written in the form of broad, field-related outcomes and are pursued through training programmes. The absence of a National Qualifications Framework entails, among other things, the lack of nationally recognised and transferable set of qualifications. This is a serious problem both for employers and for students. Whereas employers have no clear set of standards by which to judge potential employees or to determine the value of a course in developing an existing employee, students on the other hand find that the qualifications obtained in one institution are not recognised by another, this frustrates their desire to progress from one cognate area of study to another or to higher levels of achievement. Sometimes students are compelled to repeat courses, an exercise which is costly both to them and to the country’s scarce resources. A further problem has been disagreement between the status of awards given by tertiary technical institutions and the requirements for professional registration set by professional registration bodies. Hence, the need to bring
order to the pattern of qualifications in tertiary education is another important issue to be addressed by NACTE.

(v) The Duplication and/or Under-utilization of Resources Allocated to Tertiary Technical Education and Training

A study by the Ministry of Science, Technology and Higher Education conducted in 1996 indicate that there are institutions in Tanzania which have been initiating and running courses that are offered by others and thereby duplicating efforts and wasting resources. These are resources that could have been concentrated only on a few major institutions for wide variety of courses in a more effective manner. In this period of diminishing resources, under-utilisation and duplication of resources in tertiary education cannot be allowed to continue. This has compelled the government to require a source of information and advice on which to base its overall policy for technical education and training, advice that NACTE will be required to supply.

(vi) Need to Give Tertiary Institutions Greater Autonomy

The Government has embarked on a programme of decentralising activities to a local level and as part of this policy ministries are seeking to give their tertiary institutions a greater level of autonomy. However, it is recognised that institutions will require assistance on taking these new responsibilities while at the same time the need for a central body to oversee the standard and quality of courses is strengthened. This is also an agenda for the National Council for Technical Education.

(vii) Lack of a Standard Pattern of Registration and Accreditation of Technical Institutions

The increase in social demand for tertiary education and the impact of new technologies, especially information and communication technology, has contributed to the mushrooming of tertiary technical education. The Government needs a means of satisfying itself, the public generally, students and employers that these new institutions are viable entities capable of delivering courses sustainably and to the required standard. Thus registration has to certify that the institution is operating lawfully and that it has resources to enable the same provide training programmes sustainably. Accreditation has to certify that the institution has programmes and quality assurance system in place to ensure the provision of set qualifications to the required standard. At course level, the curriculum should be reviewed in many subject areas to remove overlap and duplication between courses while at institutional level there is a need to review institutional effectiveness both quantitatively and qualitatively.

Accordingly, NACTE was established with the following statutory obligations:
(a) To ensure overall coordination of technical education and training;
(b) To bring order to the pattern of qualifications offered by non-University institutions by establishing a national system of awards;
(c) To establish and institute systems of quality control and quality assurance in technical education and training;
(d) To ensure the relevance of technical education and training to labour market demands;
(e) To register and accredit both public and private technical education and training institutions capable of delivering courses;
(f) To ensure that the quality of education required for the awards is met and maintained throughout the duration of the delivery of the course;
(g) To register technical teachers and other qualified technicians; and
(h) To ensure the establishment of a central database on technical education and training, which will act as a source of information needed by the Government for the strategic development of technical education and training.

Since its inception NACTE has made a number of achievements. However, only three major ones related to its core functions are listed below.

(i) **Coordination of technical education and training**
In order for NACTE to effectively coordinate the provision of technical education and training in Tanzania, the Council has clustered the various technical fields into five subject areas, and established a Subject Board to handle each subject area. The five subject areas and hence their corresponding Subject Boards are:

(a) **Agriculture, Natural Resources and Environment Board**

(b) **Business and Management Board**
The fields covered include Accountancy, Marketing, Finance, Banking, Law, Materials and Human Resource Management, Economics and related fields.

(c) **Engineering and Other Sciences Board**

(d) **Health and Allied Sciences Board**
The fields covered include Clinical Medicine, Nursing, Midwifery, Dentistry, Pharmaceutical Sciences, Medical laboratory Sciences, Environmental Sciences (Hygiene), Radiography, Physiotherapy, Optometry, Health Education and related fields.

(e) **Planning and Welfare Board**

The Subject Boards are responsible to the Council for regulating, overseeing and coordinating technical education and training matters in their respective subject areas. The specific tasks of a Subject Board include design, development, review, approval and validation of curricula; processing of registration and accreditation of institutions; setting standards of training programmes; monitoring compliance with policies, guidelines and regulations by technical institutions, etc.

(ii) **Establishment of a National System of Awards**
NACTE has established a national system of awards known as National Technical Awards (NTA). The NTA are competence-based and designed to testify that the holder of the award is able to apply competently the knowledge and skills described in the relevant occupational sector. NTA are linked to the National Vocational Awards (NVA) established by VETA to allow progression of VET graduates to pursue TET programmes. The merged NVA and NTA system of awards has given rise to the TVET Qualifications Framework (The framework showing the levels and respective competence level descriptor is appended).

(iii) Relevance of TVET to labour market demands
NACTE accredits institutions not only for having in place a sound quality assurance system and capable departments to offer programmes but also on the basis of developing labour-market oriented and competence-based modular curricula. This entails conducting studies to identify:

- Demand of the intended qualification in the labour market;
- Needs of the industry and other stakeholders (employers, professional bodies and society) for inclusion in the curricula; and
- Generic/cross-cutting/employability skills needed for skilled/professional job performance [e.g. Information and Communication Technology (ICT), etc.].

With all the above in place, the institution is required to ensure that it has acquired adequate human, physical and financial resources i.e. to have the capacity to use the curricula to deliver the intended programmes. To verify this NACTE appoints a team of experts in the subject area/industry to visit the institution to inspect the aforementioned resources and recommend to the Council appropriate steps to be taken (i.e. grant or deny or defer accreditation).

So far NACTE has approved curricula for 196 programmes (136 for Certificate and Diploma; 60 for Bachelor’s degree). These are being implemented in 60 fully accredited institutions out of 222 institutions under the ambit of NACTE; the remaining 162 institutions are at different stages of developing labour-market oriented and competence-based modular curricula.

As one scholar has observed (Manyaga, 2008) the achievements of NACTE in ensuring that tertiary non-university institutions produce quality graduates through accreditation of their programmes can be attributed mainly to the following:

(i) Establishment of sound guidelines, procedures and regulations, based on surveys of best-practice worldwide, to guide its activities prior to becoming operational.

(ii) Good working relationship with, and representation of key organisations in the Council, Subject Boards and Committees drawn from a diversity of stakeholder constituencies such as universities, technical institutions, employers, professional and regulatory bodies;

(iii) Incorporation of the views and recommendations of key stakeholders before making key decisions in matters pertaining to education and training such as registration and accreditation of technical institutions, development and validation of curricula; and

(iv) Keeping abreast of technological, economic and socio-cultural developments through participation or presentation of researched papers in national and international conferences, seminars, workshops, symposia and other forums.

Generally speaking, therefore the policies, strategies and the legal framework in Tanzania provide the necessary enabling environment for making TVET provision demand...
driven and relevant to the needs of the Labour Market. The main challenges include inadequate human resource capacity to provide technical and managerial expertise to drive the system.

3.3 Labour Market and Employment prospects for TVET Graduates

This section focuses on the economy and labour market in Tanzania with a view to possibly determine employment prospects for TVET graduates. It is quite usual to express the economy of a country in terms of indicators like value of a country’s overall output of goods and services, in a given year at market prices, excluding net income from abroad. This is what is referred to as Gross National Product (GDP). Table 1 below shows sectoral composition of Tanzanian GDP for the year 2002 (Source: Economic Survey 2002).

Table 5: Sectoral composition of Tanzanian GDP for the year 2002

<table>
<thead>
<tr>
<th>S/N</th>
<th>Sector</th>
<th>Contribution to GDP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Subsistence farming</td>
<td>19.5</td>
</tr>
<tr>
<td>2.</td>
<td>Commercial agriculture</td>
<td>25.1</td>
</tr>
<tr>
<td>3.</td>
<td>Mining</td>
<td>1.8</td>
</tr>
<tr>
<td>4.</td>
<td>Manufacturing</td>
<td>7.4</td>
</tr>
<tr>
<td>5.</td>
<td>Electricity and Water</td>
<td>1.7</td>
</tr>
<tr>
<td>6.</td>
<td>Construction</td>
<td>4.5</td>
</tr>
<tr>
<td>7.</td>
<td>Trade</td>
<td>12.0</td>
</tr>
<tr>
<td>8.</td>
<td>Transport</td>
<td>4.7</td>
</tr>
<tr>
<td>9.</td>
<td>Finance</td>
<td>5.7</td>
</tr>
<tr>
<td>10.</td>
<td>Services</td>
<td>16.1</td>
</tr>
<tr>
<td>11.</td>
<td>Others</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Table 5 reveals that agriculture is a major sector in the economy with a total contribution of 44.6 per cent of GDP. A study of the trend of GDP growth of a period of ten (10) years for selected economic activities is given in Table 2 below.

Table 6: GDP Growth 1997 - 2006

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Agriculture</td>
<td>2.4</td>
<td>1.9</td>
<td>4.1</td>
<td>3.4</td>
<td>5.5</td>
<td>5.0</td>
<td>4.0</td>
<td>5.8</td>
<td>5.1</td>
<td>4.1</td>
<td>4.1</td>
</tr>
<tr>
<td>2.</td>
<td>Mining</td>
<td>17.1</td>
<td>27.4</td>
<td>9.1</td>
<td>13.9</td>
<td>13.5</td>
<td>15.0</td>
<td>18.0</td>
<td>15.4</td>
<td>16.4</td>
<td>16.2</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Manufacturing</td>
<td>5.0</td>
<td>8.0</td>
<td>3.6</td>
<td>4.8</td>
<td>5.0</td>
<td>8.0</td>
<td>8.6</td>
<td>8.6</td>
<td>9.0</td>
<td>8.6</td>
<td>6.9</td>
</tr>
<tr>
<td>4.</td>
<td>Trade</td>
<td>5.1</td>
<td>4.7</td>
<td>6.0</td>
<td>6.5</td>
<td>6.7</td>
<td>7.0</td>
<td>6.5</td>
<td>7.8</td>
<td>8.2</td>
<td>8.4</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Table 6 above shows trends in sectoral GDP for ten years between 1997 and 2006. Economic growth in the economy over time is depicted, with some sectors booming while others growing at a slower pace.

In attempting to examine the structure of the labour market of Tanzania it is worthy defining some commonly used terminologies related to employment in the formal and informal sectors of the economy. According to the Integrated Labour Force Survey (ILFS 2001) report “employed persons” are people who do some work either for payment in cash or in kind (paid employees) or who are in self employment for profit or family gain. Self-employment includes the large number of persons working on their own farms of any scale. These include also unpaid family workers in family business.

The report points out that unemployment contribute to poverty. The term “poverty” according to the report is conceived as a state of deprivation prohibitive to decent human life. This is caused by lack of resources and capabilities to acquire basic human needs as...
seen in many, but often mutually reinforcing parameters which include malnutrition, ignorance, prevalence of diseases, squalid surroundings, high infant, child and maternal mortality, low life expectancy, low per capita income, poor quality housing, inadequate clothing, low technological utilisation, environmental degradation, unemployment, rural-urban migration and poor communication.

It is also important to define informal sector, which is an emerging major employer in the modern sector economy. The term “informal sector” was internationally defined as a concept of labour force by the 15th International Conference of Labour Statisticians held in Geneva in 1993 (ILO, 1993), that “It consists of a group of household enterprises, which are engaged in the production of goods and services. These enterprises are not constituted as separate legal entities, independently of the households or household members that own them. There are no complete sets of accounts available, which would permit a clear distinction of the production activities of the enterprises from the other activities of the owners. All the same, flows of income and capital between enterprises and owners remain hardly identifiable. Such enterprises can either be own-account enterprises (self-employment) or enterprises of informal employers (continuous employment of one or up to ten workers).” Some characteristics of the informal sector are given here under in simple terms (Omari, 1989):

a) Easy entry into the economic activities;
b) Reliance on indigenous resources - finance and materials;
c) It is a family owned enterprise;
d) Small scale of operation;
e) Labour-intensive - depending mainly on family labour and adopted technology;
f) Skills to operate the business are required outside the formal school system;
g) There exists an unregulated and competitive market.

In Tanzania the size of formal and informal sector over a given time period can be visualised from the following table.

Table 7: Trend of Employment by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>1990/91</th>
<th>2000/01</th>
<th>Growth Rate</th>
<th>2005/07</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government (Local /Central)</td>
<td>310,455</td>
<td>344,839</td>
<td>0.8</td>
<td>439,355</td>
<td>5.0</td>
</tr>
<tr>
<td>Parastatal</td>
<td>180,767</td>
<td>78,270</td>
<td>(-8.0)</td>
<td>66,307</td>
<td>(-3.3)</td>
</tr>
<tr>
<td>Private - informal sector</td>
<td>955,647</td>
<td>1,439,848</td>
<td>4.2</td>
<td>2,256,024</td>
<td>9.4</td>
</tr>
<tr>
<td>Private - formal</td>
<td>317,404</td>
<td>756,046</td>
<td>9.1</td>
<td>1,525,226</td>
<td>15.1</td>
</tr>
<tr>
<td>Traditional Agriculture</td>
<td>9,115,932</td>
<td>13,694,935</td>
<td>4.2</td>
<td>14,687,702</td>
<td>1.4</td>
</tr>
<tr>
<td>Housework</td>
<td>600,867</td>
<td>n.a</td>
<td></td>
<td>703,646</td>
<td>3.2</td>
</tr>
<tr>
<td>Total</td>
<td>10,889,205</td>
<td>16,914,805</td>
<td>4.5</td>
<td>19,678,259</td>
<td>3.1</td>
</tr>
</tbody>
</table>


Table 5 reveals that the magnitude of formal employment in Tanzania is very small (in fact less than 5% of total employed population). Informal sector should therefore be seen as potential for employment generation.

It may be useful, at this juncture, to look at the Tanzania labour market by considering male and female engagements in the informal sector of the economy which has been seen to offer the most job opportunities. The table below shows this.
### Table 8: Engagement in the Informal Sector by Industry and Sex, 2006

<table>
<thead>
<tr>
<th>INDUSTRY</th>
<th>MAIN ACTIVITY</th>
<th></th>
<th>SECONDARY ACTIVITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
</tr>
<tr>
<td>Agriculture, Hunting and Forestry</td>
<td>1.4</td>
<td>0.8</td>
<td>1.2</td>
<td>10.7</td>
</tr>
<tr>
<td>Mining and Quarry</td>
<td>4.3</td>
<td>1.0</td>
<td>2.8</td>
<td>18.7</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>14.4</td>
<td>14.5</td>
<td>14.4</td>
<td>0.1</td>
</tr>
<tr>
<td>Construction</td>
<td>5.5</td>
<td>0.1</td>
<td>3.0</td>
<td>50.8</td>
</tr>
<tr>
<td>Wholesale and Retail trade</td>
<td>58.1</td>
<td>56.8</td>
<td>57.5</td>
<td>6.2</td>
</tr>
<tr>
<td>Hotel and Restaurant</td>
<td>5.0</td>
<td>22.6</td>
<td>12.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Other community, social and Personal services</td>
<td>2.8</td>
<td>2.3</td>
<td>2.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Other</td>
<td>8.5</td>
<td>2.0</td>
<td>5.6</td>
<td>9.2</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Source: National Employment Report (2007).**

A number of lessons can be drawn from table 6 above. However, two are given below:

(i) The most common occupation is services and shop sales workers, followed by craft and related workers and elementary occupations;

(ii) The service and shop sales and elementary occupations account for a larger proportion of males is bigger in both main and secondary activity, while in plant and machine operations and assembling, males have higher proportion in main activity and females dominate in secondary activity (Kahyarara, 2009).

Tanzania is implementing the National Employment Creation Programme aimed at creating greater employment opportunities and improved quality of life. The target of the National Employment Creation Programme (NECP) is to create not less than a million gainful and decent jobs between 2006 and 2010. The specific objectives of the National Employment Creation Programme are to:

(a) Implement policies and strategies to stimulate private sector growth and therefore increase employment and self-employment

(b) Increase public investment in construction and other lead employment creating sectors, namely agriculture, tourism, mining and manufacturing.

(c) Undertake demand-driven skills development programmes for promoting self employment and productivity.

(d) Improve institutional and regulatory framework and capacity building for co-ordination and management of NECP.

Tanzania has a population of nearly 43,739,000 people, the dominant age group being the youth. For the purpose of this paper, the term youth applies to a person between 15 and 30 years of age as defined by the Ministry of Labour and Youth Development (MLYD). The Tanzania population pyramid below confirms this information.
It makes much sense to expect that the youth cohort is key to national development and hence a resource to be fully engaged in creating wealth. Several studies however reveal that this group is most affected by unemployment either for not having the right skills demanded by the modern sector economy or existence of undeveloped economies that can readily absorb skilled personnel. A report from one of such studies purports that “In recent years, there has been increased concern over the tragic waste of human potential, particularly for the youth. Most of the youth are either unemployed or underemployed (Haji, 2007).

Tanzania is committed to reduce youth unemployment. The goal is to reduce youth unemployment by ensuring that every able-bodied youth is available for work and that the responsibility of the individual is to search for employment and the obligation of the society to provide opportunities for work (National Youth Employment Action Plan - Ministry of Labour and Youth Development - MoLYD 2007). In the mobilization of young people for enhancing their participation in the labour force, one of the approaches envisaged in the National Youth Employment Action Plan is to create opportunities for the acquisition of demand driven skills and competences for wage and self employment. This entails preparation of young people for work ensuring quality basic education and developing demand driven Vocational and Technical education system.

3.4 Designing and Management of TVET: Public and Private Sector Partnership

3.4.1 The Design
The design of training (formal TVET) should thus be such that it responds to the demands of the labour market needs and delivered by TVET Institutions in close partnership with prospective employers. This partnership is considered vital for equipping young people with the skills for entering the World of work. The design should also include change of attitudes towards TVET among parents, teachers and the public and develop it as a complementary system of education with possibilities of credit transfer to higher education and training. The design of TVET programmes should thus include:

(a) Training which is geared more to effective Labour Market demand, active marketing of courses, cost consciousness, more powers to institutional managers and stronger accountability to users. This approach requires systematic planning and management at all levels.
Relevance of TVET to Market Demands - JESR 2010

(b) New training approaches which will reduce training costs will need to be designed. Pre-employment broad based skills training will increasingly be supplemented by short up grading and updating training for workers who are already working including transferring some of the training activities to the enterprises themselves.

(c) Fostering and promotion of entrepreneurial values and skills as integral part of training programmes means (among other things) implementation of appropriate training and learning methodologies. It is not so much of what is in the curriculum but rather how that curriculum is taught. Rote learning reinforces passive habits while active inquiry based learning promotes initiative and activity. This is the type of learning that future entrepreneurs require.

(d) In order for training institutions to respond more flexibly to changing Labour Market demand, the planning of training and implementation authority has to be decentralized to the institutions. However, more freedom from the central authority may not necessarily guarantee institutional dynamism at local level. It is important also to make training institutions responsible to their outside “users”, making training more accountable to stakeholders will enhance external efficiency.

(e) In the absence of sufficient opportunities for wage Employment, formal and non-formal TVET programmes integrated with entrepreneurship training and career guidance and counselling should be developed to help young people and adults to become independent socio-economic operators. Such programmes could also enable those working in the informal economy to further develop their businesses.

(f) Given that the vast number of young people are outside the formal school system, integrated non-formal training consisting of literacy and TVET programmes (especially for girls and women) have the potential to enhance the well being of local communities. TVET should also offer an avenue for preserving, fostering and adding value to indigenous knowledge, technology and cultural art, which hitherto do not get the attention they deserve.

3.4.2 Management to include informal and Non-formal TVET

(a) Informal (traditional) Apprenticeship Training

Historically in Tanzania, small enterprises sell training as well as products and services. Apprentices pay masters a fee (in cash or labour) in return for instruction in a trade. The tradition continues to-day. Through informal Apprenticeship, individuals can acquire practical and business skills necessary for self-employment. Apprentices finance their own training, a fact that is significant in the wake of limited public resources.

(b) Though informal apprenticeship can have a positive effect on employment and earnings (poor and rural individuals can benefit), “master crafts persons” mostly pass their skills and knowledge to apprentices and seldom create new knowledge. The absence of any formal theoretical instruction favours the acquisition of practical skills essential to production, sales and management but limits theoretical understanding. Apprentices learn enough for commercial survival but not enough to improve productivity. Social customs can also restrict access of women to certain trades. The system needs to be improved although such interventions need great caution in order not to upset the traditional master-apprentice relationship that is central to the effectiveness of the system. A study conducted in 1999 (Shapiro - 1999) found out how informal apprenticeship operates in Dar es Salaam. The focus was on the skills of
Masonry, Carpentry, MV Mechanics, Welding, Hairdressing, Catering, Childcare and Tailoring. A total 330 informal sector operators were surveyed, 194 of them kept a total of 350 apprentices as follows:

Table 9: informal apprenticeship operations in Dar es Salaam

<table>
<thead>
<tr>
<th>Skills of Apprenticeship</th>
<th>Number of Small Business</th>
<th>% of Total Apprenticeship</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Masonry</td>
<td>26</td>
<td>13.4</td>
</tr>
<tr>
<td>2. Tailoring</td>
<td>27</td>
<td>13.9</td>
</tr>
<tr>
<td>3. Welding</td>
<td>35</td>
<td>18</td>
</tr>
<tr>
<td>4. MV-Mechanics</td>
<td>37</td>
<td>19.1</td>
</tr>
<tr>
<td>5. Carpentry</td>
<td>33</td>
<td>17</td>
</tr>
<tr>
<td>6. Catering</td>
<td>13</td>
<td>6.7</td>
</tr>
<tr>
<td>7. Child-care</td>
<td>6</td>
<td>3.1</td>
</tr>
<tr>
<td>8. Hairdressing</td>
<td>17</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Source: (Neil and Shapiro - 1999)

An ILO/VETA pilot project is currently being carried out in Mtwara/Lindi regions to find out the best way of upgrading informal apprenticeship training system without affecting its informality. The system seems to be massive. Within in thirty (30) micro garages in Mtwara, a total of 30 young people are receiving on the job training through informal apprenticeship.

(c) Non-Formal TVET

Non-formal is the opposite of formal TVET which is institutional based with defined curriculum. Non-formal TVET has the advantage of shorter duration, is occupational specific and may or may not follow the standard curriculum prescribed by national authorities. The entry qualification of trainees can be variable and the main emphasis is on the acquisition of practical skills for direct employment. Skilled persons with some pedagogical training may be used as instructors and training modeled as follows:

(i) Training packages to be employment led.
(ii) The curriculum to be a combination of core compulsory life skill courses and elective Technical and vocational skills courses of short duration (6 - 18 months). Modular in conception, business and entrepreneurship oriented and small class sizes.
(iii) Training be assigned to accredited training providers (public or private) who should be responsible for initial selection of trainees as well as guidance and counselling.
(iv) Funding mechanism should be output - based according to agreed performance indicators that may include numbers trained (completion rates), course type and level as well as percentage of graduates in gainful employment six months after training etc.
(v) Training methodology may include attachments or internship with local businesses, building contractors, entrepreneurs, master crafts persons etc. for practical training.
4.0 ISSUES AFFECTING THE PROVISION OF TVET

A review of TVET systems in most African countries reveals that “Many programmes are not adapted to the needs of the economy and the responsibility for training is fragmented among different agencies. It is revealed also that TVET reform strategies with sustainable financing are rare and that the stakeholders are not always prepared to play their role and suffer from limited capacity. In addition, the number of enterprises capable of offering work-place training opportunities is limited, while many training institutions have poor delivery capacity and commonly lack funding. In turn, training programmes do not produce skilled graduates because training is of poor quality and the equipment obsolete. Many youths cannot access formal TVET, and few countries have training policies which emphasise skills development in the informal sector. Other obstacles include the low prestige of formal TVET in the eyes of the general public and parents who consider it to be an option suitable only for pupils who perform poorly in general education” (African Economic Outlook, 2008). This chapter attempts to discuss some issues that pose constraints to the TVET system in Tanzania and cites a few examples of best practices worth considering for adoption or adaption.

4.1 General Challenges

i) Qualifications that do not feed congruently the labour market

That some TVET graduates are not readily absorbed in the labour market is not without examples in Tanzania. To conceptualise this Arusha Technical College (ATC), formerly Technical College Arusha (TCA) was established in 1978 with four engineering programmes in the fields of Automotive; Civil; Electrical and Mechanical Engineering at Full Technician Certificate (FTC) level (currently phased out and replaced by Ordinary Diploma (NTA level 6). Later in 1990s the Integrated Roads Programme (IRP) was having a number of road construction projects to improve the road network The government decided to introduce a new programme of Highway Engineering at TCA to get technicians to serve in the road construction business, and in particular to support IRP. The programme started at TCA with an annual enrolment of 25 students.

The government supported the college in the expansion it required in terms of staffing, infrastructure and other amenities. There was also a German government support to the same through the GTZ project. Three years afterwards the first batch of Highway Engineering students graduated at TCA with flying colours and eager to grace the labour market with full esteem.

However, advertised posts which the graduates could apply required FTC holders with at least five years experience in road construction industry. One would wonder where, when and how fresh graduates would have acquired such experience while their total college and industrial training covered only three years! By this job requirement they neither could be employed nor become self employed because of the enormous capital required to engage in road construction business. The graduates wished to have taken Civil Engineering instead of Highway Engineering. They loitered in streets searching for jobs that could not be found and resorted to doing other petty businesses like vending that did not require their FTC qualification.

Consequently the course became so unpopular that it was phased out in favour of Civil and Transportation Engineering. The intervention by the government through NACTE was twofold. First it had to ensure that products from technical institutions are of high quality and respond to the changing needs as well as technological innovations in the
world. This follows the growing need for constant improvement of skills and work-related competencies to keep abreast of technology developments. The demand for "lifelong learning" is also on the increase, arising from various parties such as:

(a) Employers who are aiming at raising productivity and competitiveness;

(b) Employees who seek employment security and better career prospects (including higher wages);

(c) Unemployed people who seek greater access to the labour market;

(d) Non-traditional learners such as informal sector employees, self-employed persons, displaced older workers; and

(e) Other specific groups with a high risk of exclusion.

For this intervention NACTE introduced the National Technical Awards (NTA) which are competence-based and designed to testify that the holder of the award is able to apply competently the knowledge and skills described in the relevant occupational sector (as has already been explained in chapter 3).

Second NACTE made it compulsory to all providers of technical education and training to change their curricula from knowledge based to outcomes / competence-based as a requirement for Full Accreditation. This requirement entails, among others searching, analysing and using labour market information to develop the curricula. At this juncture it is worthwhile pointing out the key differences between the conventional Knowledge-based Education and Training (KBET) and Competence-based Education and Training (CBET). The differences are in respect of description of qualification, curriculum contents, teaching and learning and curriculum assessment. The table below shows these differences.

Table 10: Key differences between CBET and KBET

<table>
<thead>
<tr>
<th>CBET / OBET</th>
<th>KBET</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description of Qualification (Purpose of learning)</strong></td>
<td>Qualification is normally defined by the coverage of subjects and the time taken by a learner to accomplish the same, without necessarily referring to the requirements of any specific world of work.</td>
</tr>
<tr>
<td>Qualification is described by sets of competences that should serve as reference for the performance of specific job positions, irrespective of time taken to attain such competences.</td>
<td></td>
</tr>
<tr>
<td><strong>Curriculum contents</strong></td>
<td>Contents are mainly academic and are characterised by indication of subjects with respective topics/outlines and how the same will be delivered to learners. A subject is a defined area of knowledge, without adequate reference to specific occupational needs.</td>
</tr>
<tr>
<td>Contents include statements describing abilities that are required to successfully carry out occupational activities of specific context and level.</td>
<td></td>
</tr>
<tr>
<td><strong>Teaching and learning</strong></td>
<td>It is based on longer, more inflexible and full programmes. It is relatively less controlled and not strictly referenced to workplace activities. Much of learning takes place in classroom (teacher centred). Teacher regarded as knowledge source.</td>
</tr>
<tr>
<td>It is based on smaller modules with clear meaning and value, each consisting of knowledge, skills and understanding prescribed to meet standards. It is learner centred. Teacher not regarded as knowledge source but facilitator.</td>
<td></td>
</tr>
</tbody>
</table>
An interesting feature of CBET facilitation is that it employs quite a number of techniques to ensure not only conceptual clarity but also examples drawn from life and industrial or business experience. As a famous scientist Albert Einstein once stated, “All true learning is experience, everything else is information”. The following chart (Figure 2) illustrates an example of CBET facilitation approaches worth considering in TVET institutions.

**Figure 3:** Typical example of facilitation approaches to enhance CBET learning

Two examples to show the use of the chart above follow. The Dar-es-Salaam Maritime institute (DMI) offers a programme on Maritime Transport at degree level. A student taking this course has to acquire competences for ship navigation to become a ship captain. Before the student is allowed to handle a real ship for purpose of training a navigation simulator would be used instead. The training will have almost the same effect as using a real ship, but with a greater safety margin in case of danger.

The College of Business Education (CBE) Dar-es-Salaam would need for its Business Education students, for instance, a real enterprise at the college, however small, at which real business operations are taking place. Here students would use a role play technique to practise a position at an enterprise with a mentor around taken from the industry / profession to guide the student in the learning process leading to acquisition of the business skills. The practice of bringing the ‘work place’ into the training institution is one of the best approaches to implement CBET. This is what in Singapore is referred to as the “teaching factory” concept. The concept will be further elaborated in the next section.
ii) Inadequate qualifications for teaching staff in TVET institutions

The existing standards require teachers in TVET institutions to have, at minimal, one qualification higher than the level of the qualification the students are pursuing. More often than not TVET institutions recruit, as teaching staff, fresh graduates from tertiary institutions who have neither industrial/business experience nor teaching methodology. The lack of practical and teaching skills adversely affect the quality of the delivery of programmes which as a result affect the quality of graduates in terms of competence with respect to job requirements. Consequently, employers often complain that TVET graduates are incompetent at the time they graduate and that they need on the job training to master the required skills. This section sets out to explore best practices on TVET teacher qualifications, a case from Singapore and what TVET and NACTE is currently doing in so far as imparting of teaching methodology to TVET staff is concerned.

(a) Singapore’s “teaching factory” model

The Nanyang Polytechnic (NYP) in Singapore is one of the best success stories in the world for making education and training relevant to the industry. Singapore became independent from the British in early 1960s. Since then the country has been going through ‘decade’ phases of industrial developments, based on the standards used by the advanced countries in economic restructuring. These are, in chronological order of growth, labour intensive (1960s), skills intensive (1970s), technology intensive (1980s), innovation and R&D focus (1990s) and knowledge driven (2000s). NYP, established in 1992, has been able to cope up and contribute to this development.

NYP’s unique ‘Teaching Factory’ concept provides students with a total learning experience. It ensures that students gain new knowledge, learn new skills and develop competencies in meaningful environments that emulate the real-world workplace. Complemented with NYP’s other innovative pedagogies such as the “Integrated Technology Teaching & Learning”, the Teaching Factory is an excellent platform for industry projects and collaborations. NYP offers a considerable range of Full Time Diploma courses. It also offers Advanced and Specialist Diploma courses as part of continuing professional development programme. Full-time Diploma courses run for three years taking holders of Ordinary Level Certificate of Secondary Education as eligible candidates, while Advanced and Specialist Diploma courses run from a couple of weeks to months for in-service / working candidates.

NYP’s quest for continuous organisational excellence can be evidenced by the sound attraction and retention scheme for its academic staff. NYP recruits staffs that have at least five years of relevant industrial experience. This has kept NYP at a better position to receive industrial projects which in addition to giving students problem solving oriented practical training, the staffs are able to generate innovative ideas necessary for keeping abreast with the rapid technological development challenges. NYP provides an environment that is conducive for innovation to flourish. Facilities and policies are designed to encourage and facilitate borderless and cross-disciplinary teamwork. Students and staff are encouraged to participate in projects and competitions to challenge and develop their innovative talents. Links with international communities provide overseas exchange and attachment opportunities to engender cross fertilisation of knowledge and enhance the quality of innovation outcomes.
(b) Imparting Teaching Methodology to TVET staff

As pointed out earlier, most teachers in TVET institutions have not pursued any teaching methodology training. But teaching is a profession by itself. NACTE is mandated to build an efficient National Qualifications Framework, which will ensure that products from technical education institutions are of high quality and respond to the changing needs as well as new technological innovations. NACTE is thus, charged with the role of ensuring delivery of quality non-university tertiary education and training. This quality can be achieved if non-university tertiary education is offered by teachers of the right quality and calibre.

In view of this, Section 5 (1) (b) of the National Council for Technical Education Act 1997 gives NACTE the power to register technical teachers in the country. ‘Technical Teachers” mean personnel teaching in technical institutions.

Technical teachers registration is a system for ensuring that there is a high quality standard applied to all teachers entering the teaching profession in technical institutions thereby, ensuring quality of teaching staff. Maintenance of a teachers’ register will assist institutional boards or boards of trustees in making appointments, and reassures parents and the public that quality standard for the teaching profession is available. Furthermore, the employment of registered teachers will enable institutions to produce candidates of appropriate academic standing.

In addition to that, it will act as an inspiration/driving force for technical teachers to acquire necessary qualifications required for registration and therefore, serve as a motivation for teachers to develop themselves professionally. Procedures for registration of technical teachers will enable NACTE to audit the qualifications of all those involved in the teaching process in technical institutions thereby ensuring quality of teaching staff.

The provision of technical education is regarded as one of the essential pre-conditions for economic growth and development of any country. Such education should therefore, be provided by qualified teachers. The following sections will highlight minimum qualifications, requirements, conditions and acceptable attributes for the registration of technical teachers. NACTE standard requires that to qualify as a technical teacher one should have educational qualification in the relevant subject area one level higher than the level being taught. The educational qualification in the relevant subject area must be evidenced.

The minimum staff qualifications for the training rank and basic staff qualifications are indicated in the Compendium of NACTE Academic Quality Standards. A staff with minimum qualification will be required to undertake further training to acquire the basic qualification before being assigned full teaching responsibilities. Such staff members will be considered to be under training and can only be assigned to assist the other staff with basic qualifications to teach.

In order to qualify as a teacher one needs to have acquired instruction techniques and teaching methodology by attending a teacher training course in addition to the education training in the relevant subject area. A teacher is satisfactorily trained to teach if he can provide evidence of a teacher education qualification from an approved teacher education and training institution recognized by the Council for teacher registration purpose; or if an overseas qualification, assessed as equivalent to the NACTE qualifications and recognized as equivalent and appropriate by the Council. Possession of this qualification has to be evidenced.
iii) **Weak Learning Progression Pathway:**

Weak learning progression linkages between various levels of skills development resulting in fragmented provision instead of a structured approach to an individuals competence development starting from early childhood to retirement:

**Table 11: Learning progression linkages**

<table>
<thead>
<tr>
<th>Vocational Learning Stages</th>
<th>Competences to be acquired</th>
<th>Learning Environment in Tanzania</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Vocational Awareness Competences</td>
<td>Introduction to the role of productive work and manual work process through simple handcrafts.</td>
<td>Primary school (Stadi za kazi).</td>
</tr>
<tr>
<td>II Vocational Experimentation Competences on Occupational Choices</td>
<td>Exploration of occupational choices, replacing the handcraft concept by introducing broad based basic skills in a variety of different occupational areas with emphasis on “hands-on” training.</td>
<td>Vocational Bias/ Technical Secondary Schools.</td>
</tr>
</tbody>
</table>
| III Vocational Employability Competences         | Developing particular skills and related knowledge required in a particular occupation or group of occupations for employment. | Vocational training Institutions:  
  - Technical Colleges  
  - VTCs  
  - PPTTC  
  - FDCs  
  - LITI’s and MATIS etc. |
| IV Further Vocational Competences Growth        | Further education and training to higher level competences required by:-  
  - Professionals  
  - Technicians  
  - Vocational Training Institutes.  
  - Polytechnics. |
| V Vocational Maintenance Competences             | Competence updating and upgrading to avoid skill decay and competence decline.              | Partnership between Industry and Training Institutions. |

iv) **Weak Linkage to the Labour Market:**

There are several types of labour market demands which need to be addressed including:

(a) **Needs due to increase in demand**

Usually increase in demand is catered for by continuous provision of the same skills each year or several times in a year thus releasing skilled people to the Labour Market to absorb. However, when the demand is too high one of the solutions may be to increase provision by increasing facilities and instructors in the existing training centres to enable them to enrol more trainees without lowering quality. Another solution could be to established new training centres which provide the same demanded skills. One of the best ways to monitor this type of demand is to perform tracer studies or to establish a close link with ex trainees and hence find out how many are absorbed and how many are not absorbed in the labour market. Such findings assist in the planning of what should be done to ensure more supply of skilled labour force according to demands.
(b) Needs due to emergence of new economic activities
These may be new by nature or by type. For instance if mining existed at a place and used to be carried out by small miners, then the introduction of large scale mining by foreign companies may require totally new skills. These are new by type. If a totally new economic activity, which has never been carried out at a place emerges e.g. discovery of oil, new skills by nature will be needed. Both of these necessitate people to be training in order to carry out the activities. Training agencies need access to such information well in advance.

(c) Quality needs
There are some economic activities leading to goods or services which have been carries out for years but for which quality is poor or is falling. Training needs to be provided to those carrying out the activities so that the quality of the goods or services are improved. For instance if the quality of services provided by restaurants in Dar es Salaam is poor the need for training may be to raise the quality of their services. Resources are in many cases inadequate to meet quality needs.

(d) Technological Needs
These arise due to the introduction of new technology in an existing skill; which then reduces market for the old skill. E.g. the introduction of injector pumps in petrol cars instead of carburettors, necessitate those trained to repair carburettors to also learn how to repair injector pumps. Likewise typists and secretaries who were used to the typewriters need to learn how to use computers.

To be relevant training provision must address all these needs which depends on the availability of timely and accurate information on the market. This requires harmonized Labour Market Information System (LMIS), including a system for medium and long term skills requirement projections. It will not only guide planning for education and training at national level but also alert policy makers to labour market deficiencies, provide information on career counselling and facilitate trainee placements. It will build good links between training institutions and enterprises by improving flow of information on the demand for skills and the success of training in meeting skills standards expected by the labour market.

(v) Information from tracer studies:
Trainees placement and tracer study service are also important elements (the first national tracer study on VET graduates was launched in April 2010). It is hard to place trainees let alone to subsequently follow them up. Yet it is important to trace them in order to establish the benefits of training and what measure need to be installed in order to make training more relevant to Labour market demands. Skills which are not put into early use will decay and therefore lose their market value. The first real employment (self or wage) after training is thus a good indicator of training relevance. Regularized trainees follow-ups are even more important as part of management information system for training. To a large extent the business of placing and tracing trainees requires much energy and dedication from Principals of VET Institutions.
vi) Poor Training Delivery Infrastructure:
Provision of relevant Technical and Vocational Education and Training also requires appropriate training equipment/tools, adequate supply of training materials for practice by learner’s and qualified Vocational Teachers with appropriate industrial based experience who hard are to come by because such categories of workers are also in high demand in the Labour Market. In many cases, training facilities in TVET Institutions are not only obsolete but also inadequate, lagging behind what is currently in use at the work place. Teachers are also behind technological changes taking place in industry due to be absence of regularized teacher programmes of upgrading and updating in industry. The delivery of relevant TVET also depends on building a strong professional management and leadership capacity to drive the entire system which at present needs building up.

vii) Weak Partnership with Industry
Gaps exist in the relationship between TVET and Industry. Employers prefer short courses to meet skill upgrading and updating needs of their employees in order to boost productivity and improve product quality and service delivery. Generally TVET Institutions prefer the delivery of long courses which need several years to qualify instead of visiting enterprises to discuss training requirements from which tailor made short courses could be developed and jointly delivered with the respective enterprises. The institutions, however, need credibility with the enterprises in terms of having the technical expertise to analyse company training needs and designing need oriented short courses. This expertise is not always available within training institutions and also the institutions themselves are not enterprising, lacking customer orientation to provide flexible responses to market changing needs. The concept is fairly new to many TVET institutions and therefore principals need up dated management skills in order to cope with a delivery system which demands entrepreneurial management (aggressive marketing through a constantly changing market).

viii) Over Reliance on Institutional mode of Training Delivery
The TVET system has not (until recently) paid adequate attention to other modes of training delivery, particularly apprenticeship training which can be formal (in formal industries) or informal (in small and micro enterprises). Informal apprenticeship training requires institutions to work in close collaboration with small and micro enterprises to provide skills to young people. But such a system needs careful intervention, paying special attention to:

(a) Awareness and information dissemination to the public in order to enhance the image of informal apprenticeship training.
(b) Upgrading the skills of “master craftspersons” who supervise on the job training of apprentices within the small enterprises. They need updating in both technical in order to catch up in the technology as well as on the job training methodologies.
(c) Organization of complementary related instruction courses in selected training institutions so as to enable the apprentices grasp the basics of their trades.
(d) Assessing and certifying the skills acquired through this system so that the learner competences are recognized.
(e) Building the capacity of participating TVET institutions to nurse to improvement needed in the system rather than kill it.
ix) On the Job Training:
There is increasing recognition that institutional based training need to be supplemented
by training on-the-job in order to be more effective. Institutional based pre-employment
training often suffers from not being well related to work at the market place.
Relevance is better achieved when training is partly based in the world of work itself
where the expectations go beyond skills. Some evidence is available to show that many
employers prefer skilled workers who could be trusted. On-the-job training provides
trainees with the opportunity not only to practice their skills but also acquire expected
attitudes to work. Narman (1989) studied and summarized the views of private
employers in Tanzania in relation to graduates from VET institutions. “We never recruit
craftsmen. We make them. We need to train them our way” was the response from
some employers and in many respect it is still valid to-day. However, employers need
incentives that will motivate them to willingly provide on-the-job training opportunities.

x) Curricular Alignment to Informal Sector Needs:
The curricular need realignment especially to the needs of the small and micro
enterprises. The globalization challenge has created tension between developing skills for
poverty eradication and skills for global competiveness. Skills development must aim at
both, alleviating poverty through the acquisition of basic employable skills without
ignoring the effect of globalization in a globalizing world economy, driven by the ease of
information exchange, movement of labour, goods and services across national
boundaries and hence the need for countries to have skills development strategies that
give them a competitive edge. Thus, means development of high-technology skills.
Curricula need different orientation for skills needed for employability in the small and
micro enterprises and those needed for global competition. A gap exists in balancing
curricula to meet both needs.

xi) Non formal Skills Development
Non-formal TVET has not been harmonized enough to derive maximum benefit from its
potentials. It has the main advantage of being shorter in duration, occupation specific
and may use tailor made curricula. Entry qualifications are not rigid, the emphasis being
on practical skills for direct employment. A methodology developed by TVET/GTZ
(Integrated Training for Entrepreneurship Promotion-INTEP) is being implemented but
requires full scale national application. Other forms of non-formal skills development
programmes exist but national data is not available and Institutions work in isolation.
TVET Institutions need to diversify their training modes and to articulate non-formal skill
development programmes.

xii) Coordination to Multi-sector technological demands:
The subsector (TVET) services about 187,464 students per year in over 1136 institutions;-
The coordination responsibility is split mainly between VETA and NACTE. The FDC sub-
system is accountable to MCDGC although some FDC are also served under VETA with
trade testing and certification. The agricultural sub-system functions under the
responsibility of the Ministry of Agriculture (for farming courses) and the Ministry of
Livestock (for Livestock courses). The main agriculture training Colleges however, fall
under NACTE regulations. Post Primary Technical Training Centres are under the Ministry
of Education and Vocational Training while the non formal sub-system is under various
Ministries and NGOs and no national data on coverage is available. Perhaps the MoEVT
should play a leading coordinating role.
4.2 Main TVET Achievements

i) Enrolments: In TVET institutions enrolment has increased as follows in spite of the fact that total TVET training capacity does not still meet national requirements:

<table>
<thead>
<tr>
<th>No.</th>
<th>Type of programme</th>
<th>2007/8</th>
<th>2008/9</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td>1</td>
<td>Vocational Training</td>
<td>76,354</td>
<td>69,069</td>
<td>145,423</td>
</tr>
<tr>
<td>2</td>
<td>Agriculture, Natural Resources and Environment</td>
<td>1,976</td>
<td>790</td>
<td>2,766</td>
</tr>
<tr>
<td>3</td>
<td>Business &amp; Management Information</td>
<td>5,659</td>
<td>4,378</td>
<td>10,037</td>
</tr>
<tr>
<td>4</td>
<td>Engineering and other Sciences</td>
<td>4,566</td>
<td>895</td>
<td>5,461</td>
</tr>
<tr>
<td>5</td>
<td>Health and Allied Sciences</td>
<td>2,735</td>
<td>5,010</td>
<td>7,745</td>
</tr>
<tr>
<td>6</td>
<td>Planning and Welfare</td>
<td>2,567</td>
<td>3,288</td>
<td>5,855</td>
</tr>
<tr>
<td></td>
<td>Total:</td>
<td>93,857</td>
<td>83,430</td>
<td>177,287</td>
</tr>
</tbody>
</table>

Source: BEST, 2009

The biggest achievement is the increased number of girls practicing in TVET. However in engineering and agricultural fields the percentage is still low compared to males. By the same token most girls seem to prefer Health and Allied sciences as well as welfare specialities. At vocational level, the percentage has reached almost half compared to 30% five years ago.

However, the total number of those accessing TVET is far below national requirements. The current TVET capacity (both public and non-public institutions) is about 200,000 per year while those leaving schools (primary and ordinary secondary level) annually are estimated to reach 1.2 million.

ii) Relevance

The other major achievement at both technical and vocational levels of TVET is the introduction of competence based education and training (TVET) approach. Qualifications are described in terms of competences which have derived from the world of work, curricula based on modules with clear meaning and value to meet prescribed occupational standards and assessment carried out as a process.
4.3 Progression of VET Graduates

The establishment of the TVET qualifications framework has opened doors for VET graduates to progress further and eventually acquire the National Technical Awards. Development of bridging programmes to allow this progression is in progress. That means, a holder of highest NVA (i.e. Certificate of Competence level 3) can take a bridging course of a few weeks duration to qualify for entry into an NTA programme (Basic Technician Certificate or above depending also on other strengths as may be determined through recognition of prior learning and experience).

Another development in this area of progression is that, in a bid to curb shortage of technicians in the country, some capable Regional Vocational Training and Service Centres (RVTSCs) shall be allowed to offer lower NTA Level programmes (Basic and Technician Certificate as well as Ordinary Diploma). Currently the centres offer vocational training programmes leading to National Vocational Awards (NVA) only. RVTSCs that have so far been approved by NACTE to offer the aforementioned NTA programmes are listed below:

Table 13: RVTSCs approved by NACTE to offer some NTA programmes

<table>
<thead>
<tr>
<th>RVTSCs</th>
<th>S/N</th>
<th>PROGRAMME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dar es Salaam</td>
<td>1</td>
<td>Laboratory Science &amp; Technology</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>Tanga</td>
<td>3</td>
<td>Civil Engineering</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>Mtwara</td>
<td>5</td>
<td>Laboratory Science &amp; Technology</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Civil Engineering</td>
</tr>
<tr>
<td>Moshi</td>
<td>7</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Electrical Engineering</td>
</tr>
</tbody>
</table>

It is envisaged that each of the above programme will start with about 30 students subject to availability of suitable logistic and other pertinent conditions.
5.0 THE WAY FORWARD

In view of what has been detailed in this paper, the following way forward is proposed:-

(i) TVET curricula should be linked by harmonising skills and knowledge being imparted at each level of the TVET system i.e. from “Stadi za Kazi”: (Work Skills - Primary school) to TVET degrees (through Institutes of Technology). This will ensure a structured approach to competence development from early childhood to retirement which should be complemented by institutionalized vocational counselling and guidance at every level.

(ii) Strengthen and harmonize national labour market information systems (LMIS) which should also include a system for medium and long term trends for skills requirements (indicative). This will not only guide planning for education and training at national level but also alert policy makers on labour market deficiencies, provide information career counselling, facilitate trainee placements and build good links between training and the labour market.

(iii) Institutionalize tracer studies in TVET institutions for them to trace the whereabouts of their trainees in order to establish the benefits of training and find out what needs to be done in order to make training more relevant to the needs of the labour market. Regularized trainees follow ups are important part of management information system for training.

(iv) Build the capacity of TVET teachers, modernize training facilities (including tools and equipment), and provide adequate training materials for practice of learners in order to improve training quality. The capacity building of TVET teachers should include industrial experience as many of them are behind technological changes taking place in industry due to the absence of regularized programmes of upgrading and updating in industry. The capacity of TVET management personnel should also be built in order to provide the professional leadership needed for driving the entire TVET system in the intended direction.

(v) TVET institutions should be required to increase the volume of short courses to meet skills upgrading and updating needs of those already working in order to boost productivity and improve product quality and service delivery. This should be preceded by building the capacity of principals of TVET institutions to be able to cope with a training delivery system which demands entrepreneurial management.

(vi) Diversify modes of TVET provision to take advantage of the benefits of work based training through apprenticeship training, both formal and informal. The apprenticeship system has a number of advantages including practical orientation which makes training more demand driven, less cost in terms of public financing, can cater for individuals who lack educational requirements for formal training, can serve important target groups such as rural population/ the urban poor and can provide a mechanism for integrating idle youth into productive engagement.

(vii) TVET institutions should complement institutional based training with training on the job in order to make training more relevant. Relevance is better achieved when training is partly based in the world of work itself where the expectations are beyond skills. An incentive mechanism should be established to motivate workplaces which offer on the job training opportunities for TVET learners.

(viii) TVET curricula should provide different orientation to meet the skills needs of the modern sector and those needed for poverty reduction. Alleviating poverty through the acquisition of basic employable skills without ignoring high-tech skills needed for global competition.
REFERENCES:


Relevance of TVET to Market Demands - JESR 2010
## TVET Qualifications Framework

<table>
<thead>
<tr>
<th>Qualification Level</th>
<th>Qualification Award</th>
<th>Competence Level Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>NVA Level 1</td>
<td>Transcript</td>
<td>The holder of the qualification will be able to apply basic vocational skills and knowledge.</td>
</tr>
<tr>
<td>NVA Level 2</td>
<td>Basic Vocational Certificate of competence</td>
<td>The holder of the qualification will be able to apply intermediate vocational skills and knowledge.</td>
</tr>
<tr>
<td>NVA Level 3</td>
<td>Vocational Certificate of Competence</td>
<td>The holder of the qualification will be able to apply Advanced vocational skills and knowledge.</td>
</tr>
<tr>
<td>NTA Level 4</td>
<td>Basic Technician Certificate</td>
<td>The holder of the qualification will be able to apply skills and knowledge at routine level.</td>
</tr>
<tr>
<td>NTA Level 5</td>
<td>Technician Certificate</td>
<td>The holder of the qualification will be able to apply skills and knowledge in a range of activities, some of which are non-routine and be able to assume operational responsibilities.</td>
</tr>
<tr>
<td>NTA Level 6</td>
<td>Ordinary Diploma</td>
<td>The holder of the qualification will be able to apply skills and knowledge in a broad range of work activities, most of which are non-routine.</td>
</tr>
<tr>
<td>NTA Level 7</td>
<td>Higher Diploma</td>
<td>The holder of the qualification will be able to apply knowledge, skills and understanding in a broad range of complex technical activities, a high degree of personal responsibility and some responsibility for work of others.</td>
</tr>
<tr>
<td>NTA Level 8</td>
<td>Bachelors Degree</td>
<td>The holder of the qualification will be able to apply knowledge, skills and understanding in a wide and unpredictable variety of contexts with substantial personal responsibility, responsibility for the work of others and responsibility for the allocation of resources, policy, planning, execution and evaluation.</td>
</tr>
<tr>
<td>NTA Level 9</td>
<td>Masters Degree</td>
<td>The holder of the qualification will be able to display mastery of a complex and specialised area of knowledge and skills, employing knowledge and understanding to conduct research or advanced technical or professional activity, able to work autonomously and in complex and unpredictable situations.</td>
</tr>
<tr>
<td>NTA Level 10</td>
<td>Doctor of Philosophy</td>
<td>The holder of the qualification will be able to apply knowledge and understanding and do advanced research resulting into significant and original contributions to a specialised field, demonstrate a command of methodological issues and engaging in critical dialogue with peers, able to work autonomously and in complex and unpredictable situations.</td>
</tr>
</tbody>
</table>