

**THE TANZANIA COMMISSION FOR
UNIVERSITIES**

**NATIONAL QUALIFICATIONS
FRAMEWORK**

Final Draft

March, 2010

LIST OF ACRONYMS AND ABBREVIATIONS

ABET	Adult Basic Education and Training
ACSEE	Advanced Certificate of Secondary Education
ADE	Advanced Diploma in Engineering
AQF	Australian Qualifications Framework
AU	African Union
CBE	College of Business Education
EAC	East African Community
ERB	Engineers Registration Board
ETQA	Education and Training Quality Assurance
FETC	Further Education and Training Certificate
FTC	Full Technician Certificate
GCSE	General Certificate of Secondary Education
GETC	General Education and Training Certificate
IAA	Institute of Accountancy in Arusha
IFM	Institute of Finance and Management
MoEVT	Ministry of Education and Vocational Training
MQA	Mauritius Qualifications Authority
NACTE	National Council for Technical Education
NBAA	National Board of Accountants and Auditors
NBMM	National Board of Materials Management
NQF	National Qualifications Framework
NSBs	National Standards Bodies
NTA	National Technical Awards
NVTA	National Vocational and Training Awards
NZQA	New Zealand Qualifications Authority
NZQF	New Zealand Qualifications Framework
PSLC	Primary School Leaving Certificate
RPL	Recognition of Prior Learning
SADC	Southern Africa Development Community
SANQF	South African National Qualifications Framework
SAQA	South African Qualifications Authority
SGB	Standards Generating Bodies
TAPU	Tanzania Association of Private Universities
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TCU	Tanzania Commission for Universities
TIA	Tanzania Institute of Accountancy
TRA	Tanzania Revenue Authority
TVET	Technical and Vocational Education and Training
TzQA	Tanzania Qualifications Authority
TzQF	Tanzania Qualifications Framework
UPE	Universal Primary Education
VETA	Vocational Education and Training Authority
VOCTEC	Vocational and Technical

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EXECUTIVE SUMMARY

A National Qualifications Framework (NQF) is a national instrument for the development and classification of qualifications according to a set of criteria for levels of learning and skills achieved. An NQF defines a national effort aimed at integrating education and training into a unified structure of recognised qualifications. It seeks to ensure effective comparability of qualifications and credit across the national education training systems and facilitate the recognition of those qualifications outside the country's borders. The principles of a qualifications framework such as portability and transparency of qualifications lead to criteria with which all providers of qualifications are expected to comply. An NQF establishes commonality across different qualifications and specifies qualifications in terms of standards, levels and outcomes. Tanzania has developed its in order to guide the development of a national education and training system which is well integrated/aligned with the structures and processes through which an individual acquires knowledge, understanding and skills necessary for appreciating and adapting to the environment and as means by which one can realize one's full potential.

The process of establishing the Tanzania Qualifications Framework (TzQF) was participatory, and brought together a wide range of stakeholders involved in the provision of education and training and conferment of certificates, diplomas, degrees, and other academic and professional credentials. The proposed TzQF covers all forms, levels and categories of educational and training provided by the public and private sectors in Tanzania. It is guided by the principle of inclusiveness, targeting all areas of general education, vocational training, higher education, lifelong and out of school or non-formal education, other forms of learning such as open and distance, and e-learning. The framework intends to articulate qualifications offered in general education, vocational education and training, technical education and training, higher education as well as qualifications offered by professional bodies and associations. It incorporates all forms of education from lower, basic level of education to the highest level of tertiary and higher education.

The TzQF has defined 10 unique levels of competence as shown in the following table. For each level an award has been assigned. The TzQF consists of the following features:

- The qualifications recognised in the TzQF are classified into the following groups: (a) Schools sector, (b) Vocational and technical sector, (c) University education sector, (d) Professions;
- The levels of qualifications (e.g., certificate and diploma) are differentiated based on the breadth, depth and complexity of knowledge and skills that are included in various qualifications;
- All qualifications in the TzQF have a purpose and are interrelated to each other, providing for articulation from one qualification to the other by recognition of prior learning.

TzQF Levels	School Sector	Technical and Vocational Education and Training (TVET) Sector*		University Education Sector	Professions	Lifelong Learning
		Vocational	Technical			
10				Doctorate Degree		Articulation – Horizontal and diagonal <i>Articulation credits, credit transfers, RPL, also additional qualifications that facilitate mobility and access</i>
9			Masters (Technology) Degree	Masters Degree <i>Postgraduate Certificate, Postgraduate Diploma</i>	Professional Level IV ←	
8		Vocational Bachelors Degree	Bachelors (Technology) Degree	Bachelors Degree	Professional Level III ←	
7		Higher Vocational Diploma	Higher Diploma	Higher Diploma	Professional Level II ←	
6		Ordinary Vocational Diploma	Ordinary Diploma		Professional Level I ←	
5	Advanced Certificate of Secondary Education	Advanced Vocational Certificate	Technician Certificate		Technician Level II ←	
4	Certificate of Secondary Education	Vocational Certificate	Basic Technician Certificate		Technician Level I ←	
3		Basic Vocational Certificate			←	
2		VET Level I			←	
1	Certificate of Primary Education	↑	↑	↑	↑	

Arrows in the framework refer to horizontal and diagonal articulation between and within sectors. Lifelong education pathways cut across all levels of qualifications through RPL.

The last column in the above table labelled horizontal and diagonal articulation is proposed as a mechanism to facilitate meaningful articulation between qualifications in the different tracks/strands, i.e., academic on the one hand and professional or technical, on the other. The purpose of horizontal and diagonal articulation is to facilitate learner

mobility and progression along the framework as efficiently as possible. It can also be used to admit into the system those learners who do not meet the full entry requirements for their target programmes. It is likely to be the ‘space’ in the system where the recognition of prior learning (RPL) can most easily be implemented. The horizontal and diagonal articulation mechanism is thus proposed to cater for the learning needs of those whose past learning experiences have not adequately prepared them for a chosen programme, without forcing them to ‘go back to the beginning again’. Whilst the framework provides general guidelines and parameters, specific articulation requirements will always be determined by the receiving institution on the basis of publicly declared entry requirements for particular programmes and qualifications.

The TzQF has assigned credits at its various levels as the principal means for measuring and expressing learning equivalence at the respective levels. Credits are used to reward the incremental progress of learners, facilitating student transfer, recognizing prior learning and contributing to the definition of TzQF qualification standards. In order to earn credits at a particular TzQF level, the learner must satisfy the assessment criteria for all (or the majority of) the prescribed principal learning outcomes that describe the qualification at that particular level. Among the advantages of a credit system is ‘credit accumulation’ and ‘credit transfer’. Credit accumulation is a process of collecting credit for learning towards a qualification. This may occur within a programme of study, across an institution, between institutions within a single country or on an international basis. Where accumulation crosses programme or institutional boundaries, this is usually referred to as credit transfer.

The TzQF accords importance to both programme accreditation and institutional accreditation. The assurance of quality in teaching and learning and the resulting output is paramount in any educational system that is keen to produce a competent workforce for the highly competitive economy. Qualifications will therefore qualify for registration in the TzQF after meeting the minimum quality requirements. This calls for the need to subject all education and training providers to rigorous quality assurance audits.

Many education and training providers and regulators contribute significantly to the determination of qualifications to be slotted in the TzQF. To bring order to the TzQF operational processes the relevant legal procedures are inevitable to establish the necessary administrative structures. In line with the cherished international practices Tanzania should establish a national qualifications authority. This may be called the Tanzania Qualifications Authority (TzQA). The authority will, among other things, establish and maintain an electronic register for all qualifications and their providers within the TzQF. Establishment of the TzQA will have to be enacted by the Parliament. The Act for establishing the TzQA should, among other things stipulate the responsibilities of NECTA, VETA, NACTE, TCU and professional bodies with respect to the TzQF. This implies that the existing legislations will also need to be revised to accommodate this new development. The roles of the existing regulatory bodies will also need to be restructured and harmonized.

1. INTRODUCTION

Tanzania is looking for better ways of educating her people and organising her education and training systems in order to gain an edge in an increasingly competitive and globalised economic environment. This demands a national education and training system that provides quality learning, is responsive to the ever-changing influences of the external environment and promotes the development of a nation that is committed to life-long learning. Furthermore, there is growing demand that the national education and training system should be comparable between nations so as to facilitate the mobility of people for further training and the job market.

When learners know that there are clear learning pathways which provide access to, and mobility and progression within education, training and career paths, they are more inclined to improve their skills and knowledge, as such improvements increase their employment opportunities.

Tanzania is committed, as member of the Southern Africa Development Community (SADC), to promoting regional cooperation and integration¹. The 1997 Protocol on Education and Training was signed to facilitate harmonisation and standardisation of education and training systems as well as determination of equivalence and comparability of qualifications within the SADC region for easy mobility of students and trained labour. Despite the existing protocol, there are no regional mechanisms for the comparability of entry requirements into courses, curricula design and conditions to be fulfilled in order to qualify for exit qualifications at the different levels of education and training in the region. This state of affairs obviously constrains the effective utilization of existing institutions to their full capacities; it limits access to opportunities for good quality education and training; it limits mobility of both students and staff for further training and appointment for jobs and promotions.

The purpose of this document is to present the Tanzania Qualifications Framework for Tanzania (TzQF).

1.1 Definition of National Qualifications Framework

A National Qualifications Framework (NQF) is a national “instrument for the development and classification of qualifications according to a set of criteria for levels of learning and skills achieved².” These levels are defined in terms of learning outcomes: the competences learners must have, regardless of whether they learned these competences formally, on the job, or elsewhere. New and existing qualifications can be placed within this system of levels according to their learning outcomes. This allows

¹ Sabaya, W. 2006. Tanzania National Qualifications Framework Concept Paper, p.14.

² Moving Mountains – the role of National Qualifications Systems in Promoting Lifelong Learning, OECD, 2006

qualifications to be compared more easily, and makes it clearer how learners can progress from one level of qualification to the next.

NQF defines a national effort aimed at integrating education and training into a unified structure of recognised qualifications. It seeks to ensure effective comparability of qualifications and credit across the national education training systems and facilitate the recognition of those qualifications outside the country's borders. The principles of a qualifications framework such as portability and transparency of qualifications lead to criteria with which all providers of qualifications are expected to comply. An NQF establishes commonality across different qualifications and specifies qualifications in terms of standards, levels and outcomes.

1.2 Rationale of Tanzania Qualifications Framework

Tanzania has developed this National Qualifications Framework in order to guide the development of a national education and training system which is well integrated/aligned with the structures and processes through which an individual acquires knowledge, understanding and skills necessary for appreciating and adapting to the environment and as means by which one can realize one's full potential. The Framework is designed to cater for the needs of Zanzibar.

The labour markets in the country and beyond its borders are increasingly in demand of *proven* demonstration of mastery of expected learning outcomes of an education and training process.

Furthermore, increasingly there are expectations that the learning outcomes characterizing different education and training systems should be comparable between nations and national groups as a means of facilitating the mobility of people for further training and jobs³. These expectations can only be facilitated by a national qualifications framework.

The proposed Tanzania Qualifications Framework is expected to serve as an important component of the already conceptualised SADC Qualifications Framework. The SADC framework subscribes to the principle of inclusiveness for educational, vocational and higher education sectors, with links between countries and plans to harmonise qualifications and learning programmes with the goal of facilitating the mobility of learners and workers throughout the region.

The rationale for the proposed TzQF hinges on the need for the country to:

- integrate its education and training system at all levels and relate that system with those existing in the other SADC member states;
- set national standards in education and training so as to harmonise and rationalise qualifications and make them comparable with those in the international setting;

³ Sabaya, W. 2006. Tanzania National Qualifications Framework Concept Paper

- establish mechanisms for the dissemination of equivalences and consequent recognition of qualifications and facilitate the transferability and portability of learning achievements (credits) and qualifications across institutions, levels of education and training, learning modes and borders;
- establish a national education and training database accessible by all stakeholders.

The TzQF is based on need to standardise and harmonise the country's qualifications by putting in place a system for setting standards defining expected knowledge, skills and understanding needed for labour market employment, self employment or further education. The TzQF is thus a national qualifications system with agreed principles, practices, procedures and standardized terminology with a view to ensuring effective comparability of qualifications in the SADC region so as to facilitate mutual recognition of qualifications among member states, as well as mobility of students and trained labour.

In line with other NQFs in the SADC region, particularly the South African and Namibian NQFs, the TzQF embraces and recognizes the contribution made by life long learning and work experiences translated into credits comparable with those obtained through formal schooling. It is expected that individuals will progress academically upwards along the training and career paths and across occupations if the life long learning approach is adopted.

1.3 The Process of Establishing the Tanzania Qualifications Framework

The process of establishing the TzQF was participatory, and brought together a wide range of stakeholders involved in the provision of education and training and conferment of certificates, diplomas, degrees, and other academic and professional credentials. The range of stakeholders included those in general education, vocational education and training, technical education and training, higher education as well as professional bodies and associations. Although it is important to consider special circumstances within which the Tanzania Qualifications Framework must operate and to ensure that these unique demands are met, it is equally important to take into account trends in the international arena as this reflects the global context and provides valuable perspective and experience against which to measure local progress and debate. To this end, a study tour of Australia and Malaysia was conducted from 27th October to 4th November 2008 to interact and learn from practitioners particularly personnel in the Australian Qualifications Framework and Malaysian Qualifications Authority. The first draft of the framework was shared with stakeholders at a two-day workshop held at the Sea Cliff Hotel, Dar es Salaam, 2nd and 3rd April, 2009.

2. SITUATIONAL ANALYSIS

2.1 *Historical Development of Education and Training in Tanzania*

2.1.1 Major Historical Developments

This section provides an overview of the main historical developments leading/related to the TzQF⁴.

Table 2.1: Major developments of education and training in Tanzania⁵

S/N	Developments	Highlights
1	Traditional Tanzania and colonial eras	<ul style="list-style-type: none"> Traditional education emphasized principles of good citizenship, community and survival life skills and perpetuation of valued customs. Restricted access to education and training during the German and British colonial periods.
2	Post Independence: Education Act 1962	<ul style="list-style-type: none"> Major re-engineering of the provision of education in the country to abolish racial discrimination in the provision of education; streamline the curriculum, examinations as well as the administration and financing of education; and promote Kiswahili as an national language.
3	Arusha Declaration 1967	<ul style="list-style-type: none"> Introduction of the philosophy of Education for Self Reliance (ESR) focusing on merger of theory and practice and emphasis the provision and acquisition of practical life skills; linkage between education plans and practices with national socio-economic development plans, aspirations and the world of work.
4	Education Act of 1969	<ul style="list-style-type: none"> To support implementation of the ESR philosophy in Education. Re-orientation of school curricula to meet national needs. Compulsory enrolment of school age children in primary school, under UPE. Introduction of Post – Primary Technical Centres (PPTCs) and Folk Development Colleges (FDCs). Replacement of foreign examinations with national examinations. Requirement that work be an integral part of education and school life. Making primary and secondary education terminal and relevant to the needs of individuals and the country. Introduction of vocational programmes in secondary schools (Forms 1–4) as a means of preparing young people for the world of work just after graduation. The abolition of direct entry of Form 6- leavers to tertiary and higher education and training institutions and their requirement to serve the nation for at least six months before doing so.
4	Education Act of 1978	<ul style="list-style-type: none"> Requirements that all public and private schools be registered. Establishment of schools categories including National Schools (i.e. All public schools, other than primary schools or adult education centres, managed by a Local Authority; All Folk Development Colleges and all Colleges of National Education), and regional Schools (i.e. all primary schools and all adult education centres with the former falling under the direct control of the Commissioner of National Education). Compulsory enrolment and attendance to primary education by all children of age 7 and 13 years.
5	Presidential Commission on Education, 1981	Review of education system with emphasis on quality improvement following massive expansion of Basic Education, led to:

⁴ A comprehensive presentation and discussion of the relevant historical background to the TzQF⁴ has been provided in “Sabaya, W. (2006)

; Tanzania National Qualifications Framework Concept Paper.”

⁵ Adopted from Sabaya (2006)

S/N	Developments	Highlights
		<ul style="list-style-type: none"> • The establishment of the Tanzania Professional Teachers' Association. • Introduction of new curriculum packages for primary, secondary and teacher education levels. • Establishment of the Sokoine University of agriculture. • Establishment of the Muhimbili University College of Health Sciences and the Open University off Tanzania. • Establishment of the Faculty of Education at the University of Dar es salaam. • Formulation of a National policy for Science and Technology.
6	Task force on Tanzania's Education System for the 21st Century	<ul style="list-style-type: none"> • The recommendations of Task Force led to the formulation of the Tanzania Education and Training Policy with emphasis on the promotion of partnership between the government and the private sector in the provision of education and training.
7	Education and Training Policy, 1995	<ul style="list-style-type: none"> • Private sector participation in the provision of education. • Emphasizing the provision of quality education. • Promoting access to education by focusing on equity issues. • Promoting and emphasizing the growth of the culture of education-for-job-creation and self employment. • Defining the structure of Tanzania's formal education and training comprises 2-7-4-2-3+ years (pre-primary, primary, ordinary and advance secondary education and university/tertiary education).
8	Vocational Education and Training Authority (VETA) in 1995	<ul style="list-style-type: none"> • Coordinating organ for vocational educational and training in the country. Post primary vocational schools offer crafts courses in tailoring, masonry, painting, carpentry etc lasting for up to four years and ending in the conferment of a Trade Test Certificate (III, II, I). • In order for this VOCTEC qualification to be recognized, the providers of related courses are required to register with either the VETA or the National Council for Technical Education, NACTE.
9	National Higher Education Policy (1999), National Technical Education and Training Policy (1996) and the Universities Act, 2005	<ul style="list-style-type: none"> • Tertiary education and Training coordinated and quality assured and control by National Council for Technical Education (NACTE) & Higher Education Accreditation Council, now the Tanzania Commission for Universities (TCU). • TCU coordinates and regulates quality in tertiary and higher education, specifically, universities and university colleges. • Tertiary and higher education and training encompass all post-ordinary level secondary education leading to award to certificates, diplomas and degrees. NACTE regulates all non-university tertiary institutions. • Tertiary higher education and training aims to: promote the acquisition of higher levels of intellectual, professional and management skills; prepare middle and higher level professional human resource for service in the different sectors of the economy, and; provide opportunities for intellectual, scientific and technological excellence and high level performance.
11	Non-formal education	<ul style="list-style-type: none"> • Non-formal education growing in importance and is being promoted by the Government. • Delivery systems, such as informal education, the different stages of adult literacy, evening schools, continuing and open university education, library self study, correspondence schools, radio programmes, television programme, internet and other modes of delivery now exist. • Essentially, in non-formal education, it is the student who sets the pace for his/her studies and there is flexible duration for promotion or completion.

2.1.2 Educational System in Tanzania

The Tanzanian educational system is based on the 2-7-4-2-3+ system: 2 years of pre-primary education, 7 years of primary school, followed by 4 years of secondary ordinary, 2 years of secondary advanced level and a minimum of 3 years of university education to undergraduate degree level.

i. Pre-primary education

Infants and young children (0-6 years old) are cared for and receive initial education both at home and in day-care centres, kindergartens, nursery and other pre-schools.

ii. Primary education

This is a seven years education cycle. It is compulsory for all seven-year olds. At the end of this cycle, pupils enrol in secondary education, vocational training or enter the world of work.

iii. Secondary education

Secondary education refers to post-primary formal education offered to persons who will have successfully completed seven years of primary education and have met the requisite entry requirements for the second level of national education. Secondary education is sub-divided into Ordinary Level (Forms 1 to 4) and Advanced Level (Forms 5 and 6). The ordinary level secondary education lasts for four years while the Advanced Level part lasts for two years. Students who complete Ordinary Level secondary education can go on to the next stage of advanced level secondary education, vocational training, and professional training or join the world of work. Those who complete Advanced Level Secondary Education may join either tertiary and higher education and training institutions or the world of work.

iv. Vocational and technical education and training

Vocational Education and Training Authority (VETA) is Tanzania's coordinating organ for vocational education and training. Post primary vocational schools offer crafts courses in tailoring, masonry, painting, carpentry etc. lasting for up to four years and ending in the conferment of a Certificate of Competence. Successful students can join the world of work or continue with further training. Vocational and skills training schools in the country may be owned by government or private or non-governmental organizations or individuals. In order for these vocational and technical qualifications to be recognized, the providers of related courses are required to register with VETA for craft level courses or the National Council for Technical Education, NACTE for technician level courses.

v. Non-formal education and training

Government is committed to promoting and strengthening linkages between formal and non-formal education and training. Non-formal education can be generalized as out of school education as distinguished from formal education, which is mainly in school education. Either type may include at certain stages some aspects of the other.

Many Ministries undertake education and training in Tanzania. The main ministries involved in formal and non-formal education and training are the Ministry of Education and Culture (now reformed into the Ministry of Education and Vocational Training); the Ministry of Communication, Science and Technology and the Prime Minister's Office (Regional Administration and Local Government). The other ministries may be involved in sector-specific professional education and training. In addition, formal and non-formal education and training may be provided by organized communities, Non-Governmental Organizations (NGOs) or individuals.

vi. Teacher education and training

The teacher is the most important actor in education and training. The teacher organizes and guides students in their learning experiences and interaction with the content of the curriculum and promotes, at all times, student initiatives and readiness for their own learning.

vii. Tertiary education and training

Tertiary and higher education and training encompass all post-ordinary level secondary education leading to award of certificates, diplomas and degrees.

All the above changes in Tanzania's education and training systems indicate broadly what knowledge, understanding, skills and behaviours a graduate from the system will be able to demonstrate to have mastered to deserve certification by the concerned providers or certification authorities.

2.1.3 Lessons from the History

It is important for TzQF to accommodate the individual needs of all learners in all sectors. The NQF has also to serve the social and economic needs of the nation at large, by taking into account:

- The variety of learners and their reasons for learning;
- The variety of qualification types that currently exist and are likely to exist;
- The variety sectors;
- The variety of contexts of learning that exist in the Tanzanian system; and
- The variety of learning sites.

In view of the variety of situations facing the national education and training system, the framework must not become so rigid that access and progression are inhibited. However, it must not be so flexible that meaningful achievement cannot be reliably identified. Excessive rigidity will restrict access, progression, articulation and mobility, and would be associated with a strictly hierarchical qualifications system that values certain education and training modalities above others. If the system is too flexible, however, coherence and effective portability (leading to success in study) are lost – meaningful learning achievements in different contexts will not be distinguished for recognition purposes from inappropriate or trivial learning.

2.2 Current Certification Authorities and Mechanisms in Tanzania

2.2.1 Major Certification Authorities

The 1995 education and training policy provided for the coordination of education and training in the country through the establishment of quality assurance bodies for different levels. The law has mandated different bodies to undertake quality control and certification in education and training. In 1971 the National Examinations Council of Tanzania (NECTA) was established to determine achievement in primary and secondary education, as well as teacher education and technical education. In 1995, the Vocational Education and Training Authority (VETA) was established to oversee the provision, coordination and certification of vocational education. In 1997 the National Council for Technical Education (NACTE) was established to oversee and coordinate technical education provided by non-university tertiary education and training institutions. In 1995, the then Higher Education Accreditation Council (currently the Tanzania Commission for Universities (TCU)) was established to coordinate and regulate the quality of inputs, processes and outputs of and qualifications conferred by universities and their constituent colleges.

Similarly, a number of professional bodies such as the National Board of Accountants and Auditors (NBAA), the National Board of Materials Management (NBMM) and Engineers Registration Board (ERB) have been established and mandated to assure the quality of graduates for the purpose of professional registration as competent practitioners.

2.2.2 Awards Offered by the NECTA

The National Examinations Council of Tanzania (NECTA) is responsible for setting, moderating and administering examinations and conferring the deserved certificates namely:

- Primary School Leaving Certificate, (PSLC) after seven years of primary education;
- Certificate of Secondary Education (CSE), after four years of ordinary level secondary education;
- Advanced Certificate of Secondary Education, (ACSE), after two years of advanced secondary education;

- Certificate or Diploma in Education after two years or one year of teacher training, respectively;
- Full Technician Certificate (FTC), after three-years of post CSE technician training;
- Advanced Diploma in Engineering (ADE) after three years of post ACSE and FTC technician training.

2.2.3 VETA System of Awards

The VETA establishing instrument, the Vocational Education and Training Act, 1994, defines ‘vocational education and training’ as training leading to a skilled occupation. The Vocational Education and Training Authority (VETA) runs courses, regulates the quality of training in different vocations and offers three levels of trade test certificates namely Trade Test Grade III, II and I. In a recent development, VETA has replaced the Trade Tests with Certificates of Competence levels I, II, and III respectively. The VETA awards system has been merged with that of the NACTE to form a single system of vocational and technical (VOCTEC) awards.

2.2.4 NACTE Scheme of Awards

The NACTE establishing instrument, the National Council for Technical Education Act, 1997, defines ‘technical education’ as education and training undertaken by students to equip them to play roles requiring higher levels of skill, knowledge and understanding and in which they take responsibility for their area of specialisation.

The National Council for Technical Education (NACTE) is mandated to oversee the growth, relevance and quality of technical education in a wide range of fields including:

- **Agriculture, Natural Resources and Environment**, covering agriculture, crop science, animal science, fisheries, marine science, wildlife, forestry, tourism, environmental management and conservation, soil science, land use planning, irrigation, biodiversity, natural resources management and related fields;
- **Business and Management**, encompassing accountancy, marketing, finance, banking, law, materials and resources management, economics and related fields;
- **Engineering and Other Sciences**, covering courses in communications and transport, all fields of engineering, computer science, architecture, land surveying, quantity surveying, land management and valuation and related fields;
- **Health and Allied Sciences**, including courses in clinical medicine, nursing, midwifery, dentistry, pharmaceutical science, medical laboratory sciences, environmental science (hygiene), radiography, physiotherapy, optometry, health education and related fields;
- **Planning and Welfare**, covering courses in public relations, community development and planning, journalism, gender issues, social sciences and related fields.

The scope of NACTE as a regulatory organ for technical education includes all tertiary institutions other than universities and their affiliated colleges. The institutions under the NACTE admit students who have completed secondary education and offer courses at technician, semi professional and professional levels leading to a certificate, diploma, degree or related awards.

NACTE has defined and established a range and levels of awards in technical education and training⁶. The awards of NACTE are known as National Technical Awards (NTA). They are competence-based and are designed to attest that holders are able to apply competently the knowledge and skills described in the relevant occupational sector. The seven-level systems of the NACTE's NTAs is linked to a three-level system of VETA awards known as National Vocational Training Awards (NVTA) to form the ten-level framework of vocational and technical education qualifications shown in Table 2.2.

Table 2.2: The ten-level qualifications framework for vocational and technical education.

NVTA Levels	Minimum Entry Level	Title
Level 1	Standard VII	Certificate of Competence I
Level 2	Level 1	Certificate of Competence II
Level 3	Level 2	Certificate of Competence III
NTA Levels	Minimum Entry Level	Title
Level 4	Form IV/Level 3	Basic Technician Certificate
Level 5	Level 4	Technician Certificate
Level 6	Level 5/Form VI	Ordinary Diploma
Level 7	Level 6/FTC	Higher Diploma
Level 8	Level 7	Bachelor's Degree
Level 9	Level 8	Master's Degree
Level 10	Level 9	Doctorate Degree

Each level in the NACTE Qualification Framework has broad competence descriptors as presented in Table 2.3.

⁶ See NACTE (2004); Procedures for Occupational Analysis towards setting of Qualification Standards

Table 2.3: The seven-level NACTE Qualification Framework with corresponding competence level descriptors.

NTA Level	Qualification Title	Competence Level Descriptors <i>(Short Version/Indicative Version)</i>
10	Doctorate Degree	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.
9	Master's Degree	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.
8	Bachelor's Degree	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.
7	Higher Diploma	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.
6	Ordinary Diploma	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.
5	Technicians Certificate	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.
4	Basic Technician Certificate	The holder of the qualification will be able to apply skills and knowledge at routine level.

2.2.5 Awards by Universities

The Tanzania Commission for Universities (TCU) was established under the Universities Act no. 7 of 2005. The Commission provides quality control on programmes offered, accredits higher education institutions, and coordinates student admissions. TCU has established a scheme of academic and professional qualifications and academic titles and promotion scheme for all academic staff in universities. The scheme is intended to ensure a single nomenclature of qualifications offered by public and private universities. The scheme includes certificates, diplomas, advanced diplomas, bachelor's degree, master's degree and doctoral degree (Table 2.4).

Table 2.4: Qualifications and the minimum duration of programmes

	Classification criteria	Certificate	Diploma	Bachelor's degree	P.G. Diploma	Master's degree	PhD	Post Doctoral Award
1.	Minimum years spent in university***	1	2	3	1	1.0	3	2-3
2.	Number of credit hours	108	216	324	108*	108*	**	**
3.	Internship and/or requirement for field practicals	Y	Y	Y	Y	Y	Y	Y
4.	Research Paper or Research Report	Y	Y	Y	Y	-	-	Y
5.	Dissertation / Thesis required					Y	Y	

Y = applicable requirement

* The number of credit hours is the minimum number of hours a student is expected to spend in his or her advanced coursework or in attendance of lectures per academic year.

** A PhD and/or a post-doctoral candidate is normally, not assessed in terms of credit hours; rather, of the output he/she produces in terms of a thesis or, as the case may be, a research report. However, a minimum of 540 credit hours have been proposed for the award of a PhD (see Table 4.1).

***for full time candidates.

2.2.6 Awards Given by Professional Bodies

The National Board of Accountants and Auditors and the National Board of Materials Management are professional bodies, which regulate professional expertise in their areas of specialization. These Boards set examinations and confer awards at certificate, diploma and higher levels in accountancy, auditing, materials management, procurement and supplies management.

2.2.7 Professional Landscape

There are two major groups of Professional Bodies – statutory and non-statutory. In the case of statutory bodies, their authority and responsibilities regarding the qualifications under their jurisdiction are set out in legislation and include regulation of the profession in general. Most bodies have common requirements for ongoing registration (which includes the right to use a Professional Designation and the right to practice). These requirements include compliance with a Code of Professional Conduct/Ethics,

Continuing Professional Development and the payment of annual registration fees. A description of some of the bodies is given below.

(a) National Board of Accountants and Auditors (NBAA)

NBAA is a regulatory body of the accounting professional body established under the Auditors and Accountants (Registration) Act No. 33 of 1972 as amended by Act No. 2 of 1995. It is an accountancy regulatory body operating under the Ministry of Finance and Economic Affairs. The NBAA conducts two categories of examinations namely, Accounting Technician examinations (ATEC I and II) and Professional level examinations (modules A-F). On successful completion of ATEC II examinations and one year practical training, one qualifies for an Accounting Technician Certificate. Professional level examinations are conducted in three stages of two modules in each stage, whereby on completion of the final stage and a three-year practical training, one is awarded the CPA (T) certificate.

(b) Board of Architects and Quantity Surveyors

The Board of Architects and Quantity Surveyors was established by the Architects and Quantity Surveyors (Registration) Act of 1997 with a mandate to regulate the conduct of architects, quantity surveyors and architectural and quantity surveying consulting firms, and to provide for their registration and related matters. A person shall be eligible for registration if he/she is in the Board's opinion a professionally fit and proper person by general conduct as required by the Act.

(c) National Board for Materials Management

The National Board for Materials Management (NBMM) was established by an Act of Parliament No. 9 of 1981. The Board started carrying out its activities in 1978 as a Materials Management Caretaker Committee and became fully operational in April 1982. The Board runs three programmes namely; (i) Basic Procurement and Supply Certificate (BPSC) which is divided into stages I and II aimed at producing stores clerks, artisans or helpers; (ii) Foundation Level which is divided into stages I and II, aimed at producing purchasing and supplies technicians; and (iii) Professional Level which is divided into four stages, Stage I to Stage IV. On successful completion of the four Professional Stages including the Research Paper the candidate is awarded the Certified Procurement and Supplies Professional (CPSP) award. The CPSP holder is expected to work at both middle level and senior managerial positions.

(d) Tanzania Nurses and Midwives Council

The Nurses and Midwives Registration Act of 1997 makes provision for education, training, registration, enrolment and practice of nurses and midwives in their expanded role and scope of their practice. Ethical matters are addressed by the Code of Professional Conduct for Nurses and Midwives in Tanzania (2007). The Code of Professional Conduct complement existing laws, regulations, guidelines and any other codes guiding and regulating the standards of behaviour in nursing and midwifery practice.

(e) Engineers' Registration Board

The Engineers Registration Board is a statutory body established under the Engineers Registration Act, No. 15 of 1997. The Board has been given the responsibility of monitoring and regulating engineering activities and the conduct of the engineers and engineering consulting firms in Tanzania through registration of engineers and engineering consulting firms. Under the law, it is illegal for an engineer or an engineering firm to practice the profession if not registered with the Board. The Board has also been given legal powers and has the obligation to withdraw the right to practice from registered engineers if found guilty of professional misconduct or professional incompetence. Registration with the Board is, thus, a license to practice engineering in Tanzania.

(f) Medical Council of Tanganyika

The Medical Council of Tanganyika was established to give guidance to the medical profession generally on all matters relating to ethical conduct and behaviour.

(g) Tanzania Institute of Education

The Tanzania Institute of Education (TIE) is a Parastatal Organization under the Ministry of Education and Vocational Training (MoEVT) charged with the responsibility of ensuring the quality of education in Tanzania at the pre-school, primary, secondary, and teacher training levels.

(i) Tanzania Institute of Bankers

The Tanzania Institute of Bankers (TIOB) was established in 1993 with the principal objectives of setting, promoting and upgrading the excellence and professionalism in the banking and financial services industry in Tanzania. The aim is to alleviate the acute shortage of professional and efficient career bankers, thus enhancing the quality services to the public.

2.2.8 The Problems

Experience has shown that in addition to the referred bodies authorized to confer academic and professional credentials, there are many other private institutions offering qualifications of their own design. In some cases an institution may offer a qualification, which may not be accepted by another for job placement or promotion or selection for higher education. This frustrates students' desire to progress from one level of studies to another and may force some individuals to repeat courses already undertaken in one institution in order to obtain entry requirements for the next level of education in another institution or to be accepted for employment within the country or outside Tanzania.

Another problem is on horizontal and vertical academic mobility and equivalence, for example:

- Certificate in Law offered by the Institute of Judicial Administration and that offered by Mzumbe University or the University of Dar es Salaam—Are they equivalent? Do they meet the same accreditation criteria?

- How can a VETA graduate proceed to NACTE levels if one does not meet the basic entry qualifications for NACTE awards, i.e. Form IV or VI secondary education?
- How does an NTA level 7 or 8 graduate proceed with Bachelor's or Master's degree at a University without having to repeat the already acquired competences?
- Can the credit system be applied to all systems (i.e., VETA, NECTA, NACTE, TCU) for portability of awards?

In addition, employers have often found that they are unable to judge the competences of their potential employees or to determine the value of a course undertaken and qualification obtained by employees already in station. The need is, therefore, clear for a system of national awards and certification system recognizable nationally and internationally.

2.3 Lessons from Well-Established National Qualifications Frameworks in Other Countries

2.3.1 Australian Qualifications Framework

The Australian Qualification Framework (AQF) was introduced in 1995 and operates under the guidance of an AQF Council which was established in 2008 following approval by the Ministerial Council for Education, Employment, Training and Youth Affairs (MCEETYA). The AQF Council replaces the AQF Advisory Board that was established by the MCEETYA in 1995. The object of the AQF Council is to provide strategic and authoritative advice to Ministers on the AQF to ensure it is nationally and internationally robust and supports flexible cross-sectoral linkages and pathways. The Secretariat is based in Adelaide, hosted by the South Australian Department of Further Education, Employment and Science and Technology.

The AQF recognises that the schools sector, vocational education and training sector and higher education sector each have different industry and institutional linkages. It connects these in a coherent single framework incorporating qualification titles and guidelines.⁷ All registered training institutions are accredited to provide training and issuance of qualifications according to the guidelines provided by the AQF. The framework recognizes prior learning (RPL) and give credit for knowledge and skills obtained outside the formal education and training system no matter how and where the qualifications were obtained including previous study at school or college, adult education programmes, training programmes at work, work experience and life experience as long as the qualification meets the determined learning outcomes and assessment criteria. The AQF sets out the qualification standards upon which RPL ultimately relies for its credibility. The framework integrates and streamlines requirements of participating providers, employers, employees, individuals and organizations; encourages cross sectoral linkage

⁷ AQF (2007). Australian Qualifications Framework. Implementation Handbook. Fourth Edition, p. 1. Australian Qualifications Framework Advisory Board. Australia.

programmes such as VOCTEC in schools allowing students to pursue industry based units of learning. An important aspect of the AQF is the development of closer connections between secondary education, vocational education and training (VET) and higher education. The development of structured arrangements to link qualifications across the sectors represents a key process in building closer intersectoral relationships.

Recognition of Prior Learning

Recognition of prior learning (RPL) may be defined in a number of ways, some more expansive than others. All definitions, however, include the key notion that RPL involves the assessment of previously unrecognised skills and knowledge that an individual has achieved outside the formal education and training system. RPL assesses this unrecognised learning against the requirements of the qualification, in respect of both entry requirements and the outcomes to be achieved. By removing the need for duplication of learning, RPL encourages an individual to continue upgrading their skills and knowledge, through structured education and training, towards formal qualifications and improved employment outcomes (AQF, 2007; p. 91).

The AQF now comprises 15 qualifications as shown in Table 2.5, grouped according to the sector with authority for setting the standards of each qualification. The AQF serves to relate qualifications across the federal states that make up Australia. It does this by defining the characteristics of a common set of qualifications across schools, VET and higher education (Table 2.5). The important feature here is the absence of explicit reference to levels and the hierarchy of qualifications is defined by the qualifications themselves and not via independent level descriptors. Vocational Qualifications are positioned at the same level as Higher Education Qualifications on the AQF. The distinctive outcomes of the Vocational Qualifications include high level employment-related skills and knowledge which in most cases are specified in sets of competency standards developed by relevant industry, enterprise, community or Professional Bodies to meet identified training needs at professional levels, and focus on competency in the workplace.

According to AQF (2007), it can be noted that:

- a) There is rapidly increasing provision of vocational education and training in the schools sector, which may be recognised as the appropriate Certificate I-IV level and contribute towards a Senior Secondary Certificate of Education;
- b) Some Certificate I-IV qualifications are issued by the higher education institutions approved as Registered Training Organisations; and
- c) Some higher education qualifications, such as Associate degrees and Bachelor Degrees, are issued by vocational education and training institutions approved to provide higher education qualifications.

Table 2.5: AQF qualification by sector of accreditation

Schools Sector Accreditation	Vocational Education and Training Sector Accreditation	Higher Education Sector Accreditation
Senior Secondary Certificate of Education	Vocational Graduate Diploma Vocational Graduate Certificate Advanced Diploma Diploma Certificate IV Certificate III Certificate II Certificate I	Doctoral Degree Masters Degree Graduate diploma Graduate Certificate Bachelor Degree Associate Degree, Advanced Diploma Diploma

It should also be noted that there are no standardised rankings or equivalences between different qualifications issued in different sectors, as these qualifications recognise different types of learning reflecting the distinctive educational responsibilities of each sector. Where the same qualifications are issued in more than one sector but authorised differently by each sector (i.e., Diploma, Advanced Diploma) they are equivalent qualifications, although sector-differentiated (AQF 2007, p. 2).

Qualifications in Australia include professional aspects and universities work with Professional Bodies in the accreditation of specific programmes (AQF 2007).

For effective implementation, the Framework is supported by:⁸

- 1) Guidelines for Cross-Sector Qualification Linkages and Recognition of Prior Learning (RPL);
- 2) Principles for the issuance of qualifications and protection of titles, which include provision for the issuance of a Statement of Attainment which is issued by a Registered Training Organisation when an individual has completed one or more units of competency from nationally recognised qualification(s)/course(s); and
- 3) Arrangements for monitoring the implementation of the Framework, through the Australian Qualifications Framework Advisory Board.

⁸ AQF (2007) *Op. cit.*, p. 2.

2.3.2 New Zealand Qualifications Framework

New Zealand's efforts to introduce a national qualifications framework started in 1989 with the establishment of the New Zealand Qualifications Authority (NZQA). The NZQA is responsible for registration, approval and accreditation of education and training providers and their programmes. A provider of education and training in New Zealand must be registered and accredited to be able to award credit of unit standards on the framework. The accreditation of an institution signals that the provider is capable of running an approved course and awarding NZQA credits.

The New Zealand National Qualifications Framework defines national certificates, diplomas, degrees and postgraduate qualifications that are made of unit standards and/or achievement standards based on the principles of inclusiveness, portability and transparency.

New Zealand has a ten-level framework qualifications; levels 1-3 reflect and approximate the standard of senior secondary education and basic trades training; levels 4-6 approximate to advanced trades, technical and business qualifications; level 7-8 equate with advanced qualification of graduate and postgraduate standards.

The NZQA is committed to maintaining a high quality and credibility of New Zealand qualifications; to work in partnership with industry, professional groups and all stakeholders in ensuring that New Zealand has a world-class qualifications system.

2.3.3 The South African National Qualifications Framework

All national education, training and professional qualifications offered by both public and private providers in South Africa are being redesigned, registered and quality assured according to the principles, criteria and procedures approved by the South African Qualifications Authority (SAQA).

The SANQF consists of eight-levels, which are entitled Levels 1 to 8 (Table 2.6). Level 1 of the SANQF is open-ended and accommodates three sub-levels for Adult Basic Education and Training (ABET) for which certificates of achievement may be awarded, and level 8 is open-ended. The eight levels of the SANQF are grouped into three bands, namely:

- Level 1 and below: General Education and Training band;
- Levels 2 to 4: Further Education and Training band;
- Levels 5 to 8: Higher Education and Training band.

Table 2.6: South African National Qualifications Framework⁹.

NQF Level	Band	Qualification Type
8	Higher Education and Training	<ul style="list-style-type: none"> • Post-doctoral research degrees • Doctorates • Master's degrees • Professional Qualifications • Honour's degrees • National first degrees • Higher diplomas • National diplomas • National certificates
7		
6		
5		
Further Education and Training Certificate (FETC)		
4	Further Education and Training	<ul style="list-style-type: none"> • National certificates
3		
2		
General Education and Training Certificate (GETC)		
1	General Education and Training	Grade 9 / ABET Level 4 <ul style="list-style-type: none"> • National certificates

SAQA has formulated policies to establish national standard setting system and national quality assurance system. The SANQF standards setting and quality assurance processes embrace two basic principles:

- That knowledge creation is no longer the preserve of narrowly defined groups of “experts” and that knowledge, relevant for the current world is created through partnerships between and among various groupings in society, from academics and researchers to business; from workers to professional experts, from government to community organizations and from learners to professors.
- The need for a balance between society’s needs and the needs of the individual and that national systems of education must balance the need for quality education for all with the need for flexibility to cater for the wider ranging circumstances and the wider options in what constitute relevant education.

SAQA has two ‘arms’ i.e. Standards Setting and Quality Assurance. The sub-structures in the standards setting arm are the National Standards Bodies (NSBs) and the Standards Generating Bodies (SGBs), while the sub-structures in the quality assurance arm are the Education and Training Quality Assurance bodies (ETQAs). SAQA therefore does not register learning programmes on the NQF. However, ETQAs evaluates the learning programmes of different providers in a process of accreditation, thereby assuring learners and other users of the system that any learner who has been deemed successful after participating in that learning programme, has displayed the learning outcomes required for that qualification or standard. ETQAs do not set standards; rather they assure quality

⁹ South African Qualifications Authority, 2003

delivery and assessment of registered standards and qualifications. ETQAs assure the quality of provision and assessment of providers it has accredited.

2.3.4 Ireland National Qualifications Framework

Ireland's National Qualifications Framework was introduced in 1999, with the intention of introducing a single coherent, easily understood award system for all levels of education and training in Ireland, for learners and their supporters, for parents, teachers providers and their staff and employers. All learning is recognised including that achieved through experience in the workplace or other non-formal settings. The framework is comprised of 10 levels, award-types and named awards. Generic ranges of standards of knowledge, skill and competence have been determined for each level. The ranges of standards define the outcomes to be achieved by learners seeking to gain awards at each level. The ten levels accommodate awards gained in schools, the workplace, the community, training centres, colleges and universities, from the most basic to the most advanced levels of learning. All learning can thus be recognised including that achieved through experience in the workplace or other non-formal settings.

Framework Structure

<i>NFQ Levels</i>	<i>NFQ Major Award-types</i>
1	Level 1 Certificate
2	Level 2 Certificate
3	Level 3 Certificate; Junior Certificate
4	Level 4 Certificate, Leaving Certificate
5	Level 5 Certificate, Leaving Certificate
6	Advanced Certificate; Higher Certificate
7	Ordinary Bachelors Degree
8	Honours Bachelor Degree; Higher Diploma
9	Masters Degree; Post-Graduate Diploma
10	Doctoral Degree; Higher Doctorate

There are four classes of award-types in the framework – major, minor, special purpose and supplemental. Award-types are independent of the field of learning, for example; an ‘Honours Bachelor Degree’ is an award-type but an ‘Honours Bachelor Degree in Business Management’ is a named award. Each award-type has its own award-type descriptor. The descriptor sets out the key features. On this basis, a range of named awards can be developed for each award-type. Further details can be obtained at www.nfq.ie.

2.3.5 Mauritius National Qualifications Framework

The national qualifications framework in Mauritius aims at integrating academic and vocational awards and includes all stages of education and training for secondary schools

to higher education. The decision to adopt an NQF was taken based on the report by the Scottish Qualifications Authority, which undertook the study in 1998 to advise the government on the setting up of an NQF for Mauritius. The NQF was introduced in 2002 with the establishment of the Mauritius Qualifications Authority (MQA), which is responsible for implementing the framework. The framework was developed to ensure greater articulation between education, training, and the world of work and that training responds to standards set by industry. At the same time, it aims to encourage lifelong learning through recognition of prior learning and flexible delivery of training.

The Mauritius NQF comprises of national qualifications issued in:

- The primary and secondary schools sectors;
- The vocational education and training and workplace sectors;
- The higher education sector – mainly universities

These qualifications are shown in Table 2.7, according to the educational sector which is responsible for their accreditation.

Table 2.7: Mauritius NQF by sector of accreditation

	PRIMARY & SECONDARY EDUCATION	TVET / WORKPLACE	TERTIARY EDUCATION	LEVEL
10			Doctorate	10
9			Masters Degrees e.g. MA, M.Sc., M.Phil.	9
			Postgraduate Certificates, Postgraduate Diplomas	
8			Bachelor with Honours, Conversion Programmes	8
7			Bachelor (Ordinary Degree)	7
6		Diploma	Diploma	6
5	HSC/ GCE 'A' Level	Certificate	Certificate	5
4				4
3	SC / GCE 'O' Level			3
2				2
1	Certificate of Primary Education			1

2.3.6 Malaysian Qualifications Framework

MQA (undated)¹⁰ describes the Malaysian Qualifications Framework (MQF) as an instrument that develops and classifies qualifications based on a set of criteria that is agreed nationally and benchmarked with international practices, and which clarifies the academic levels, learning outcomes and credit system based on student academic load. These criteria are accepted and used for all qualifications awarded by higher education providers. The MQF contains post secondary national qualifications, which are conferred in the skills, vocational and technical, academic and professional sectors.

The MQF has eight levels, namely Certificate Levels 1-3, Diploma, Advanced Diploma, Bachelors, Masters and Doctoral as summarised in Table 2.8. The qualification levels indicate the levels of capabilities.

Table 2.8: Malaysian qualifications framework: Qualifications and levels.

MQF Levels	Sectors			Lifelong Learning
	Skills	Vocational and Technical	Higher Education	
8			Doctoral Degree	Accreditation of Prior Experiential Learning (APEL)
7			Masters Degree	
			Postgraduate Certificate & Diploma	
6			Bachelors Degree	
			Graduate Certificate & Diploma	
5	Advanced Diploma	Advanced Diploma	Advanced Diploma	
4	Diploma	Diploma	Diploma	
3	Skills Certificate 3		Certificate	
2	Skills Certificate 2	Vocational and Technical		
1	Skills Certificate 1	Certificate		

MQF underlines the point of integration and overlaps of different qualifications in terms of types and levels. This is performed through regulations on accumulation and transfer of credits, accreditation of prior experiential learning, the mechanism of relatedness in fulfilment of the entry qualifications to a higher level of education and the use of certificates and diplomas. MQF allows students to apply and be considered for admission to a higher level upon successful completion of a level of study. The right for such

¹⁰ MQA (undated). Malaysian Qualifications Framework. Malaysian Qualifications Agency, Selangor, Malaysia, p. 1.

entrance is not automatic, as students may need to fulfil additional requirements for the higher qualification.

2.3.7 Lessons from the Well-Established NQFs

Consideration of international qualifications structures is important if the Tanzanian system is to be comparable with international systems. The following are key lessons for the TzQF:

- The TzQF needs, in important ways, to respond to international best practice
- At the same time, the TzQF must respond to important national policy objectives and the structure of the national education and training system
- The TzQF should gradually evolve into a comprehensive system. Thus, it is important to have a vision of the final goal and a gradual approach for reaching the goal
- The TzQF needs to adequately allow for important sector differences in line with the demands of the national situation.
- There is need to establish a National Qualifications Act and Authority to guide and coordinate the efforts of all stakeholders of the TzQF.
- There must be a hierarchical structure – of competence levels and for each level a set of competence descriptors that are also well aligned with those relevant to other national qualifications frameworks elsewhere.
- The TzQF must be quality assured – validation of qualifications and accreditation and auditing of education and training institutions.
- The process of managing the national qualifications framework must take account the need to cultivate trust among its various stakeholders so that they may have confidence in the integrity of the framework and its effects.

3. DESIGN AND STRUCTURE OF THE TANZANIA QUALIFICATIONS FRAMEWORK

3.1 Preamble

The Tanzania Qualifications Framework (TzQF) should be constituted of principles and guidelines by which records of learner achievement are registered to enable national recognition of acquired skills and knowledge, thereby ensuring an integrated system that encourages life-long learning. When learners know that there are clear learning pathways providing access to—and mobility and progression within—education, training and career paths, they will often be more inclined to improve their skills and knowledge since such improvements will increase their employment opportunities. The increased skills base of the workforce implies the enhancement of the functional and intellectual capability of the nation. The TzQF is based on the premise of the need to standardize and harmonize the country’s qualifications by putting in place a system for setting standards defining expected knowledge, skills and understanding needed for labour market employment, self employment or further education within Tanzania education and training system and beyond the country borders.

3.1.1 The TzQF Objectives

Following the review of experiences outside and inside Tanzania, the TzQF has been specifically designed to:

- create an integrated national framework for learning achievements;
- enhance and coordinate the quality of education and training in the country by setting quality standards as well as moderation across fields of learning and levels of qualifications;
- contribute to the full personal development of each learner and the social and economic development of the nation at large;
- ensure linkage and coherence within the existing fragmented system of education, training and certification;
- generate qualifications that are comparable with those in the international scene;
- promote competence-based assessment practices and qualifications;
- encourage learners (workers and others) to continue learning and sharpening and modernizing their skills and knowledge to respond to the changing needs of education and the labour market;
- integrate academic and vocational training, formal and informal, theoretical and practical education and training and professional qualifications within the framework of the expectations of a globally competitive work force;

- promote recognition of prior learning so as to bring on board acquired experiential learning and work experience.

3.1.2 TzQF Design Considerations

The design of TzQF is based on the following principles:

- Building on the effort by NACTE to develop a qualifications framework for the technical education sector in Tanzania;
- Ensuring standardization of terminologies so as to promote understanding and effective implementation of the framework;
- Defining levels of learning achievement, each with an agreed set of sharply-defined competence descriptors so as to ensure comparability and benchmarking of qualifications;
- Using an agreed definition of *credit value* in order to facilitate recognition of the variety of credits and prior learning obtained from different modes of provision of education and training;
- Common standards for every level of qualifications;
- Common quality assurance criteria and procedures for use in monitoring and regulating the provision of education and training;
- A national database of information relevant to all forms of provision and standards of qualifications.

3.2 *Functions and Scope of the National Qualifications Framework*

(a) Functions

The TzQF will serve the following key functions:

- facilitate vertical and horizontal integration and harmonization of qualifications through a system of credit accumulation, transfer or exemptions. This will enhance the mobility of learners and labour within institutions, across occupations and sectors;
- recognize and assign credits to prior learning so as to enable the recognition and registration of qualifications acquired through non-formal education and training;
- vet, recognize and register qualifications acquired through different learning modes irrespective of the duration of training as long as they meet the defined minimum standards of the expected competencies;
- vet, recognise and register qualifications acquired outside the national framework,
- ensure the development and implementation of clearly defined national standards of qualifications which are relevant to the expectations of the formal and informal sectors of economy and employment;

- develop systems for evaluating, determining equivalences and recognizing skills acquired and qualifications earned; and
- facilitate recognition of Tanzanian qualifications and to determine their comparability in the SADC region and beyond.

(b) Scope

The TzQF covers all forms, levels and categories of educational and training provided by the public and private sectors in Tanzania. It is guided by the principle of inclusiveness, targeting all areas of general education, vocational training, higher education, lifelong and out of school or non-formal education, other forms of learning such as open and distance, and e-learning.

The framework intends to articulate qualifications offered in general education, vocational education and training, technical education and training, higher education as well as qualifications offered by professional bodies and associations. It incorporates all forms of education from lower, basic level of education to the highest level of tertiary and higher education.

3.3 TzQF Levels and Competence Descriptors for the National Awards

3.3.1 Tanzania Qualifications Framework Levels

The term “Level” is used to refer to a degree of achievement in academic progress on a scale, with gradations representing the extent of acquisition of knowledge, conceptual understanding, competences and practical skills. The process of assigning qualifications to levels involves judgements about the relative worth or value of different qualifications. In addition, the levels system adopted is a key aspect of defining the relationships and equivalences between the qualifications of Tanzania and those in the rest of the world. It is important that stakeholders understand that qualifications at the same level are deemed to be equivalent in certain respects, and not the same. Qualifications at the same level may be quite different in size and scope and have quite different purposes. For example, one may prepare learners for study of an academic subject at a higher level; another may indicate competence in an occupation.

A point worth noting is that, where it is normal to proceed from qualification A to qualification B, this does not necessarily mean that qualification B is at a higher level than qualification A. Sometimes progression is horizontal. For example, it may be common for learners who have completed a lower secondary qualification to proceed to take an intermediate craft qualification. This does not mean that the intermediate craft qualification is necessarily at a higher level. It may represent a different type of learning at the same level. Progression can also be down a level. For example, individuals with general degrees may be required to take practical or professional courses at a sub-degree level to gain entry to initial occupation. It should further be noted that qualifications at the same level may require quite different periods of learning. As shown in Section 4.2, measuring and recognising the size or weight of learning is generally achieved through credit systems.

The number of levels in a National Qualifications Framework (NQF) varies with most countries subscribing to eight levels as shown in Table 3.1. A country adopts the number of levels that makes sense in relation to its own education and training system and policy goals. As long as the number and nature of levels bear a recognisable relationship to the eight levels in Table 3.1, there will be little difficulty in establishing comparisons with qualifications in other NQFs.

Table 3.1. Eight most common level descriptors¹¹.

Level	Examples of qualifications and related competences
8	Doctoral degree; Senior Manager Vocational qualification <ul style="list-style-type: none"> • Jobs requiring the knowledge, creativity and leadership skills to deal with complex and unpredictable situations
7	Masters degree; Specialist Professional Qualifications; Senior Manager VQ <ul style="list-style-type: none"> • Specialist knowledge-based professional work; high-level management responsibilities.
6	Bachelors degree/Honours degree; Professional Qualifications; middle Manager VQ <ul style="list-style-type: none"> • Knowledge-based professional work; high-level management responsibilities
5	Higher education Certificate and Diploma; Technician/Specialist VQ; Para-professional Qualification; Advanced Vocational Qualification <ul style="list-style-type: none"> • Highly skilled employment; management training
4	Senior School Exit Qualification; Advanced Vocational Qualification <ul style="list-style-type: none"> • Fully skilled employment; independent operative; supervisory responsibilities
3	Junior School Exit Qualification; Intermediate VQ <ul style="list-style-type: none"> • Skilled/semi-skilled employment
2	Basic Vocational Qualification <ul style="list-style-type: none"> • Skills required to function in the workplace
1	Literacy and Numeracy Qualification <ul style="list-style-type: none"> • Skills required to enter the workplace and undertake vocational training

NQFs are based on learning outcomes which are defined as “the set of knowledge, skills and/or competences an individual has acquired and/or is able to demonstrate after completion of a learning process. Learning outcomes are statements of what a learner is expected to know, understand and/or be able to do at the end of a period of learning”¹².

In the process of developing level descriptors clear statements are made about the characteristics and outcomes of qualifications and how qualifications at adjacent levels differ from each other. It is noteworthy that some qualifications are more concerned with development of knowledge; others with skills or personal and professional competences.

The TzQF has defined 10 unique levels of competence as shown in Table 3.2. For each level a National Award has been assigned. The framework provides clear competence descriptors for each level/National Award. It is important to remember that competence

¹¹ Adopted from Tuck, R. (2007). An Introductory Guide to National Qualifications Frameworks: Conceptual and Practical Issues for Policy Makers. ILO, Switzerland. 72 pp.

¹² Commission of the European Communities (2005). Commission Staff Working Document: Towards a European Qualifications Framework for Lifelong Learning, 8.7.2005-Sec (2005), p. 10. Brussels.

descriptors are not specific to any field of specialization (they are generic and cross-field statements). The approach used in developing the National Awards and respective competence descriptors entailed adoption and strategic modification of the levels and competence descriptors used by the prominent regulatory bodies—especially South African Qualifications Authority, Mauritius Qualifications Authority, New Zealand Qualifications Authority and NACTE rather than starting afresh using the occupational analysis approach. This was considered a valid approach since competence descriptors are broad and provide generic statements of achievement at a particular level of study.

The TzQF consists of the following features:

- The qualifications recognised in the TQF are classified into the following groups: (a) Schools sector, (b) Vocational and technical sector, (c) University education sector, (d) Professions;
- The levels of qualifications (e.g., certificate and diploma) are differentiated based on the breadth, depth and complexity of knowledge and skills that are included in various qualifications;
- All qualifications in the TzQF have a purpose and are interrelated to each other, providing for articulation from one qualification to the other by recognition of prior learning.

The TzQF has been designed to build flexibility into a framework that would otherwise remain too rigid and crude to accommodate the vast variety of programmes and qualifications offered across the higher education and technical bands. The last column in Table 3.2 labelled horizontal and diagonal articulation is proposed as a mechanism to facilitate meaningful articulation between qualifications in the two different tracks/strands, i.e., academic on the one hand and professional or technical, on the other. The purpose of horizontal and diagonal articulation is to facilitate learner mobility and progression along the framework as efficiently as possible. It can also be used to admit into the system those learners who do not meet the full entry requirements for their target programmes. It is likely to be the ‘space’ in the system where the recognition of prior learning (RPL) can most easily be implemented. The horizontal and diagonal articulation mechanism is thus proposed to cater for the learning needs of those whose past learning experiences have not adequately prepared them for a chosen programme, without forcing them to ‘go back to the beginning again’.

An example of the use of qualifications in the articulation column follows: A learner with Form IV and Vocational Certificate (Level 4) qualification may be permitted to move diagonally on the framework to Technician Certificate at Level 5 subject to successfully completing a bridging course (Table 3.2). Generally, horizontal articulation requirements mean that the learner is required to undertake further learning at the same level as his/her highest qualification in order to meet the entry requirements of a target programme.

Table 3.2. The TzQF and associated qualification titles.

NQF Levels	School Sector	Technical and Vocational Education and Training (TVET) Sector*		University Education Sector	Professions	Lifelong Learning
		Vocational	Technical			
10			Doctorate Degree	Doctorate Degree		Articulation – Horizontal and diagonal Articulation credits, credit transfers, RPL, also additional qualifications that facilitate mobility and access
9			Masters (Technology) Degree	Masters Degree <i>Postgraduate Certificate, Postgraduate Diploma</i>	Professional Level IV	
8		Vocational Bachelors Degree	Bachelors (Technology) Degree	Bachelors Degree	Professional Level III	
7		Higher Vocational Diploma	Higher Diploma	Higher Diploma	Professional Level II	
6		Ordinary Vocational Diploma	Ordinary Diploma		Professional Level I	
5	Advanced Certificate of Secondary Education	Advanced Vocational Certificate	Technician Certificate		Technician Level II	
4	Certificate of Secondary Education	Vocational Certificate	Basic Technician Certificate		Technician Level I	
3		Basic Vocational Certificate				
2		VET Level I				
1	Certificate of Primary Education					

* Vocational education: training for a specific vocation, e.g., in industry or agriculture or trade.

Technical education: occupations that are classed above the skilled crafts (vocational) but below the scientific or engineering professions.

Arrows in the framework refer to horizontal and diagonal articulation between and within sectors. Lifelong education pathways cut across all levels of qualifications through RPL.

The learning achievement for the various levels are explained by competence descriptors in section 3.3.4.

Diagonal articulation requirements mean that the learner may proceed to the next level, but will be required to undertake additional enrichment learning in the target area prior to being admitted to a new programme. In some cases, where a learner is better prepared than others, s/he may be required to attain only a certain number of credits in the target area (i.e. register for one or two modules rather than a whole qualification in the articulation column) prior to being admitted to the target programme. In such cases, if the learning load is not too onerous, s/he may be allowed to register simultaneously for the enrichment learning in the articulation column and for the target programme.

Whilst the framework provides general guidelines and parameters, specific articulation requirements will always be determined by the receiving institution on the basis of publicly declared entry requirements for particular programmes and qualifications. This shall be a requirement for the registration of qualifications on the TzQF. A key to ensuring the articulation of qualifications in the general and technical bands and to exploiting the flexibility of this framework, will be the clear and public statement of entry and exit requirements for programmes, both in terms of credits at particular levels and in terms of statements of learning outcomes, against which learning (both formal and experiential or non-formal) can be assessed and weighted.

As stated in the example above, the articulation column can be used as a space where learners achieve ‘articulation credits’ in transit between two programmes, or it can be used to attain whole qualifications.

3.3.2 Inclusion of Professional Qualifications on Tanzania Qualifications Framework

Definitions and Concepts

A *profession* can be described as a specialist occupational group that is self-restricted and self-regulated and which tends to have a great deal of autonomy in setting the academic and practice standards, the ethical code and the disciplinary policies and practices for their members and in providing the right/licence to practice. The distinctive characteristics of a profession include:

- a service orientation, making expertise available to others;
- a distinctive body of knowledge and skills, coupled with abilities and values;
- autonomy in performance of work, within agreed boundaries; and
- public recognition of the authority of the practitioner by virtue of operation within ethical standards.

The benefits of services offered by professions are accompanied, invariably, by risks to the client and the public. There are different types of risks in different professions, for example: injustice, financial, health, safety or environmental. Consequently, professions are regulated through two main models, namely; a statutory body or a non-statutory body that has the confidence of government, clients, practitioners and the public.

A *Professional Body* (e.g. National Board of Accountants and Auditors, Tanzania Nurses and Midwives Council, Architects and Quantity Surveyors Registration Board, The Institution of Engineers Tanzania) is a body appointed to represent a recognised 'community of expert practitioners' and as such it devises, informs, monitors and continually updates the benchmark standards of competence, both academic and practical, required in the practice of the profession for which it is responsible. It is governed either by a statute (e.g. The Auditors and Accountants [Registration] Act, 1972) or a constitution (e.g., The Constitution of IET, revised 2007) and has the necessary full time resources to carry out its functions. Major functions include quality assurance, assessment of professional competence, the conferring of professional designations and the right to practice, development and management of a code of professional/ethical conduct and ensuring the currency of knowledge of members through the implementation and monitoring of Continuing Professional Development programmes.

A *Professional Qualification* represents a planned combination of learning outcomes which has a defined purpose or purposes, and which is intended to provide qualifying learners with applied competence and a basis for further learning. It adds value to the qualifying learner in terms of enrichment of the person through the provision of status, recognition, credentials and licensing the enhancement of marketability and employability and the opening up of access routes to additional education and training. The applicability of qualification, however, depends on the definition of a Professional Designation.

A *Professional Designation* is a title/status that is conferred by a Professional Body, which indicates the professional status of the individual and the right to practice in the particular field of expertise governed by that Body. Retention of this status is dependent upon compliance with the stated requirements of the Body concerned. These would typically include compliance with a Code of Professional Conduct, compliance with Continuing Professional Development requirements and the payment of fees.

There are a number of important differences between academic awards and professional qualifications. A degree is a qualification awarded on academic merit based on an assessment of the candidate's knowledge and skills, and many degrees are accredited by professional bodies as meeting the *academic* requirements for entering the profession. However, awards made by professional bodies essentially constitute a (statutory or non-statutory) "licence to practice" which is awarded on the basis of not only of academic requirements, but also the candidate's competence, acquired during training and/or in the workplace and, in some instances, other factors such as personal suitability for the profession. Unlike a degree, or other academic award, which must be durable and permanent, a licence to practice is temporary, its continuance is at the discretion of the professional body and will depend on evidence of the candidate's compliance with requirements for continuing professional development, ethical standards and regulations controlling fitness to practice in addition to other factors, such as physical and psychological health.

Three steps to Professional Status are recognised; firstly Professional Qualification (often in two stages, namely an academic/theoretical stage and a workplace experience stage), secondly assessment for professional registration and lastly ongoing retention of registration by professional members.

Professional Bodies have been providing employment marketplace in the country with skilled, knowledgeable and productive individuals over a long period of time thus contributing to national objectives. Moreover, regional and global trends for qualifications frameworks indicate a focus on Vocational qualifications as opposed to purely Academic and where Professional qualifications have not previously been included in NQFs around the world, there are currently moves in that direction.¹³ The TzQF as an integrated framework for all learning achievements includes Professional Qualifications on the framework as depicted in Table 3.2. The qualifications that are registered on the NQF will be quality assured by the relevant regulatory authority and will enjoy national recognition, including articulation with other nationally registered qualifications. Since Professional Designations may be revoked due to non-compliance with specific requirements of Professional Bodies it is not prudent to include them on the framework itself. Professional bodies should be encouraged to publish the standards for professional competency in a form that supports the NQF objectives of integration, coherence of education and training requirements, articulation and portability.

3.3.3 Recognition of Prior Learning

Prior learning can be recognised through appropriate forms of assessment which may include:

- Interviews; and/or
- Challenge examinations; and/or
- Assignments or projects; and/or
- Demonstrations of skills; and/or
- Validation of previous qualifications; and/or
- A combination of the above.

The RPL process will usually entail the following:

- Identifying the qualifications, unit standards or learning outcomes for which a candidate believes they will meet the requirements;
- Matching a candidate's skills, knowledge and experience with the specific requirements;
- Assessing a candidate using appropriate forms of assessment; and crediting a candidate for skills, knowledge and experience attained.

¹³ Rulan Projects, 2005. An Investigation into the Inclusion of Qualifications Currently Registered as Professional on the National Qualifications Framework. Phase I Research Report. SAQA. 66 pp.

3.3.4 Competence Descriptors

As already stated, level descriptors attempt to describe the nature of learning achievement, its complexity and relative demand, at each level of a qualifications framework. Level descriptors are broad, generic, qualitative statements against which specific learning outcomes can be compared and located. Thus, sets of level descriptors can be used in a general way to determine the pegging of qualifications and standards on a framework. But because they describe learning across domains, disciplines, fields and learning pathways, level descriptors must be general and at the same time specific enough to serve their purpose. They must provide a clear understanding of the meaning of learning attainment corresponding to each level on the NQF.

It is important to recognize that the NQF levels and their level descriptors can only serve as reference points for more specific outcomes achieved by specific qualifications. It is important to remember that competence descriptors are broad and provide generic statements of achievement at a particular level of study. Level descriptors are necessary for qualification design and for the assessment of learning, but for these purposes must be complemented by the relevant qualification descriptors and often more specifically by the addition of specialized qualification standards. These will be re-worked into learning outcomes.

The TzQF consists of 10 national award levels with the first one – level 1 being the basic one. Each level is described by a unique level descriptor. The 10 levels of the NQF are described below.

TzQF 1 – Primary Education Certificate

Level 1 or Primary Education Certificate level includes broad-based primary education training that is structured for progression into secondary education level or vocational education and training level. This level does not generally match employers' minimum criteria for recruitment into a sector.

TzQF 2 – VET Level I

Level 2 or Vocational Education and Training Level I reflects a broad-based initial training and reflects competence to perform, under supervision, routine jobs and some non-routine jobs in a specific vocational area. This level matches employers' minimum criteria for recruitment into a sector.

TzQF 3 – Basic Vocational Certificate

Level 3 or Basic Vocational Certificate includes competence to perform, with minimum guidance and supervision, routine and some non-routine jobs in a specific vocational area.

TzQF 4 – Vocational Certificate

Level 4 or Vocational Certificate includes competence to perform tasks associated with skilled jobs of non-routine and complex nature and indicates potential for supervisory functions in a specific vocational area.

TzQF 5 – Technician Certificate

As an outcome of learning at this level, individuals will have given evidence of a range of the generic knowledge and understanding, competences, skills and abilities in a specific area detailed in Table 3.3 ('Area' refers to a subject, a discipline or an area of work).

Table 3.3: TzQF 5 – Technician Certificate

Statement of Learning Outcomes			Statement of wider abilities developed
Knowledge and understanding	Practical skills and understanding	Communication Skills	Autonomy, accountability, teamwork, etc.
<p><i>The holder of the qualification will be able to demonstrate and/or work with:</i></p> <ul style="list-style-type: none"> • Basic operational knowledge • Readily available information • Known solution to familiar problems • Little generation of new ideas • Ability to determine operational problems and suggest tentative solutions 	<p><i>The holder of the qualification will be able to carry out processes that:</i></p> <ul style="list-style-type: none"> • Are moderate in range • Are established, familiar or less familiar • Offer a clear choice of routine response • Go beyond routine functions 	<p><i>The holder of the qualification will be able to:</i></p> <ul style="list-style-type: none"> • Produce and respond to simple written and oral communication in familiar, routine and non-routine contexts • Select and use standard/basic IT applications to obtain and process information 	<p><i>Typically the holders of the qualification will be able to :</i></p> <ul style="list-style-type: none"> • Work alone or with others in directed activity • Under general supervision and quality control • With some responsibility for quantity and quality • With possible responsibility for guiding others

TzQF 6 – Ordinary Diploma

As an outcome of learning at this level, individuals will have given evidence of a range of the following generic knowledge and understanding, competences, skills and abilities in a specific area as detailed in Table 3.4. ('Area' refers to a subject, a discipline or an area of work)

Table 3.4: TzQF 6 – Ordinary Diploma

Statement of Learning Outcomes			Statement of wider abilities developed
Knowledge and understanding	Practical skills and understanding	Communication Skills	Autonomy, accountability, teamwork, etc.
<p><i>The holder of the qualification will be able to demonstrate and/or work with:</i></p> <ul style="list-style-type: none"> • Basic theoretical knowledge • Interpretation of available information 	<p><i>The holder of the qualification will be able to carry out processes that:</i></p> <ul style="list-style-type: none"> • Carry out process • Require a range of well developed skills 	<p><i>The holder of the qualification will be able to:</i></p> <ul style="list-style-type: none"> • Use a range of forms of communication effectively in both familiar and new contexts • Use standard IT applications to process and obtain a variety of information and data • Use a range of numerical and graphical 	<p><i>Typically the holders of the qualification will be able to:</i></p> <ul style="list-style-type: none"> • Work alone or in a team in directed activity with some autonomy • Under general supervision and quality checking • With significant responsibility for the quantity and quality of

Statement of Learning Outcomes			Statement of wider abilities developed
Knowledge and understanding	Practical skills and understanding	Communication Skills	Autonomy, accountability, teamwork, etc.
<ul style="list-style-type: none"> Discretion and judgment A broader range of known responses to familiar and non-familiar problems An awareness of the evolving or changing nature of knowledge and understanding, including demonstrating ability to react to such changes 	<ul style="list-style-type: none"> Offer significant choice of procedures Are employed within a range of familiar and unfamiliar contexts 	analysis skills	output <ul style="list-style-type: none"> Manage limited resources within defined areas of work With possible responsibility for the output of others

TzQF 7 –Higher Diploma

As an outcome of learning at this level, individuals will have given evidence of a range of the following generic knowledge and understanding, competences, skills and abilities in a specific area as detailed in Table 3.5. ('Area' refers to a subject, a discipline or an area of work.)

Table 3.5: TzQF 7 – Higher Diploma

Statement of Learning Outcomes			Statement of wider abilities developed
Knowledge and understanding	Practical skills and understanding	Communication Skills	Autonomy, accountability, teamwork, etc.
<p><i>The holder of the qualification will be able to demonstrate and/or work with:</i></p> <ul style="list-style-type: none"> A broad range of knowledge base incorporating some core theories, principles and concepts Analytical interpretation of information Informed judgment An outline knowledge and understanding of research and equivalent scholarly/academic processes A range of innovative responses to concrete but often unfamiliar problems 	<p><i>The holder of the qualification will be able to carry out processes that::</i></p> <ul style="list-style-type: none"> Require a wide range of technical or scholastic skills Offer a considerable choice of procedures Are employed in a variety of familiar and unfamiliar contexts Require basic principles of enquiry, development of investigation into professional level problems and issues 	<p><i>The holder of the qualification will be able to:</i></p> <ul style="list-style-type: none"> Use a range of standard applications to process and obtain data Use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis; Use and evaluate numerical and graphical data to measure progress and achieve goals/targets 	<p><i>Typically the holders of the qualification will be able to:</i></p> <ul style="list-style-type: none"> Work alone or with others in self-directed activity Under broad guidance and evaluation With complete responsibility for quantity and quality of output. With possible responsibility for the quantity and quality of the output of others in defined areas. Exercise some initiative independence in carrying out defined activities at a professional level

TzQF 8 – Bachelors Degree

As an outcome of learning at this level, individuals will have given evidence of a range of the following generic knowledge and understanding, competences, skills and abilities in a

specific area as detailed in Table 3.6. ('Area' refers to a subject, a discipline or an area of work.)

Table 3.6: TzQF 8 – Bachelors Degree

Statement of Learning Outcomes			Statement of wider abilities developed
Knowledge and understanding	Practical skills and understanding	Communication Skills	Autonomy, accountability, teamwork, etc.
<p><i>The holder of the qualification will be able to demonstrate and/or work with:</i></p> <ul style="list-style-type: none"> • A broad knowledge base with substantial depth in key subject areas • A critical understanding of a selection of the principal theories, concepts and terminologies • Analytical interpretation of a wide range of data • Synthesize and evaluate information pertaining to problems and data in the subject area and general practice 	<p><i>The holder of the qualification will be able to carry out processes that::</i></p> <ul style="list-style-type: none"> • Require a wide range of specialized technical or scholastic skills • Involve a wide choice of standard and non-standard procedures • Are employed in a variety of routine and non-routine contexts • Practice routine principles of enquiry and/or research • The determination of appropriate methods and procedures in response to a manage of concrete problems with some theoretical elements 	<p><i>The holder of the qualification will be able to:</i></p> <ul style="list-style-type: none"> • Effectively communicate information , ideas, problems and solutions to both specialists and non-specialist audiences; • Communicate with professional level peers, senior colleagues and specialists • Use a range of IT applications to support and enhance work • Interpret, use and evaluate a wide range of numerical and graphical data to set and achieve goals/targets 	<p><i>Typically the holders of the qualification will be able to:</i></p> <ul style="list-style-type: none"> • Work alone or with others in self directed and sometimes directive activity • Within broad general guidelines or functions • With full responsibility for the nature, quantity and quality of outcomes • With possible responsibility for the achievement of group outcomes • Possible responsibility for allocation or resources, policy, planning execution and evaluation • Exercise autonomy and initiative in some activities at a professional level • Delegating functions to technicians and peers

TzQF 9 – Masters Degree

As an outcome of learning at this level, individuals will have given evidence of a range of the following generic knowledge and understanding, competences, skills and abilities in a specific area as detailed in Table 3.7. ('Area' refers to a subject, a discipline or an area of work.)

Table 3.7: TzQF 9 – Masters Degree

Statement of Learning Outcomes			Statement of wider abilities developed
Knowledge and understanding	Practical skills and understanding	Communication Skills	Autonomy, accountability, teamwork, etc.
<p><i>The holder of the qualification will be able to demonstrate and/or work with:</i></p> <ul style="list-style-type: none"> • A critical understanding of the principal theories, concepts and principles • Extensive, detailed and critical knowledge and understanding in one or more specializations, much of which is at or informed by developments at the forefront • Critical awareness of current issues in a subject or discipline and one or more specializations • Knowledge that covers and integrates most of the principal areas, features, boundaries, terminology and conventions of a subject or discipline • Demonstrate mastery of the subject area • Plan and carry out research/project work to internationally recognized standard demonstrated by the completion of a substantiated research paper or dissertation 	<p><i>The holder of the qualification will be able to carry out processes that::</i></p> <ul style="list-style-type: none"> • Deal with complex issues both systematically and creatively • Make sound judgments in the absence of completed data and communicate their conclusions clearly to specialist and non-specialist audiences • Continue to advance their knowledge and understanding, and to develop new skills to a high level; and will have the qualities and transferable skills • Have independent learning ability required for continuing professional development 	<p><i>The holder of the qualification will be able to:</i></p> <ul style="list-style-type: none"> • Effectively communicate information, ideas, problems and solution to both specialist and non-specialist audiences • Use a wide range of software to support and enhance work at this level and specify new software or refinements/improvements of existing software to increase effectiveness • Undertake critical evaluation of a wide range of numerical and graphical data • Use a range of established technique to initiate and undertake critical analysis of information and propose solutions to problems arising from that analysis 	<p><i>Typically the holders of the qualification will be able to:</i></p> <ul style="list-style-type: none"> • Exercise ability of initiative, creativity and personal responsibility • Exercise substantial autonomy and initiative in professional and equivalent activities • Take significant managerial or supervisory responsibility for the work of others in defined areas of work • Take continuing account of own and others' roles, responsibility and contributions in carrying out and evaluation tasks • Work in support of current professional issues in accordance with current professional and /or ethical codes or practices • Demonstrate originality or creativity in the application of knowledge, understanding and practice

TzQF 10 – Doctorate Degree

As an outcome of learning at this level, individuals will have given evidence of a range of the following generic knowledge and understanding, competences, skills and abilities in a specific area(s) - see Table 3.8. ('Area' refers to a subject, a discipline or an area of work.)

Table 3.8: TzQF 10 – Doctorate Degree

Statement of Learning Outcomes			Statement of wider abilities developed
Knowledge and understanding	Practical skills and understanding	Communication Skills	Autonomy, accountability, Teamwork, etc.
<p><i>The holder of the qualification will be able to demonstrate and/or work with:</i></p> <ul style="list-style-type: none"> • A critical understanding of the principal theories, concepts and principles • A critical , detailed and often leading knowledge and understanding at the forefront of one or more specializations • Knowledge and understanding that is generated through personal research or equivalent contribution to the development of the subject/discipline, judged by independent experts applying international standards 	<p><i>The holder of the qualification will be able to carry out processes that::</i></p> <ul style="list-style-type: none"> • Employ skills, practices and/ore materials which are specialized or at the forefront of a subject/discipline • Critically evaluating arguments, assumptions, abstract concepts and data (that may be incomplete) , to make judgments, and to frame appropriate questions to achieve solution -or identify a range of solutions to a problem • Having the learning ability needed to undertake appropriate further training of a professional or equivalent nature • Use a few skills, practices and/or materials which are specialized , advanced, or at the forefront of a subject/discipline • Practice in a range of professional level contexts which include a degree of unpredictability and /or specialization 	<p><i>The holder of the qualification will be able to:</i></p> <ul style="list-style-type: none"> • Effectively communicate information, ideas problems and solutions to both specialist and non-specialist audiences • Communicate with professional level peers, senior colleagues and specialists • Communicate at the standard of published academic work and/or critical dialogue and review with peer and experts in other specializations • Interpret, use and evaluate a wide range of numerical and graphical data to set and achieve goals/targets 	<p><i>Typically the holders of the qualification will be able to:</i></p> <ul style="list-style-type: none"> • Exercise autonomy and initiative in professional or equivalent activities • Take full responsibility for own work and/or significant responsibility for the work of others • Demonstrate leadership and originality in tackling and solving problems and issues • Work in ways, which are reflective, self-critical and based on research • Deal with complex ethical and professional issues in accordance with current professional and/or ethical codes of practices • Recognize the limits of these codes and seek guidance where appropriate • Deal with complex ethical and professional issues and make informed judgments on issues not addressed by current professional and/or ethical codes and practice

4. CREDIT GUIDELINES FOR THE NATIONAL QUALIFICATIONS

4.1 *The Concept of Credit*

In a teaching and learning context it is common to give an indication of the volume of learning required by a training programme in terms of the time demanded by a learner with an average learning speed to realise a given set of learning outcomes. A learning outcome is a statement of what a learner can be expected to know, understand and/or do as a result of a learning experience. Such time is often referred to as ‘notional’ or ‘average learning’ time. The South African Qualification Authority (SAQA) defines ‘notional hours of learning’ as the learning time that it would take an average learner to meet the outcomes defined. It includes concepts such as:

- Contact time;
- Time spent in structured learning in the work place;
- Individual learning; and
- Assessment.

Other literature hold a similar view that the notional learning time should include all the activities which it is expected that the learner will undertake in order to achieve the learning outcomes including, as appropriate:

- (a) Formal learning (including classes, training sessions coaching, seminars and tutorials);
- (b) Practical work in laboratories or other locations;
- (c) Relevant Information Technology activities;
- (d) Information retrieval in libraries;
- (e) Expected private study and revision;
- (f) Work based activities which lead to assessment;
- (g) Practice, gaining, applying and refining skills to achieve threshold level of competence;
- (h) Programme planning; and
- (i) Educational counselling and mentoring.

The unit for this purpose is termed as *credit*. Below are some definitions of an academic credit with their respective sources acknowledged.

- (i) UNESCO
“A credit is a generally agreed-upon value used to measure a student workload in terms of learning time required to complete course units, resulting in learning outcomes. Generally, once gained, credit cannot be lost” (Vlăsceanu, et al., 2004, p. 31)¹⁴.
- (ii) Scottish Qualification Authority

¹⁴ Vlăsceanu, L., Grúnberg, L., and Pârlea, D., 2004, *Quality Assurance and Accreditation: A Glossary of Basic Terms and Definitions* (Bucharest, UNESCO-CEPES) Papers on Higher Education, ISBN 92-9069-178-6. <http://www.cepes.ro/publications/Default.htm>

- “A credit is the amount of time that an ‘average’ learner at a specific level might expect to take to achieve the outcomes regardless of the mode of delivery or assessment (SAQA, 2002, p. 1).¹⁵
- (iii) European Credit Transfer and Accumulation System (ECTS)
 “A credit is the currency to measure student workload in terms of notional learning time required to achieve specific learning outcomes (EU, 2004).¹⁶
- (iv) New Zealand Qualification Authority (NZQA)
 “A credit is a numerical value assigned to a standard on a National Qualifications Framework that represents the estimated time needed for a typical learner to demonstrate that all specified outcomes have been met (NZQA, 2003).¹⁷

Credit may therefore be perceived as a currency for learning achievement that provides a measure of learning outcomes achievable in a learning time at a given level in the TzQF. It is an award made to a learner in recognition of the verified achievement of designated learning outcomes at a specified level.

4.2 The TzQF Credit Standards

A credit is awarded only as evidence of learning achievement and is derived through estimation of notional learning time at a particular level. A credit in the TzQF equates to learning outcomes achievable in 10 hours of learning time determined on the basis of a learner with an average learning speed. That is, a credit equals 10 notional hours. The most prominent qualifications Frameworks also adopt the same definition of a credit (e.g. the NQFs adopted by Australia, New Zealand, South Africa and the United Kingdom).

The TzQF has assigned credits at its various levels as the principal means for measuring and expressing learning equivalence at the respective levels. Credits are used to reward the incremental progress of learners, facilitating student transfer, recognizing prior learning and contributing to the definition of TzQF qualification standards.

Among the advantages of a Credit system is ‘credit accumulation’ and ‘credit transfer’. Credit accumulation is a process of collecting credit for learning towards a qualification. This may occur within a programme of study, across an institution, between institutions within a single country or on an international basis. Where accumulation crosses programme or institutional boundaries, this is usually referred to as credit transfer. According to UNESCO sources, “a credit gained by a student in a given higher education institution may be recognised in another institution, depending upon the commonality in terms of level and context. Thus study credits are transferable” (Vlăsceanu et al., 2004, p. 31).

¹⁵ South African Qualifications Authority, (SAQA), 2002, *The National Qualifications Framework and Standards Setting*, (Pretoria, SAQA).

¹⁶ European Union (EU), 2004, *ECTS Users’ Guide – European Credit Transfer and Accumulation System for Lifelong Learning*, European Commission. Published Summer 2004.

¹⁷ New Zealand Qualifications Authority (NZQA), 2003, *National Qualifications Framework*, <http://www.nzqa.govt.nz>.

In order to earn credits at a particular TzQF level, the learner must satisfy the assessment criteria for all (or the majority of) the prescribed principal learning outcomes that describe the qualification at that particular level. A credit shall not be apportioned. If a learner has met a standard (demonstrated attainment of a principal learning outcome or accumulated qualification outcomes), he/she shall receive full credits assigned to that standard.

It should be understood that competency is acquired through mastering a prescribed number of learning outcomes. This can be achieved through a combination of all the three known domains of learning namely cognitive, psychomotor, and affective which are respectively responsible for the acquisition of knowledge, skills and attitudes. Thus to earn a credit means more than assigning contact hours to a learning programme; a good estimation of average learning time should include also that spent in acquiring not only theoretical knowledge but also practical skills and the right attitude, values or ethics.

It is strongly emphasised to consider the cognitive domain in its wider context in order to capture its various hierarchical levels of knowledge while defining the outcomes defining an academic credit and assessing their realisation. According to Benjamin Bloom's taxonomy knowledge has six levels which rank from the lowest to the highest degrees of complexity namely: recall knowledge; comprehension; application; analysis; synthesis; and evaluation.

4.3 The TzQF Credit Framework

A portrayal of credits assigned per qualification level is popularly known as a credit framework. Table 4.1 below indicates the proposed credit framework for the National Qualifications System.

To administer the TzQF Credit Framework the following policy guidelines for post school education levels are proposed for vertical and diagonal articulation.

Vocational Education and Training

- (i) A minimum of 30 credits have to be realised at levels 2 for the award of Certificate of Competence I
- (ii) A minimum of 40 credits have to be realised at levels 3, among which a maximum of 10 credits may be picked from level 2, otherwise all credits may be taken from level 3 for the award of Certificate of Competence II
- (iii) A minimum of 60 credits have to be realised at levels 4, among which a maximum of 20 credits may be picked from level 3, otherwise all credits may be taken from level 4 for award of Certificate of Competence III.

In this framework, a holder of Certificate of Competence III is considered to meet the competence level descriptor for TzQF level 4 within the trade field. Such a person, though good at practical skills, needs broader subject area skills for progression to a higher level within technical education and training. As such would need to take a bridging course amounting to 30 credits to follow technician training at TzQF level 5.

Table 4.1: Tanzania credit framework.

TzQF L E V E L	P S C	S S C	H S C	VOCATIONAL			TECHNICAL			UNIVERSITY			P R O F E S S I O N S	TzQF L E V E L
				Min Overall Credits	Min Credits From Current Level	Max Credits From Lowest Level	Min Overall Credits	Min Credits From Current Level	Max Credits From Lowest Level	Min Overall Credits	Min Credits From Current Level	Max Credits From Lowest Level		
10							540	510	30 (9)	540	510	30 (9)		10
9							180 (120 PGD) (60 PGC)	150	30 (8)	180 (120 PGD) (60 PGC)	150	30 (8)	Level IV	9
8				120	90	30 (7)	120	90	30 (7)	120	90	30 (7)	Level III	8
7				240	210	30 (6)	240	210	30 (6)	240	210	30 (6)	Level II	7
6				120	90	30 (5)	120	90	30 (5)	120	90	30 (5)	Level I	6
5				120	90	30 (4)	120	90	30 (4)	120	120	0		5
4				60	40	20 (3)	90	90	0					4
3				40	30	10 (2)								3
2				30	30	0								2
1														1

PSC = Primary School Certificate; SSC = Secondary School Certificate; HSC = High School Certificate. These levels do not impart skills; hence no credit hours are given.
PGD = Post Graduate Diploma; PGC = Post Graduate Certificate.

Technical Education and Training

- (i) A minimum of 90 credits have to be realised at levels 4 for the award of Basic Technician Certificate. This level attracts Form Four Secondary Education leavers as well as those who have in addition acquired Certificate of Competence II.
- (ii) A minimum of 120 credits have to be realised at levels 5 for the award of Technician Certificate, among which a maximum of 30 credits may be picked from level 4. This level attracts holders of Basic Technician Certificate; Form Six Secondary Education leavers; and Form Four Secondary Education leavers who have in addition acquired Certificate of Competence III.

- (iii) A minimum of 120 credits have to be realised at levels 6 for the award of Ordinary Diploma, among which a maximum of 30 credits may be picked from level 5. This level attracts holders of Technician Certificate.
- (iv) A minimum of 240 credits have to be realised at levels 7 for the award of Higher Diploma, among which a maximum of 30 credits may be picked from level 6. This level attracts holders of Ordinary Diploma. Form Six Secondary Education leavers may also be considered for entry at his level as long as they undergo a bridging course training to cover 120 credits tailored to realise the competences / learning outcomes at level 6.
- (v) A minimum of 120 credits have to be realised at levels 8 for the award of Bachelors Technical/Technology Degree (BTec) among which a maximum of 30 credits may be picked from level 7. This level attracts holders of Higher Diploma.
- (vi) A minimum of 180 credits have to be realised at levels 9 for the award of Masters Technical/Technology Degree (MTec) among which a maximum of 30 credits may be picked from level 8. This level attracts holders of Bachelors Degree. Postgraduate Certificate and Postgraduate Diploma may be granted upon realising 60 and 120 credits respectively as part of the Masters Degree Programme. They may also be offered as independent programmes with the same credit value.
- (vii) A minimum of 540 credits have to be realised at levels 10 for the award of a Technical/Technology Doctorate Degree (DTec) among which a maximum of 30 credits may be picked from level 8. This level attracts holders of Masters Degree.

University Education

- (i) A minimum of 120 credits have to be realised at levels 5 for the award of Undergraduate Certificate. This level attracts holders of Form Four Secondary Education Certificate.
- (ii) A minimum of 120 credits have to be realised at levels 6 for the award of Undergraduate Diploma, among which a maximum of 30 credits may be picked from level 5. This level attracts holders of Form Six Secondary Education Certificate or Undergraduate Certificate.
- (iii) A minimum of 240 credits have to be realised at levels 7 for the award of Higher Undergraduate Diploma, among which a maximum of 30 credits may be picked from level 6. This level attracts holders of Undergraduate Diploma. Form Six Secondary Education leavers may also be considered for entry at his level as long as they undergo a bridging course training to cover 120 credits tailored to realise the competences / learning outcomes at level 6 for specialised / professional programmes. This requirement does not apply to the qualifications of a general academic nature.
- (iv) A minimum of 120 credits have to be realised at levels 8 for the award of Bachelors Degree among which a maximum of 30 credits may be picked from level 7. This level attracts holders of Higher Undergraduate Diploma.
- (v) A minimum of 180 credits have to be realised at levels 9 for the award of Masters Degree among which a maximum of 30 credits may be picked from level 8. This level attracts holders of Bachelors Degree. Postgraduate Certificate and Postgraduate Diploma may be granted upon realising 60 and 120 credits

respectively as part of the Masters Degree Programme. They may also be offered as independent programmes with the same credit value.

- (vi) A minimum of 540 credits have to be realised at levels 10 for the award of a Doctorate Degree among which a maximum of 30 credits may be picked from level 8. This level attracts holders of Masters Degree.

Progression Pathways

The adoption of the credit accumulation and transfer system within the TzQF should open doors for progression within and across education and training providers at all levels. For that matter, a student following a university path should be allowed to switch over to the technical path and vice versa. A vocational education and training student should be allowed to progress vertically to obtain a vocational degree, say BVoc, and then switch over to a Masters Degree in either the technical or university line.

Duration of Training

The minimum total credit points assigned to each TzQF level gives the indication of the duration of training for the level, where 120 are considered sufficient for an academic year, which may be split into two semesters each of which may run from 15-17 weeks. Field practical training should range between eight and 12 weeks per academic year. For vocational education and training, however, as more skills are required, the duration of training will be determined by the nature of the trade and the credits assigned to each level spread through out the specified year or years of training.

5. QUALITY ASSURANCE

The TzQF accords importance to both programme accreditation and institutional accreditation. This is necessary in order for stakeholders within the country and the international community to have confidence in the qualifications registered in the TzQF. There needs to be some appropriate procedures for ensuring that the qualifications are well designed to fit for purpose. To build the same trust the programmes leading to these qualifications should be delivered by competent providers and that the assessments leading to the award of the qualifications are of an accepted standard.

The assurance of quality in teaching and learning and the resulting output is paramount in any educational system that is keen to produce a competent workforce for the highly competitive economy. Qualifications will therefore qualify for registration in the TzQF after meeting the minimum quality requirements. This calls for the need to subject all education and training providers to rigorous quality assurance audits. This chapter describes an approach to quality, the machinery for the process and cites the legal implications for the same.

The process of using system checks to ensure quality standards set by a competent authority can be maintained and corrected if and whenever they go wrong is referred to as quality assurance. The quality assurance of the TzQF shall therefore be centred on the following elements:

- (a) Setting and validation of qualifications standards;
- (b) Validation of relevant curricula;
- (c) Ensure appropriateness of assessment and examinations system; and

5.1 *Setting of Qualifications Standards*

A qualification may be perceived, in simple terms, as a planned combination of learning outcomes which has a definite purpose and which is intended to provide qualifying learners with applied competence and a basis for further learning. A ***Qualification Standard*** is a standard that is set by a competent body to guide development of curricula targeting a particular qualification in the TzQF. It prescribes the *Purpose(s) of Qualification*, the *Principal Learning Outcomes* for realising the Purpose(s) of Qualification, and the associated *Credit Values with Assessment Criteria*. These terms are explained below.

(i) ***Purpose of Qualification***

A Purpose of Qualification is a statement that prescribes in broader terms what someone with a particular qualification should be able to do in the world of work in terms of competencies. It also indicates the typical context that person to be awarded with the qualification could work in more efficiently.

(ii) *Principal Learning Outcomes*

Principal Learning Outcomes are standard statements formulated to realize the *Purpose(s) of a particular Qualification* and therefore they are relatively more focused than the latter. They prescribe the typical context and level that a person who has been awarded with a particular NTA qualification could work in more efficiently, and what someone with the qualification should be able to do in the world of work in terms of *integrated skills, knowledge and understanding*, as well as the *wider cross-cutting abilities*. This is normally signalled by indicating the level of responsibility of graduates and the expected degree of independence in the workplace, in line with the respective TzQF Competence Descriptors.

(iii) *Credit Values*

Since credit is awarded as evidence of learning achievement it follows that the volume of learning for each *Principal Learning Outcome* needs to be specified in terms of credits. The number of credits awarded for successful realization of completion of one principal learning outcome is called a *Credit Value* of that particular principal outcome. However, it should be ensured that the sum of credits from all Principal Outcomes is equal to the minimum number of credits of the qualification at the particular level in the TzQF.

(iv) *Assessment Criteria*

Assessment criteria are statements that indicate what learners are expected to do in order to demonstrate that they have successfully realized a Principal Learning Outcome. The following are some key points that should be borne in mind while developing assessment criteria.

- (a) Assessment should be an integrated undertaking taking into consideration both the applied competencies and cross-cutting issues to ensure life-long learning.
- (b) Assessment should recognize achievements against approved criteria and benchmark.
- (c) Assessment should allow progression and portability and enable the transference of credits from one learning situation to another but similar situation.
- (d) Assessment should recognize prior learning and give credit to evidence of learning outcomes that have already been acquired in different ways.
- (e) Assessment should emphasize legitimacy and transparency and clarity on what the learner is expected to achieve. Credibility in assessment is assured through assessment procedures and practices being governed by fairness, validity, reliability and practicability.

Setting of Qualification standards will very much depend on the labour market information obtained through labour market surveys. The dependence arises from the need to provide qualifications that address the labour market requirements. Labour market information may be complemented by data from the relevant Standard Classification of Occupations, e.g. TASCO, ISCO, etc., which describe many of the desirable workplace aptitudes and skills required for a successful venture in modern global economies.

The key regulatory bodies for qualifications registered in the TzQF, that is the TCU, NACTE and VETA should set qualification standards at national level for the awards under their respective jurisdiction. Validation of the qualification standards should be done by a committee representing the three bodies and other key stakeholders.

5.2 Development of Relevant Curricula

Curriculum encompasses teaching and learning experiences taking place in a learning institution. It describes all aspects of teaching and learning such as the purpose or the intended outcomes of learning, syllabi documentation, learning strategies, assessment methods and certification with adequate reflection of the needs and interests of the learner, institution, employer, profession, society and the government.

Education and training providers in Tanzania will have to ensure that they develop / use curricula that are relevant to labour-market demands and the needs of direct consumers and other stakeholders. The curriculum development process usually goes through the following stages:

- (i) Curriculum planning;
- (ii) Conducting situational analysis;
- (iii) Actual curriculum development; and
- (iv) Curriculum approval and validation.

Before curriculum is developed, it is crucial to plan the exercise in order to ensure that it is done effectively and the ultimate purposes are realized in an optimum way. This should lead to the selection of effective strategies to be adopted and subsequent identification of respective financial implications, hence the essence of the planning stage.

Situational analysis is important for identification of the needs of various beneficiaries of the envisaged curriculum. Situational analysis results are used to formulate the contents of a curriculum. Situational analysis is also crucial for assessing and establishing human and physical resources necessary for effective teaching and learning.

Principal learning outcomes are usually part of the standards developed by a relevant regulatory body. However, since these are normally quite broad, they need to be translated into simple learning outcomes for ease of implementation. The process of actual curriculum development involves also developing assessment criteria and their benchmarking, teaching and learning strategies, modules and resource material.

The institutional approval organs should approve their curriculum for onward transmission to the relevant regulatory body for validation after ensuring that it is in line with its vision and mission incorporates the needs of stakeholders and has followed all the requirements as stipulated by the relevant regulatory body.

The relevant regulatory body will validate the curriculum after ensuring that the following requirements have been met:

- (a) Situation Analysis supporting each curriculum has been conducted and that the results adequately reflect the needs of the employers, profession and society;
- (b) Curriculum enables competencies required of learners in their personal or professional lives after graduation. The curriculum describes what students will be able to do with what they have learned in course modules and in the academic programme as a whole;
- (c) Curriculum incorporates cross-cutting issues (generic curriculum needs, e.g. basic computer skills, communication skills, entrepreneurship, etc) to facilitate life-long learning within and across fields and that the teaching and learning strategies for realization of all the learning outcomes are adequately formulated;
- (d) Learning outcomes and course modules are reconciled in a way to allow modular delivery of curriculum under a semester learning timeframe; and
- (e) Appropriate assessment criteria have been formulated and benchmarked. This is supported with clear assessment methods and statement on respective assessment instruments.

The relevant regulatory body will then appoint a team of experts in the subject area addressed by the curriculum to determine the institutional capacity to deliver the same, in terms of adequacy of qualifications and number of the teaching staff, teaching and learning equipment and resources, infrastructure, student development and support, etc. Upon being satisfied, the regulatory body will allow the institution to use the curriculum for its award. This will qualify the award to be registered in the TzQF.

5.3 Appropriate Assessment and Examinations System

Education and training providers wishing to have qualifications they offer registered on the TzQF should ensure having in place a sound assessment and examinations system. The system should provide a mechanism to ensure that both formative and summative assessments are done by considering reasonable quality standards and that examination fulfil both the validity and reliability criteria. In this context an assessment is valid if it measures what it is supposed to measure. For example, an essay is a valid assessment method of the ability to undertake literary criticism but not of the competence to install electrical wiring in a house. Likewise, assessment is reliable if it is carried out consistently. In principle, a particular performance by a student should lead to the same assessment result regardless of who conducts the assessment and where or when it is conducted.

In practice assessments culminate in examinations conducted by approved providers or agencies. Institutions that are responsible for examinations should have in place the following:

- (i) Procedures/Guidelines for Appointing Setters, Moderators, Invigilators, Supervisors, and Markers of Examinations;
- (ii) Procedures/Guidelines for Setting and Moderating Examinations;
- (iii) Procedures/Guidelines and Criteria for Approving Examinations and Awards;
- (iv) Procedures/Guidelines for Printing Examinations, Safe Custody and Transmission of Examinations to Designated Departments/Centres;
- (v) Guidelines for the Conduct and Administration of Continuous Assessment;
- (vi) Procedures for Marking Examinations and Standardizing Results;
- (vii) Mechanisms for Detection and Control of Cheating and Other Irregularities in Examinations (including Continuous Assessment);
- (viii) Grading Systems for Various Awards;
- (ix) Procedures/Guidelines for Publishing Examination Results;
- (x) Guidelines for Academic Appeals and Student Complaints on Academic Matters;
- (xi) Procedures for Evaluating Examinations; and
- (xii) Appropriate Facilities/Working Tools for every Set of Procedures/Guidelines developed.

It is important that the assessment methods are feasible (practicable) and apply in the normal institutional setting (e.g. school or workplace) and that they are cost-effective.

5.4 Accreditation and Audit of Education and Training Institutions

Accreditation is the approval or certification granted by the relevant authority representing the interest of both the public and students, to an institution, on account of having programmes and quality assurance system that ensures the provision of set qualification(s) and educational standard(s) for a particular period of time, normally five years.

The mechanism for accreditation for education and training institutions normally involves

- Compliance with accreditation standards;
- Preparation and submission of a self-evaluation study report on compliance with accreditation standards to a competent accreditation body;
- Establishment of an institutional quality assurance system;
- Development of curricula for training programmes using approved qualification standards; and
- Recognition of academic departments that will offer the programmes to ascertain their capacity to deliver the same at the intended level of award.

The process culminates into a physical verification visit to the institution that has applied for accreditation, by a team of experts in subject areas relevant to the programmes offered, appointed by a competent accreditation body to audit the resources of the institution.

Accreditation standards cover as much as possible all areas of concern to facilitate an environment conducive to teaching and learning. These are usually clustered under the following headings (adopted from NACTE, 2004):

(i) Institutional Vision and Mission

This standard requires the institution to have clear statements of Vision and Mission that define the institution, its educational purposes, its student constituency, and its place in technical education and training community.

(ii) Governance and Administration

This standard requires the institution to have a clear governance system and organizational structure with a Governing or Advisory Board or Council responsible for quality and integrity of the institution. The system must be designed in line with the provisions in enabling Act that has established the institution. The institution is also required to have administrative staff of appropriate size to enable the institution achieve its goals and must be so organized to provide the required administrative services.

(iii) Institutional Integrity

This standard requires the institution to subscribe to, advocate and demonstrate honesty, truthfulness in presentations to its constituencies and the public; in its pursuit of truth and dissemination of knowledge; in its treatment of and respect for administration, academic and supporting staff, and students; in management of its affairs and in relationship with NACTE and other external agencies. The essence of this standard has to do with integrity and honesty in all areas of institutional operations.

(iv) Institutional Effectiveness

For this standard, the institution is required, appropriate to its mission and purposes, to develop and implement a broad based system of education and training, evaluation, and planning to assess institutional effectiveness and use the results for institutional improvement. The institution is also required to identify institutional outcomes that can be validated by objective evidence.

(v) Educational Programmes

This standard requires the institution to offer appropriate academic level programmes in recognized fields of study that culminate in identified student competencies leading to the National Technical Awards (NTA). The institution is required to demonstrate that

education and training programmes it offers support the mission and vision for which it was established. The institution is further required to have clearly defined processes for establishing and evaluating all of its educational programmes. The purpose of this standard is to invite a detailed look at educational programmes of the institution.

(vi) Student Support and Development

This standard requires the institution to recruit and admit students appropriate to its programmes. The institution is also required to identify the diversity needs of its students and provide appropriate support services and educational programmes to address those needs. The institution is further required to have the entire student pathway characterised by a concern for student access, progress and success.

(vii) Information and Learning Resources

For this standard the institution is required to have information and learning resources sufficient in quality, depth, diversity, and currency to support the institution's activities and programmes. The institution is also required to have professionally qualified staff to provide appropriate support to users of information and learning resources, including training in effective application information technology to students' learning and training.

(viii) Teaching and Supporting Staff

This standard requires the institution to have sufficient numbers of qualified full time and part-time staff, with appropriate education, training and experience, to effectively support its educational programmes and services wherever offered and by whatever means delivered. This standard asks the institution to assess its academic and support staff in terms of their qualifications, selection and their evaluation. It also asks evaluation of professional development activities and personnel policies.

(ix) Physical Resources

This standard requires the institution to have sufficient and appropriate physical resources to effectively support its education and training purposes and goals. Thus this standard requires that the institution review the quality of its facilities and their maintenance.

(x) Financial Resources

For this standard the institution is required to have adequate financial resources to achieve, maintain and enhance its education and training programmes. The level of financial resources provides a measure for sustainability, viability and assurance for institutional improvement.

In order for the TzQF to register quality assured qualifications, all education and training providers should be audited and their programmes accredited. The regulatory bodies

responsible for qualifications under the TzQF should develop the following procedures and standards to support both regulatory operations and institutional quality initiatives:

- (a) Procedures for curriculum development, review, approval and validation;
- (b) Academic quality standards and specifications of education and training resources;
- (c) Performance indicators for institution's assessment;
- (d) Benchmarks for comparing performance across courses and across education and training institutions;
- (e) Procedures for quality assessment, evaluation and audit of course delivery;
- (f) Framework for institutional quality assurance evaluation; and
- (g) Guidelines for establishing institutional quality control and quality assurance policies and procedures.

6. IMPLEMENTATION OF THE TANZANIA QUALIFICATIONS FRAMEWORK

6.1 Establishing a National Qualifications Authority

In the preceding chapters, an attempt was made to describe what constitutes a national qualifications framework (NQF). It was explained that the NQF was simply a structure on which qualifications which satisfy the specified criteria are registered. It was observed that many education and training providers and regulators contribute significantly to the determination of qualifications to be slotted in the NQF. To bring order to the NQF operational processes the relevant legal procedures are inevitable to establish the necessary administrative structures.

In Tanzania the provision of education and training is regulated by the following legislations:

- The Educational Act, 1995;
- The VETA Act, 1995;
- The National Council for Technical Education Act, 1997; and
- The Tanzania Commission for Universities Act, 2005.

These Acts were established at different times, with well defined purposes and they stipulate the functions and scope of the organizations they establish. The education and training sub-systems established by these legislative instruments are to some extent detached from one another. They exhibit little mobility between them, be it between vocational and technical, or technical and university education or between initial training and continuing training (vertical mobility). The same is true of horizontal mobility – that is, switching from one training path or profile to another. It is by means of the NQF that it will be possible to facilitate access to, mobility and progression within education, training and career paths. This is important for realizing full personal development of each learner and the social and economic development of the nation at large. For this to materialize, therefore there is a need for enactment to establish an administrative structure for the development, recognition and award of education and training qualifications in Tanzania.

The structure so established would be the custodian or in-charge of the TzQF. Worldwide a body executing such responsibilities is known as a National Qualifications Authority (NQA) with country names replacing the word ‘national’ [e.g. South African Qualifications Authority (SAQA); Mauritius Qualifications Authority (MQA); New Zealand Qualifications Authority (NZQA); Scottish Qualifications Authority (SQA); etc].

In many countries NQFs have been established within the auspices of their respective national qualifications authorities. A National Qualifications Authority (NQA) has to discharge a number of functions including to:

- (a) Develop, implement and maintain a National Qualifications Framework;

- (b) Establish the policies and criteria on which the framework of qualifications shall be based;
- (c) Determine the procedures to be implemented by providers of education and training for access, transfer and progression;
- (d) Moderate the functions of regulatory bodies responsible for education and training qualifications and awards;
- (e) Ensure that standards and registered qualifications are internationally comparable;
- (f) Determine the equitability of national as well as international awards; and
- (g) Coordinate the harmonisation of regional qualifications frameworks and other similar international initiatives (e.g. SADC, EAC, AU, etc).

In line with the cherished international practices Tanzania should establish a national qualifications authority. This may be called the Tanzania Qualifications Authority (TzQA). The authority will, in addition to the above stipulated functions, establish and maintain an electronic register for all qualifications and their providers within the TzQF. Establishment of the TzQA will have to be enacted by the Parliament. The Act for establishing the TzQA should, among other things stipulate the responsibilities of NECTA, VETA, NACTE, TCU and professional bodies with respect to the TzQF. This implies that the above named legislations will also need to be revised to accommodate this new development. The roles of the existing regulatory bodies will need to be restructured and harmonized.

The TzQA will need to establish a list of fields, subfields and domains for the various subject areas covered by the regulatory bodies it oversees. The information should also cover institutions offering those fields and stakeholders for the same. Through the exercise, it should be possible to avoid a lot of programmes which look different by names but are actually the same in content, or have same names but different contents. The fields may also be clustered in well defined subject areas for ease of their management.

The TzQA will need also to establish, in collaboration with regulatory bodies under its jurisdiction, **qualification standards setting committees** for the various programmes leading to the qualifications recognised by the authority. The committees will also review the standards from time to time to make them go abreast with developments in technology. Composition of members for the standards setting committees is suggested below:

- (i) Academic members from members of academic staff of education and training institutions and which have the appropriate subject expertise;
- (ii) Subject experts currently employed in a university and who have professional qualifications in the subject areas covered by the Authority;

- (iii) Professionally qualified members from industries or professions directly concerned with the employment of the holder of the council awards in the subject area of the Authority.

The TzQA will develop the modalities for which the committees will be appointed and coordinated to discharge their functions.

GLOSSARY OF TERMS

Accreditation

Accreditation is the approval or certification granted by the relevant authority representing the interest of both the public and students, to an institution, on account of having programmes and quality assurance system that ensures the provision of set qualification(s) and educational standard(s) for a particular period of time. Programmes accreditation establishes the academic standing of the programme or the ability of the programme to produce graduates with professional competence to practice, whereas, institutional accreditation provides a licence for a university or college to operate.

Capability

Capability is in essence a combination of knowledge understanding and skills, usually in a particular field of activity.

Competence

Competence is associated with clear ability to successfully carryout some occupational activity and it is described in term of 'skills' 'knowledge' and 'aptitude or understating' as well as typical 'context' and 'level' that person who possesses such competence could work in.

Competence Descriptors (Competence Level Descriptors)

Competence descriptors are broad, generic (cross-field) standard statements of achievement at a particular level of study. They indicate in broad terms the ability to perform the activities within an occupation or function to the level of standard expected in employment.

Credit

A credit is an instrument for measuring and expressing learning equivalence. A credit plays an important role in rewarding the incremental progress of learners, facilitating student transfer, recognizing prior learning and contributing to the definition of academic standards

Credit Value

Credit Value is the number of credits awarded for successful completion of a module at particular study level. A credit value is achieved when the leaner has satisfied the assessment criteria for all (or the majority) of the designated learning outcomes of the module.

Credit accumulation

Credit accumulation is the process of collecting credit for learning towards a qualification.

Credit Transfer

Credit transfer refers to transferring of credit value(s) from one programme to another, both programmes belonging to the same institution or from one learning environment to another, i.e. involving programmes of two different institutions.

Knowledge

Knowledge is regarded as information that has been gathered and recorded in one's memory and that which can be recalled in answer to a question

Learning Outcomes

Learning outcomes are statements on competencies expected to be imparted to a learner during the learning experience

Lifelong Learning

Lifelong learning is the continuous development of the skills, knowledge and understanding that are essential for employability and fulfilment.

Occupation

Occupation is “the principal business of ones life”. It relates to a person and his/her role in the labour market (e.g. a clerk)

Occupation Analysis

Process of identification through observation, interviews or/and studies of the activities and requisites of workers and the technical and environmental factor of an Occupation

Occupational Standards

Occupational (skills) standards are standards developed to describe competence based performance in the work place and state from the perspective of employers, workers, regulatory bodies and government interests.

Principal Learning Outcomes (or Principal Outcomes)

These are broad standards of achievement at a particular level of study and context specified by TzQF to facilitate realization of a particular NQF or qualification

Qualification

A planned combination of broad learning outcomes which has a defined purpose or purposes, and which is intended to provide qualifying students with applied competence and a basis for further learning

Training Programme or Learning Programme

A sequential leaning activities, associated with curriculum implementation

Skill

Skill is defined by the ability to do specific things without necessarily understanding the processes by which one does them.

Standards

Statements of learning outcomes from general and technical education and training and their associated assessment criteria as registered on the TzQF.

Understanding

Understanding involves grasping concepts and being able to use them creatively.

Verification

Verification is authentication or validation, usually in the form of accreditation of an organisation or part of an organisation's activities.