THEME: QUALITY ASSURANCE IN TECHNICAL, VOCATIONAL EDUCATION AND TRAINING (TVET)

TOPIC: A SITUATIONAL ANALYSIS OF APPROACHES USED TO BRIDGE CONTENT GAPS AND LABOUR MARKET DEMAND – A CASE FOR BOTSWANA VOCATIONAL TRAINING SYSTEM

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GABORONE, BOTSWANA
LIST OF ACRONYMS

<table>
<thead>
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<th>Acronym</th>
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<tr>
<td>AMDP</td>
<td>Assessment Material Development Panel</td>
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<tr>
<td>BNVQF</td>
<td>Botswana National Vocational Qualifications Framework</td>
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<td>BOTA</td>
<td>Botswana Training Authority</td>
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<td>BQA</td>
<td>Botswana Qualifications Authority</td>
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<td>BTEP</td>
<td>Botswana Technical Education Programmes</td>
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<tr>
<td>CQAF</td>
<td>Common Quality Assurance Frameworks</td>
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<td>DTVET</td>
<td>Department of Technical, Vocational Education and Training</td>
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<td>HRD</td>
<td>Human Resource Development</td>
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<td>MTTC</td>
<td>Madirelo Training and Testing Centre</td>
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<tr>
<td>NCQF</td>
<td>National Credit and Qualifications Framework</td>
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<td>NCTVETD</td>
<td>National Centre for Technical, Vocational Education and Training Development</td>
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<td>NQFs</td>
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<td>NVQFs</td>
<td>National Vocational Qualification Frameworks</td>
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<td>RNPE</td>
<td>Revised National Policy on Education</td>
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<td>SSTF</td>
<td>Standard Setting Task Force</td>
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<td>TVET</td>
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ABSTRACT

This paper analyzed quality assurance activities used by Botswana Training Authority (BOTA), a vocational training regulatory body in Botswana, to ensure that the content of accredited programmes meet the needs of the labour market. The vocational training system in that country is characterized by five types of training programmes. These are Madirelo Training and Testing Centre (MTTC) Apprenticeship programmes, Botswana National Vocational Qualification Framework (BNVQF) programmes, Botswana Technical Educational Programmes (BTEP), franchised and self-developed programmes. Although BOTA was established and mandated to develop, maintain and promote the use of training standards and standard-based qualifications, as well as develop a standardized curricula that addresses the requirements of the local industry, the quality assurance activities which the organization have put in place, extend even beyond BNVQF programmes. The level of industry involvement in the generation of content of training curricula or programmes was explored. The study revealed that there is industry involvement in development of national programmes, which are MTTC apprenticeship, BTEP and BNVQF programmes. Both qualitative and quantitative methodologies were used to gather and analyze data. The study concluded that Botswana has a robust vocational training system. However, it recommended that if the credibility and quality of the Technical, Vocational Education and Training system is to be improved from the status quo, the level of involvement of industry in the whole training cycle should be improved and the country should only run one national vocational training system.
1. INTRODUCTION

1.1 OVERVIEW

There are many factors that cause the organizations environment to become turbulent. One of these factors is the economic recession that hit the world around the year 2008. In Botswana the impact of recession was greatly felt because the country relied completely on diamond extraction. Just like other countries, Botswana is still at recovery stage of that economic meltdown. The President of Botswana in his 2013 State of the Nation Address reported that Botswana’s economy has been recovering and the country has enjoyed positive growth rates since 2010/2011. This growth could be attributed to strategies which the countries uses to diversify the economy, one of such strategies being a move from natural resources to human resource development, which of course encompasses Technical, Vocational Education and Training (TVET) initiatives (Ministry of Education and Skills Development, 2009).

Studies have revealed that TVET is becoming a political priority in boosting the countries’ economies. Gondo and Dalefuya (2010) support that in both developed and developing countries, TVET programmes have continued to receive increased attention for stimulating the economic growth. In Botswana even before the economic recession, TVET was a priority in increasing youth employability and boosting the country’s economy. This is reflected in the country’s current and previous National Development Plans (NDPs) and pieces of legislation dealing with education and training matters.

Besides economic recession, other factors such as globalization and rapid technological advancements make some knowledge and skills which employees acquired a long time ago obsolete. To address this, organizations have to device strategies that will enhance their employees’ adaptation to changes. The strategies or Human Resource Development (HRD) interventions should be those that are aimed at re-tooling or up-skilling employees. According to McGuire and Cseh (2006), HRD interventions are measures that could be put in place in order to help organizations cope with this inevitable change. They argued that HRD, particularly training and skills development initiatives are strategic interventions which facilitate competitive
advantage by helping organizations cope with change process, competitive markets and turbulent business environment.

The main philosophy behind TVET is to prepare people for the world of work. An education system that bears fruits is one that is quality assured so that it meets the needs or exceeds the expectations of the customers, which in this case are the learners and the industry. UNESCO (2005) asserts that quality assurance is essential at all levels of TVET because of the strong link between what is learnt and the needs of the labour market.

The concept of quality assurance may be defined in various ways, especially in education and training circles. Bartram and Wolfendale (1999) stated that it involves setting and monitoring operational standards. Quality assurance ensures that TVET is industry driven so as to enhance youth employability. Whatever quality assurance system a country puts in place, it should ensure that all training initiatives or interventions are work-based. This will allow the graduates from either conventional training institutions or workplaces to readily perform their duties upon completion of their training. Employers would not have any need to send new employees for immediate further training to up-skill or retool them. Evidence has shown that involvement of the industry in planning, delivery and evaluation of training, facilitates and enhances the training system to meet the demand of the labour market.

The concept of quality assurance in TVET is very important in that it:
(a) ensures ease of articulation should a learner wish to change areas of specialization or move from one strand to the other,
(b) training standards are developed for setting minimum quality requirements which training providers should meet,
(c) curriculum is aligned to the industry requirements specified in the training standards as this allows for ease of transferability of what has been learnt to real work situations; and also
(d) allows learners to acquire knowledge skills and attitudes, through exposure to both theoretical and practical components of the training programme.

All these specified quality indicators can only be measured when there is a robust quality assurance system put in place so that nothing is left to chance.
The European Union has also developed a set of ten (10) quality indicators and four of those are directly related to labour market demands. These are placement rate in vet programmes which discusses the percentage of TVET programme completers who are employed after the end of training, utilization of acquired skills at the workplace, unemployment rate, and mechanisms to identify training needs in the labour market.

1.2 NATIONAL QUALIFICATIONS FRAMEWORKS AND NATIONAL QUALITY ASSURANCE FRAMEWORKS

Many countries have National Qualification Frameworks (NQFs) and/or National Vocational Qualification Frameworks (NVQFs) which provide a basis for all quality assurance activities. Colombo Plan Staff College for Technician Education (2011) defines an NQF as “a quality assured national system for the development, recognition and award of qualifications based on standards of knowledge, skills and attitudes acquired by learners or workers of a certain country.” Winch and Foreman-Peck (2004) stated that National Vocational Qualifications (NVQs) were introduced with the intention of accrediting and developing a flexible and skilled workforce responsive to global economic changes. Hart and Rogojinuru (2007) stated that NQF functions include accreditation of occupation and training standards, validation of programmes and assessment and certification of learners’ achievement.

Some developed countries such as those in Europe have gone further than developing NQFs by developing Common Quality Assurance Frameworks (CQAF) in TVET in an effort to promote transparency and consistence among the member states that have signed the Copenhagen Declaration of 2002 (UNESCO-UNEVOC 2013). This framework has four main components which include the model, a method for assessment, and monitoring tool and a measurement tool.

Since the inception of Botswana Training Authority (BOTA), the country has had a Botswana National Vocational Qualifications Framework (BNVQF) only. The BNVQF is an integrated system of nationally recognized qualifications and nationally endorsed standards for the recognition of vocational skills, knowledge and competencies. The Vocational Training Act of
1998 set out broad plans for a three-tier vocational qualifications framework, which will eventually link to a National Credit and Qualifications Framework (NCQF) which the country is in the process of developing its architecture.

The BNVQF also facilitates the coordination of Technical, Vocational Education and Training (VET) provision in Botswana, assessment of learning, and the award of credits and certificates. It sets quality standards in the provision of VET in Botswana, as well as moderation across fields of learning and levels of qualifications. Following assessment based on unit standards, learners will be awarded certificates of achievement. Botswana has never had a National Quality Assurance Framework. However, the regulatory body for vocational training, BOTA, has a documented Quality Management System and is certified against ISO 9001: 2008. This ISO standard is a generic optional standard that assists organizations to continually improve their processes in order to satisfy or exceed its customer expectations.

1.3 BACKGROUND ON BOTSWANA’S CURRENT VOCATIONAL TRAINING SYSTEM

Prior to 1993, a National Commission on Education was set up assess the status of the quality of Botswana’s education system. The Commission’s enquiry revealed that there were no clear, standardised qualifications with appropriate equivalencies; and the curriculum did not meet the demands of the economy because some programmes were developed outside the country for different needs altogether. It was then that the Botswana Revised National Policy on Education (RNPE) of 1994 was formulated in order to address these challenges.

Botswana’s vocational training system is characterised by five (5) different types of programmes being offered in the country’s training institutions. These are Madirelo Training and Testisting Apprenticeship programmes, BNVQF, Botswana Technical Education Programmes (BTEP), Franchised and self-developed ones. All these programmes are accredited by BOTA provided they are for Foundation, Intermediate or Certificate Levels. It is the discretion of an institution to decide on the type of programme they want to accredit with BOTA.
The RNPE noted the need to establish a regulatory body for coordinating all vocational training initiatives in the country. Responding to the recommendations of that policy, Botswana Training Authority (BOTA) was established under The Vocational Training Act of 1998. According to this Act, BOTA has a responsibility of establishing and implementing a Botswana National Vocational Qualification Framework (BNVQF) national unit standards and qualifications below technician level.

1. The components of BNVQF are the unit standards and the standard based qualifications which are developed by industry based committees, herein and later referred to as Standards Setting Task Forces (SSTFs). According to BOTA Terms of Reference for Standard Setting Task Forces, the desired composition of an SSTF is as follows:
   i. Not more than 12 persons belonging to or having interest in a specific sector;
   ii. Inclusive of an employer perspective;
   iii. Inclusive of an employee perspective;
   iv. Inclusive of professional or regulatory associations;
   v. Inclusive of training deliverers;
   vi. Inclusive of an NGO or Community perspective; and
   vii. Inclusive of the appropriate Government perspective.

It is the responsibility of SSTFs to generate content of the unit standards, specifying minimum requirement which providers have to base their curricula or programmes on. It is allowed for the provider to offer more than what is specified on these unit standards.

BNVQF qualifications are made up of sector specific, entrepreneurship, information and technology and generic/key unit standards. The awarding and certification body for these programmes is Botswana Training Authority.

Botswana Technical Education Programmes (BTEP)

Rocke- Collymore (2010), stated that BTEP Programmes are outcomes based TVET qualifications made up of modules. These modules are made up of mandatory and elective units, key skills, integrated project and work experience. These programmes are developed
through participation of industry through Curriculum Development Groups and Programme Advisory Committees coordinated by a government department under Ministry of Education and Skills Development, called Department of Technical, Vocational Education and Training (DTVET). Assessment, moderation and verification for these programmes is undertaken by Quality Assurance and Assessment Unit under the same Ministry. The awarding and certification body for these programmes is the Ministry of Education and Skills Development. These type of programmes are only offered in government training institutions, which are Brigades and Technical Colleges.

**Franchised programmes**

Training institutions also have a choice of purchasing Training Franchise Packs which include training programmes, assessment material, leaner guides and training guides. In some instances, the Franchisors are the awarding or certification body. There is no participation of the local industry in the development of training material for the franchised programmes. Although these type of programmes are mostly used by private training institutions, one technical college owned by the government offers a franchised hospitality programme.

**Self – Development Programmes**

With these programmes, a training institution develops a programme on what it would like to train on. There is no involvement of the local industry on the curriculum development for this type of programme. BOTA offers templates and support on how to develop these programmes.

**Madirelo Training and Testing Centre (MTTC) Programmes**

A government department under Ministry of Labour and Home Affairs called, Madirelo Training and Testing Centre is mandated to coordinate apprenticeship and industrial training programmes. This institution offers theoretical and practical contact sessions and later trainees go for apprenticeship attachment at workplaces. According to Mupimpila and Narayana (2009), the programmes offered by MTTC are employer based, which mean they are offered at the trainees' workplaces.
1.4 STATEMENT OF THE PROBLEM

Many countries continue to experience rising statistics of one of the macroeconomics a problem which is unemployment. This is common especially among the youth. Brigades, Colleges and University graduates are not immune from unemployment. Factors that contribute to unemployment are many, and research has pointed lack of relevant knowledge, skills and attitudes among the graduates as some of the factors. The 2011 Population and Housing Census revealed that the population of Botswana was 2,024,787. Out of this figure, 63.4% are between 15 and 64 years (CSO, 2011). In the State of the Nation Address by His Excellency, the President of Botswana, he reported that the 2012 population statistics reported 17.5% rate of unemployment.

Several studies that have been done in Botswana revealed that graduates of the country’s local vocational training institutions do not have current industry requisite skills. These are young people who trained in self-developed, franchised, BNVQF or Botswana Technical Education Programme (BTEP) training programmes. Mbayi (2013) stated that a large number the unemployed have not received formal education. Central Statistics Office cited by Mabyi revealed that 2% are Degree holders, 2% are Diploma holders and 10% of the unemployed are Certificate holders. The statistics above indicate that unemployment is high among certificate holders who are graduates of the vocational training system.

1.5 JUSTIFICATION OF THE STUDY

A study such as this one is relevant because there is a reformation and rationalization in Botswana’s education system with the aim of raising the standard and quality of the system. Findings of the analysis will be of great help in guiding the development of quality assurance activities, systems and processes for use by Botswana Qualifications Authority (BQA) which was established in September 2013 by an Act of Parliament. This new regulatory body will be responsible for coordinating all quality assurance activities in Botswana’s education system.

1.6 RESEARCH SCOPE
The study is based only on analysis of vocational training system, particularly quality assurance activities for programmes up to certificate level or equivalences of BNVQF Level 3. It covers both BNVQF and Non BNVQF programmes.

1.7 RESEARCH AIM AND OBJECTIVES

This study aimed at exploring and analyzing the approaches used to ensure that there is no gap between the content of training programmes and what the labour market demands.

The study:
- Analyzed the quality assurance activities used by BOTA on the programmes it accredits, focusing specifically on the level of industry involvement and participation in the development of training curricula or training programme content.

- Made recommendations on how Botswana’s vocational training system can be improved to ensure that all training initiatives are work based.
2. LITERATURE REVIEW

This section discusses the quality of the TVET system, and youth employability. Quality here is gauged by the level of participation in the development of content of training programmes. The section also discusses briefly, the theory which the research is premised on.

2.1 EDUCATION AND TRAINING FOR EMPLOYMENT

There has been extensive research done in education systems and employment settings that confirm that the output of quality TVET makes employees employable, competitive and flexible in changing occupations even beyond the country borders. These studies have established a positive relationship between youth employability and education and training. UNESCO-UNEVOC (2013) asserts that there is a strong link between what is learnt in TVET and the needs of the labour market because graduates of high quality TVET are more likely to find employment either within or outside their country’ borders. This is because quality assured qualifications makes the graduates portable.

According to Beach, (1999) training is defined as an organised procedure by which employees learn knowledge and or skills for a definite purpose. From this definition, it is clear that the ultimate goal of training should be positive transfer of what is learnt to the workplace. In reviewing the training transfer literature, trainee characteristics, training design, work climate variables were seen to influence training transfer. It is also important to note that literature revealed positive relationship between these variables (Lim and Morris 2006). Even though the goal of training is clear, Lim and Morris (2006) stated that unfortunately, estimates suggest that only 10% of learning actually transfers to job performance.

Bridgwood (1987) argued that vocational education and training is seen as preparing people for the world of work and contended that it can be defined broadly or even narrowly. According to her, in its broad sense, all education is vocational in so far as it encourages qualities, attitudes, knowledge, understanding and competencies which are the necessary foundations for employment. HMSO (1985) cited by Bridgwood stated that narrowly, it refers to training for a specific vocation area.
2.2 USE OF INDUSTRY EXPERTS IN CURRICULUM DEVELOPMENT

Many company’s use industry experts for developing the curricula or training programmes. This ensures that there is no content gap between what training offers and what the workplaces expect of employees. Hiring competent employees increases the company profits because employees would productively undertake their duties (Mupimpila and Narayana, 2009). A case for Honda revealed that after economic downturn, the company sales went down and then Honda partnered with CETE/OSU to undertake the curriculum development process. That process involved analyzing the tasks and jobs for different occupations. The analysis revealed that Honda’s training programme required additional content (McLemore, 2013). This shows how a systematic and structured approach of doing job analysis is important in determining the programme content.

Halasz (1997) stated that DACUM, used in workplaces and education settings, is a fast, effective, cost effective way of doing job analysis to inform training curricula. Halasz asserts that DACUM uses experts from the industry and that the validity of DACUM is based on the fact that expert workers understand and can explain their work environment more than anybody else. The DACUM process involves identification of the competencies required by employees for to better perform their tasks. These competencies are then classified into knowledge, skills and attitudes which are then translated into learning outcomes.

Romania has been working with a competence based VET system since 1995. In ensuring that the training standards based qualifications meet the sectoral labour market needs, and are delivered to an appropriate quality, the country developed both an NQF and NQAF. The regulatory body for TVET in Romania, National Centre for Technical, Vocational Education and Training Development (NCTVETD), has the responsibility of curriculum development, development of training standards and lastly development and validation of qualifications. It is only programme development which is the responsibility of providers. (Hart and Rogojinaru, 2007). This approach has enabled Romania’s TVET to improve to a certain degree.

This section has shown that training facilitates individual and organizational effectiveness. High quality TVET is determined by the level of involvement of industry throughout the system.
2.3 FINDINGS FROM VOCATIONAL EDUCATION AND TRAINING STUDIES CONDUCTED IN BOTSWANA

As revealed by tracer studies conducted by Department of Vocational Education and Training under Ministry of Education and Skills Development (DVET, 2005), Construction Industry Trust Fund (CITF, 2006) and Botswana Training Authority (BOTA, 2005, 2010) competencies of graduates of the local vocational education and training system do not match the industry demands.

The 2010 Tracer study that was conducted by BOTA revealed that employers reported that the graduates were not skilled enough to competently perform work roles. It also outlined that the graduates of the local vocational education and training system pointed out that there is need for minimal improvements on the BNVQF awards in order to enhance the graduates’ employability.

Mbayi (2013) stated that despite reforms in Botswana education system, particularly vocational training, it appears like the system is still underperforming. According to her study, the public vocational training system either produces graduates with low level technical skills for diamond cutting and polishing industry or does not produce relevant skills at all.

Mupimpila and Narayana (2009) supported that there is a significant relationship between economic growth and vocational education and technical training. On the other hand, contrary to what other analysts have pointed out as the cause of unemployment among the TVET system graduates, that the graduates are underachievers and are not skilled enough to undertake duties at workplaces, they argued that the high rate of unemployment among the TVET graduates is attributable to the fact that in Botswana, job creation in the formal sector is limited, hence disadvantages graduates with low level qualifications.
2.4 THEORETICAL FRAMEWORK

The theoretical construct which influenced the study is the systems theory which assumes that organizations operate on an external environment and that this external environment impacts on the organizations internal environment (Ott, Shafriz and Jang, 2010; Cummings, and Woley, 2008). Some of the characteristics of this theory that guided this study is that the theory states that organizations import energy from the environment, this means that the inputs or resources of production for products are obtained from outside the organization. This implies that involvement of the industry in curriculum development is critical. Secondly, the theory states that quality of through put depends on the quality of inputs and it has to be maintained if the output is to be of desired quality. This means that the Curriculum Development facilitators need to be qualified and skilled to undertake this duty. Thirdly, the theory asserts that information input, negative feedback and the coding process is important to the organization. This suggests that customer feedback is important is assisting the organization improve its processes. This aspect implies that it is very important to have independent evaluation of the TVET system in addition to the monitoring and evaluation activities undertaken by BOTA. Lastly, one of the characteristics is that of equifinality, which suggests that the desired end may be reached through various means. This implies that if the process which BOTA has been using does not yield desired results, the new regulatory body for TVET quality assurance activities will have to find another way that may bear fruits.
3. METHODOLOGY

3.1 RESEARCH STRATEGY

The study adopted a case study approach. It focused only on Botswana’s vocational training system. There was triangulation of research strategies since both qualitative and quantitative methods were used for data collection and analysis. Qualitative strategy in the form of key informant structured interviews was used to enable the researcher to have in-depth insight about the key parameters of the investigation. The qualitative research approach seeks to understand a given research problem or topic from the perspective of the local population it involves (Cohen and Crabtree, 2009). Quantitative approach was used for gathering numeric data.

Desktop evaluation of documents was used for collecting secondary information on BNVQF unit standards and qualifications that are already registered on the database, number of training institution supported on curriculum development, number of accredited training institutions and programmes.

3.2 RESEARCH DESIGN

The study was analytic in nature because the quality assurance activities which BOTA uses to ensure that the content of the training programmes used by the local training institutions address the current and future needs of the industry were investigated.
4. FINDINGS/RESULTS

4.1 REGISTRATION OF INDUSTRY BASED COMMITTEES (STANDARD SETTING TASK FORCES- SSTFs) RESPONSIBLE FOR BNVQF UNIT STANDARDS AND QUALIFICATIONS DEVELOPMENT

It is the responsibility of BOTA to organize a team of subject matter experts for any sector for which national qualifications are to be developed. Each Standard Setting Task Force (SSTF) has an elected Chairperson, Deputy Chair, Secretary and Vice Secretary who work with a BOTA officer, Standards Specialist to manage the activities of the SSTF. These people are drawn from the industry.

By end of quarter 2 for the year 2012/13, there were 48 registered Standard Setting Task Forces.

4.2 INDUSTRY INVOLVEMENT IN DEVELOPMENT OF BNVQF TRAINING STANDARDS AND QUALIFICATIONS

Training standards and qualifications are developed by a subject matter experts and practitioners employed in a particular sector of the economy. The SSTF works under the guidance of a trained and skilful facilitator who serves as a process expert while the team members serve as content experts. These industry representatives explain precisely the job requirements for people working in that sector as well as how the job is done. This type of analysis provides the content of industry-recognized unit standards. The analysis of identified duties and tasks forms a solid research base upon which relevant competencies can be identified to inform design and packaging of qualifications as well as associated curricula materials. This system elicits the support of industry leaders in guiding training providers on what content to teach and strategies to use to meet industry needs.

It was observed that the content of unit standards specify the assessment mode for learning outcomes. The mode depends on the evidence to be collected by the assessor in order to...
determine the leaner’s competence. Some learning outcomes are to be assessed theoretically while others are to be assessed in practical activities. For some unit standards, learners have to demonstrate their competence and collect evidence in a real working environment. Evidence of some of the Performance Criteria is to be gathered and assessed while the learner is on workplace attachment.

The development of qualifications involves packaging of industry specific, soft skills, entrepreneurship, and information and communication technology unit standards.

After developing unit standards and qualifications, they are quality audited, edited and then sent out to the whole industry for national endorsement, confirming that the contents address the needs of the labour market.

### 4.3 REGISTRATION OF BNVQF UNIT STANDARDS

When the whole development process is complete, the unit standards are registered on the BNVQF. By 28 October 2013, it was reported that BOTA had registered 1452 unit standards on the BNVQF. These unit standards are from various Fields and Subfields of Learning. Out of these some have expired and are due for review.

### 4.4 REGISTRATION OF BNVQF QUALIFICATIONS

Just like unit standards, when the process of designing and developing Figure 1 illustrates all the different types of qualifications which BOTA had registered on the BNVQF by the 28 October 2013. These are also from various Fields and Subfields of Learning.

Figure 1: National Qualifications registered on the BNVQF

- Registered Qualifications - 146
In a normal qualification, all the packaged unit standards are compulsory, which means that if a learner wants to be awarded a full qualification, they need to master all of these standards. A core qualification has a compulsory section and an electives section. An elective section provides a menu of unit standards from which the learner is expected to choose learning outcomes that they would like to study in order to meet the minimum requirement of the full qualification. Lastly, a strand qualification has compulsory, elective and optional sections. The optional section provides a menu of different specializations or concentration areas which a learner has to choose from, in addition to the compulsory and election sections explained above.

4.5 FINANCIAL COSTS FOR DEVELOPMENT OF UNIT STANDARDS AND QUALIFICATIONS

Development of unit standards and qualifications for one subfield would cost approximately:
Workshop packages for 6 meetings = BWP 252, 000.00
Sitting allowance at a rate of BWP300.00/day = BWP 108,000.00
Total = BWP360, 000.00 ~ $ 41,472.00

4.6 INDUSTRY INVOLVEMENT IN CURRICULUM DEVELOPMENT FOR BOTSWANA TVET PROGRAMMES

BOTA provides support to training institutions on curriculum/programme development after which the curriculum/programme is submitted for accreditation with BOTA. This support is offered at no cost for both BNVQF and Non-BNVQF programmes. Training providers are given the curriculum templates and assisted on what to write under each section.

Table 1 illustrates the different types of programmes that BOTA accredits and whether there is industry involvement in curriculum or programme development.
Table 1 Quality Assurance activities per type of qualifications

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<th>Type of programme</th>
<th>Quality Assurance activities coordinated by BOTA</th>
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<td></td>
<td>Local industry involvement in programme development</td>
<td>Support in programme development</td>
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<tr>
<td>BNVQF</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>NON-BNVQF</td>
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<tr>
<td>(a) BTEP</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>(b) Franchise</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>(c) Self-developed</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>(d) MTTC apprenticeship programmes</td>
<td>Yes</td>
<td>Yes</td>
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BOTA’s Strategic Plan trend report indicated that by end of quarter 2 for the year 2012/13 only one (1) training institutions sought support on development of two (2) BNVQF programmes. On the other hand, support for fifty three (53) Non- BVQF programmes was provided to training institutions that had approached BOTA for assistance.

4.7 INDUSTRY INVOLVEMENT IN DEVELOPMENT OF ASSESSMENT MATERIAL FOR BNVQF PROGRAMMES

For quality assurance purpose, when unit standards and qualification development process is complete and they are registered on the BNVQF, another group of industry experts, called Assessment Material Development Panel (AMDP), is assembled to design and develop assessment materials. Only 25% of the members who would have been part of the SSTF are included in AMDP membership. Table 2 indicates Fields/ Subfields that have assessment materials. For a very long time until 2013, BOTA used to offer Standard Based Assessment Training to members of the AMDPs to build their capacity and provide them with knowledge and skills required when developing standard based assessment materials. BOTA has since outsourced this function to one accredited training provider.
<table>
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<th>Field</th>
<th>Subfield</th>
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<td>Agriculture and Nature Conservation</td>
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<td>Dairy Cattle farming</td>
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<td>Small Tock farming</td>
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<td>Poultry and Ostrich farming</td>
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<td>Traditional Song and Dance</td>
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<td>Welding and Fabrication</td>
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<td>Tourism</td>
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<td>Education</td>
<td>Early Childhood Development</td>
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<td><strong>Sub Total</strong> 5</td>
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### 4.8 FINANCIAL COSTS FOR DEVELOPMENT AND SALE OF ASSESSMENT MATERIALS

Development of assessment materials for 1 qualification = P12,000.00
Moderation of assessment tools for 1 qualification = P8,000.00.

\[ \text{Total BWP} = 20,000.00 \sim \$2,304.00 \]

BOTA sells assessment materials at a highly subsidised price of P5000.00 per qualification (\sim \$576). Regardless of this subsidy, only one training institution has bought assessment material for one (1) subfield of learning which is Skin and Body Therapy.

### 4.9 ACCREDITATIONS OF TRAINING INSTITUTIONS AND PROGRAMMES

#### 4.9.1 Programme evaluation prior to accreditation

BOTA has a structured system put in place where subject matter experts are drawn from the industry to evaluate training programmes before being accredited. Some of the items evaluated on the programme are evidence of alignment of the programme to national unit standards, information on benchmarking and articulation, assessment modes and moderation systems for the programme.

#### 4.9.2 Accredited Programmes and Training Institutions

By the 25th August 2013 reporting period there were 392 accredited training institutions and 3617 accredited programmes. Out of the 3617 accredited programmes, 18/3617 (0.5%) are BNVQF programmes while 3599/3617 (99.5%) are non-BNVQF programmes.
Apart from programme evaluation, BOTA uses industry experts for undertaking a resource verification visit to the institutions. Basically these visits are done to confirm that the training institution has enough resources that will facilitate training.

5. DISCUSSION

5.1 DEVELOPMENT AND ADMINISTRATION OF BNVQF

It is commendable that BOTA uses industry experts to generate content of the training standards and standard based qualifications. However, the organization seems not to be doing so well as far as standards development and conducting review of expired unit standards and qualifications is concerned. There are few qualifications from varying Field of Learning that have been registered on the BNVQF. Non availability of qualifications in some subfields of learning leaves training institutions with no choice but to use non-BNVQF programmes, some of which were developed with no consultation or involvement of the local industry. Training providers end up using whatever they can easily access. The non BNVQF programmes (save for BTEP programmes) which are used by institutions are developed without local industry consultation and lack national endorsement.

Besides the non-availability of standards and qualifications in some fields of learning, there are some that were developed more than five years back which should have been reviewed by 2013 and BOTA has not undertaken reviews in some subfields. It is possible that the competencies specified in those standards which were relevant five years back are now obsolete. Some of these expired unit standards are still being used to package qualifications even in this year 2013.

Lack of BOTA availing BNVQF unit standards and qualifications on time for whatever reason, is not only an organization internal problem but leads to a disintegrated vocational education and training system that does not meet the needs of learners and the industry as the organization's mission states that it exits for all these. The consequence of this is that by the time the learners graduate, they would still have certain skill deficit and may find it difficult to find employment.
Lastly, the usage of non BNVQF programmes by vocational training institutions poses a great challenge for learners as both horizontal and vertical articulation, transitions into further training, credit transfer, and getting exemptions for learning outcomes already covered in lower levels, becomes difficult. Any certificate awarded after learners undergo training for non BNVQF programmes, particularly the self-developed ones, do not have international or even national recognition since such programmes did not gain national endorsement by the concerned sector of the industry. This is of great disadvantage to the learner of such a vocational training system because portability of their qualification is reduced.

5.2 DEVELOPMENT AND SALE OF ASSESSMENT MATERIAL

The assessment materials for BNVQF programmes are unit standard based and their usage provides a standardized system of obtaining competence evidence expected of learners by the industry. The beauty of this type of assessment system is that it even allows leaners to compile portfolio of evidence whilst at work. The portfolio of evidence can later be submitted to BOTA for assessment and determining the learner’s competence.

BOTA uses a lot of money to develop the assessment material. It is unfortunate that only one institution that offers a Beauty Therapy programme has purchased the assessment materials. Part of the explanation why training institutions do not buy assessment material could be attributed to the fact that almost all (99.5%) of the programmes are non-BNVQF, so there is no how they could buy assessment tools that are not aligned to the programmes they offer.

5.3 LOCAL INDUSTRY PARTICIPATION IN PROGRAMME/CURRICULUM DEVELOPMENT

There are various models of curriculum development in outcome based education. The approach which BOTA promotes or guides the industry on when developing curricula is the use of Unit Standard Based Curriculum Development model. This model is preferred because the content of the unit standards is generated by the industry based committees. The content is generated on the basis of the job and task analysis that is undertaken as a critical step in
curriculum development. Job and task analysis ensures that training programmes are tailored for the current and future job demands.

Figure 2 below illustrates a six step unit standard based curriculum development process.

![Curriculum Development Process Diagram]

Figure 2: Unit Standard Based Curriculum Development Process
(Source: BOTA Curriculum Guidelines – BOTA.DSD.CDD.P03.F10)

This cycle indicates that curriculum development is not a one-off activity. It is a process which training institutions are continually engaged with. In Botswana, the responsibility of curriculum development lies with the training provider while, BOTA provides support and templates for both BNVQF and non-BNVQF programmes.
5.4 ACCREDITATION OF INSTITUTIONS AND PROGRAMMES

The results indicate that since the inception of BOTA, the focus of accreditation of programmes has been on non-BNVQF (99.5%) programmes even though BOTA was established to standardize qualifications with appropriate equivalencies; and facilitate development of curriculum that meets the demands of the economy. This situation is unfortunate because BOTA uses lots of monies on development of national standards, qualifications and assessment materials. Accrediting non BNVQF and BNVQF creates fragmentation of the system because the credit system used by training institutions differs on the type of programme they offer. This fragmentation hinders credit transfer and thus disadvantages the learners.

Regarding programme evaluation of non BNVQF by industry experts, it can be concluded that usage of one subject matter expert to evaluate a programme may not really give an objective opinion on the content of the programme as opposed to what the entire industry would say, should endorsement be sought from them. It therefore cannot be guaranteed that the content of these type of programmes addresses the needs of the local industry.
6. CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION
A very good TVET is one that involves industry in the design, planning, implementation, monitoring and evaluation of the system. The study revealed that in Botswana, there is high level of involvement and participation of industry experts in generation of training standards, curriculum/programme development, programme evaluation, and verification visits at training institutions. All these quality assurance activities ensure that the contents of national programmes offered address the requirements of the labour market. This therefore means that the country has a robust quality assured vocational training system.

It can also be concluded that BNVQF, BTEP and MTTC programmes are demand driven as opposed to supply driven because there is industry influence of the training content for these programmes. The only challenge of running these programmes parallel is that monitoring, reporting and measuring quality of the entire vocational training systems is not well coordinated. The development of these programmes is time consuming and taxing to the industry experts since their involvement and level of participation is required by different bodies for almost the same products.

Although BNVQF programmes are quality assured, developed at a high cost which is borne by the regulatory body, BOTA allows for flexible delivery mode, benchmarked against programmes from other countries and are relevant to industry requirements, they study showed that most training institutions have over the years preferred to offer non-BNVQF programmes. Regardless of the benefits the national qualifications have for learners and the industry, uptake of BNVQF programmes has been slow.

The study was not able to prove whether or not the content of franchised programmes also addresses the needs of the local market. It only revealed that development of such programmes does not involve the local industry. Lastly, the quality of self-developed programmes could not be ascertained because the content of these programmes lies entirely on what the trainer wants to offer.
6.2 RECOMMENDATIONS

Based on the findings of the study, it is recommended that for Botswana’s TVET system to improve, the country should:

• Develop a National Quality Assurance Framework that will harmonize with the National Credit and Qualifications Framework.
• Develop a system that allows for two pathways for vocational educational and training and general education to both lead to further study in university courses.
• Develop common curricula for use by local training institutions. However institutions should only be allowed to develop their own curriculum if there is evidence that whatever would be taught would meet all the requirements of the training standards since the standards specify the minimum requirements.
• Standardize the credit systems used by training institutions in order to facilitate learners’ credit transfer should there be a need to do so.
• Fast-track development of assessment material for all the registered qualifications.
• Strengthen promotion and marketing of national programmes.
• Strengthen partnerships between training institutions and industry so that learners can access workplaces for exposure even before placement or attachment.
• Run one national system that involves the local industry for better coordination.
• Have one organization or government Ministry coordinating the apprenticeship programme for easy monitoring, evaluation and reporting.
REFERENCES


3. BOTA Curriculum Guidelines – BOTA.DSD.CDD.P03.F10


6. BOTA. Terms of Reference for Standard Setting Task Forces.


