



**IMPLEMENTATION OF INTERNAL QUALITY ASSURANCE IN TECHNICAL AND  
VOCATIONAL EDUCATION AND TRAINING (TVET) INSTITUTIONS IN  
BOTSWANA**

**BY**

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## **DECLARATION**

‘I have read and understood the University Regulations concerning plagiarism and I undertake:

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That I have not incorporated in this dissertation without acknowledgement any work previously submitted by me for any other module forming part of my degree.’

## **DEDICATION**

This research is dedicated to my husband Joseph for his love and sacrifice.

## **ACKNOWLEDGEMENTS**

My special appreciation goes first of all to God Almighty, the Giver of life, who is always there for me at all times and in all seasons of life. Thank you Father.

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### **ABSTRACT**

Quality vocational education is the hope of Botswana to produce quality and skilled manpower that will in turn improve its economy as well as eradicate abject poverty amongst Batswana. This means that TVET institutions need to implement and institutionalize internal quality assurance (IQA) systems so as to match the existing NQF mechanisms and vision of the country of providing quality education. This study, sought to assess the extent of practice and implementation of IQA systems in the TVET institutions. The research examined the current practices and challenges prevailing in the implementation of robust IQA systems in Botswana TVET. A mixed method research approach was used for the study with indepth interviews, questionnaires and document analysis as the research tools. Madirelo Training and Testing centre was used as the case institution. Data collected was presented and analyzed through the use of tables for quantitative analysis and descriptive narration for qualitative analysis. The sample selected were fifteen instructors, two key informants from the IQA committee, two from the examination department and six non-academic staff members because of their significance to the study.

The findings of this research revealed that among other components of an institution, the quality assurance unit is an important component to a successful QA practice and to the overall functioning of an academic institution. However, findings showed that the presence of a quality assurance unit alone without a clear quality assurance policy and an implementation committee or QA staff is an incomplete phenomenon. To note, in this research, it is evident from the findings that these components are not yet fully embedded in the case institution under study and that most staff members both academic and non-academic still have a misconception about QA exercises and its advantages. They see the IQA units as witch hunting, policing and fault finding departments. This implies that QA is still not yet embraced and fully understood as an important input to the overall function of an institution in Botswana. The research findings also revealed that lack of resources and manpower are the main challenges faced in Botswana in the effective implementation of IQA. This implies that TVET need adequate resources and manpower to achieve QA goals as expected

by Botswana Qualifications Authority (BQA), an external body which assesses whether the operations or programs of academic institutions in Botswana is meeting the standards and guidelines.

Institutions with a commitment to quality should take internal quality assurance seriously regardless of whether it is expected by BQA or there is a need for accreditation. It is therefore necessary for TVET institutions to establish well-structured and equipped IQA systems in order to assure quality, structures that will assist with enhancing quality education. Therefore, in order to improve and promote IQA implementation in Botswana TVET institutions the researcher recommends that BQA facilitate the understanding of IQA by supplying documents and manuals on how to set up IQA and adopting communication strategies within their website to explain the importance of IQA in institutions. In addition to that, the researcher recommends that institutions consider giving incentives to IQA committee members within the institutions, whose main job is not QA but who take up QA work as additional to their day to day work. As well, trade representatives and experts from outside the institution should get incentives as a way of motivating them to attend meetings and contribute to QA matters. This hopefully will aid institutions establish robust QA systems and eventually improve the quality of education in Botswana.

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## **ABBREVIATIONS AND ACRONYMS**

|        |                                                        |
|--------|--------------------------------------------------------|
| ASEAN  | Association of Southeast Asian Nations                 |
| AQAN   | ASEAN Quality Assurance Network                        |
| AQAFHE | ASEAN Quality Assurance Framework for Higher Education |
| AUN    | ASEAN University Network                               |
| BNVQF  | Botswana National Vocational Qualification Framework   |
| BQA    | Botswana Qualifications Authority                      |
| EQA    | External Quality Assurance                             |
| EQAA   | External Quality Assurance                             |
| EQM    | External Quality Monitoring                            |
| ETP    | Education and Training Provider                        |
| HEI    | Higher Education Institute                             |
| IQA    | Internal Quality Assurance                             |
| IQAC   | Internal Quality Assurance Committee                   |
| MTTC   | Madirelo Training and Testing Centre                   |
| NCQF   | National Credit and Qualifications Framework           |
| TAC    | Trade Advisory Committee                               |
| TVET   | Technical and Vocational Education and Training        |
| QA     | Quality Assurance                                      |

QAA                                      Quality Assurance Agency

QAC                                      Quality Assurance Center

## **CHAPTER 1: THE PROBLEM AND ITS CONTEXT**

### **1.0 Research Topic**

Implementation of Internal Quality Assurance in Technical and Vocational Education and Training (TVET) institutions in Botswana

### **1.1 Introduction**

The future of higher education lies in the effective application of quality assurance because training must meet the needs of the country, graduates and workplaces and those seeking employment. Achieving quality education must be of priority to tertiary institutions and quality assurance policies unaccompanied with internal implementation and practice will not bring changes to the higher education field. Quality assurance has become an important and central subject in higher and tertiary education all over the world including in Botswana. A study on the implementation of Internal Quality Assurance in Tertiary and Vocational Education and Training (TVET) institutions in Botswana became my goal. Madirelo Training and Testing Center was used as a case institution in this study.

Woodhouse (2006, p.8) defines quality assurance as those systems, procedures, processes and actions intended to lead to the achievement, maintenance and monitoring of quality. According to Dill (2000) internal quality assurance are those policies and practices whereby academic institutions themselves monitor and improve the quality of their education provision, while external quality assurance refers to supra-institutional policies and practices where external bodies assure the quality of higher education institutions and programs. Quality in higher education according to Loukkola (2010) covers areas like learning and teaching processes, course materials, pass rates, communication, number of graduates, enrolments, governance, policy statements, institutional culture and many others.

Employers and even stakeholders want quality programs and quality graduates. Standards for skills in various occupations are set by the industry and students expect such standards and skills required by the market or industry to be provided to them by institutions. This implies that training providers of higher education should provide relevant quality courses and content. To achieve this, strategic robust internal quality assurance systems must be put in place to guide the institutions in attaining quality education.

In Botswana, The Botswana Qualifications Authority (BQA) is mandated by the Botswana Qualifications Authority Act, 2013 to maintain a National Credit and Qualifications Framework (NCQF) and coordinate a quality assurance system for education, training, and skills development. The expectations of BQA are for every institution to establish an internal quality assurance center or committee responsible for their internal quality assurance activities. This entails that institutions have to implement robust QA internal systems and procedures so as to match the new national quality framework and to provide quality higher education.

The purpose of this study is to measure the extent of practice and implementation of robust IQA systems in institutions of Botswana using Madirelo Training and Testing Centre (MTTC) as case study, so as to ensure that students receive relevant and quality qualifications that are internationally recognized. The extent of practice has more to do with how the institution leaders disseminate the idea of quality across the board, which is to all the employees, staff members who form part of the actors in the implementation process. The culture of quality should be imbedded in their day to day work in such a way that it becomes evident that they have taken ownership of the vision of quality provision and therefore commit themselves to quality assurance. The research will also determine the main challenges faced by TVET institutions in implementing their internal quality assurance system and propose strategies to improve the implementation of the internal quality assurance systems in institutions in Botswana.

This purpose comes from the background that there is normally a difference between planned outcomes of policy and the outcomes of the implementation process, which Newton (2001) calls the 'implementation gap.' The gap between governments and institutions can be in their definition, objectives, concerns and approach to quality assurance. This difference determines the success implementation of quality assurance systems in TVET institutions.

## **1.2 General Background**

Quality assurance is important in higher and tertiary education all over the world and to Botswana as well. The goal of any country should be to implement quality assurance (QA) systems and mechanisms that ensure students receive relevant and quality qualifications that are internationally recognized (Harman 2000).

Quality in higher education is Botswana's confidence of producing quality graduates, quality manpower, reduce poverty and improve productivity. This entails that TVET institutions have to implement robust QA internal systems and procedures so as to match the new national quality framework to provide quality higher education.

The Botswana National Vocational Qualifications Framework (BNVQF) was established after the government realized that there was a gap and a mismatch between learned job specific skills and the country's needs dictated by economic conditions. Under the BNVQF system vocational qualifications registered on the BNVQF were awarded by a registered and accredited Vocational Training Institutions. In 2016 the Government of Botswana established a new Botswana Qualifications Authority (National Credit Qualifications Framework) regulations and vocational qualifications are now registered on the NCQF. The purpose of the BNVQF was to arm students with relevant industry skills thus reducing the unemployment rate as well as reduce poverty, provide lifelong learning and promote accountability among training providers.

Madirelo Training and Testing Centre (MTTC) was therefore established to complement this vision, in the year 1986 through the Apprenticeship and Industrial Training Act, No. 2 of 1983. MTTC was given a mandate to coordinate and conduct apprenticeship and industrial training or skills as well as do Trade Testing in order to develop skills required by the industry in Botswana. MTTC offers 15 apprenticable vocations and awards these theory and practical courses nationally at three levels, National Craft Certificate (NCC), Trade Test 'B' and Trade Test 'C. These vocations are Automotive vocations, Building and Construction vocations, Electrical or Electronic vocations, Heavy plant vocations, Mechanical vocations, Hotel and Catering vocations,

Agricultural vocations, Automotive vocations, Construction vocations, IT vocations, Mechanical vocations, Textile vocations and Health and Beauty vocation (MTTC 2015).

Research works on quality assurance is growing especially in higher education but not much literature on the practice and implementation of internal QA is available, moreso, in (TVET) sub-system in Botswana. The implementation and extent of practice of the QA system in the institutions' internal units has been studied globally and regionally, for instance in Asia, UK, Vietnam and Ghana, but it has not yet been studied and documented in Botswana. Therefore, this study, sought to investigate and assess internal quality assurance practices of TVET institutions in Botswana using Madirelo Training and Testing Centre (MTTC) as case study.

### **1.3 Conceptual Framework**

QA policies unaccompanied with internal implementation and practice will not bring changes to the education field. To guide the research study, the researcher constructed a conceptual framework to explain the implementation of internal QA in TVET institutions. There are a number of QA models suggested by authors but the researcher found it necessary to develop a model as a guide to understand and explain how a robust internal assurance system should be and what is involved in its successful implementation.

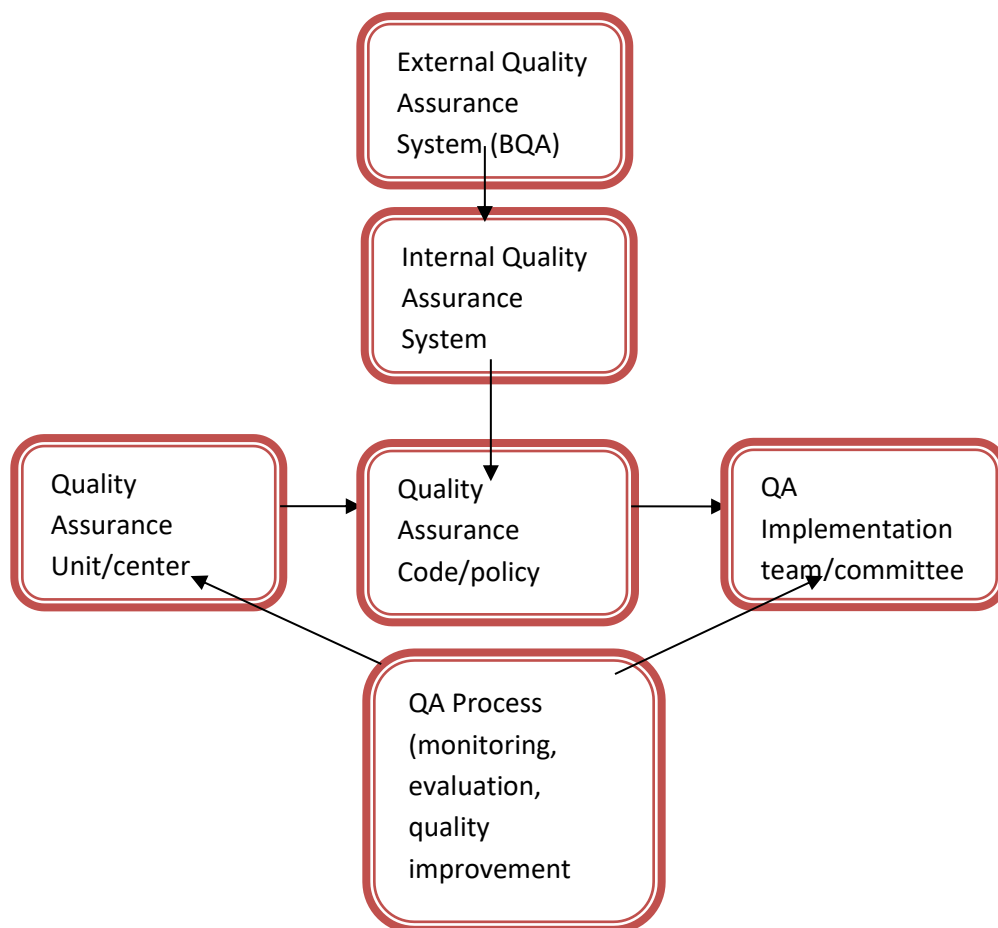
Harvey (2006) argued that, internal and external systems are not opposites as it were rather both are essential for a robust QA system in higher education. In this regard, according to Harvey the equilibrium between the internal and external mechanisms, mediated by the institutional quality culture, is necessary for the effective implementation of quality assurance in higher education institutions.

The conceptual framework is such that for an ideal robust Internal Quality Assurance (IQA) system to be implemented at any institution, there should be three important components which are, a clear quality assurance code or policy, an established quality assurance committee or unit or center or department (depending on the capacity of the institution) and an implementation committee which will oversee the implementation of QA processes as guided and informed by a national

quality framework which is the external quality assurance system. The QA process should have three goals which are evaluation, monitoring and quality improvement.

The QA center or unit is helped by an implementation committee or team to support the QA process in the institution. This assists institutions to meet their QA objectives and encourage the improvement of quality. To investigate the practice and implementation of QA at MTTC, this study will look at the function of their QA unit and as well examine their QA processes. Therefore, the proposed conceptual model of this study is as follows:

**Figure 1 Proposed conceptual model**



*Source: Researcher's construct*

## **1.4 Statement of the problem**

There is a gap between governments and institutions in their definition, objectives, concerns and approach to quality assurance. This difference determines the success implementation of quality assurance systems in TVET institutions.

There have been intensive QA discussions and trainings initiated by BQA. With these training activities, the expectations of BQA are for every institution to establish an internal quality assurance center or committee responsible for their internal quality assurance activities.

Reichert (2008), noted that notions of quality differ between institutions and stakeholders in tertiary education and this generate conflict and inhibits successful implementation of QA policies. Newton (2001) notes that there is normally a difference between planned outcomes of policy and the outcomes of the implementation process, which he calls the ‘implementation gap’. A successful QA system must not be dependent more on the thoroughness of the application and accreditation process or the excellence of documents of QA system but more on how it is used by training providers, how it is interpreted or viewed by them.

Even though the implementation and extent of practice of the QA system in higher education institutions has been studied globally and regionally, for instance in Vietnam and Ghana, the implementation and extent of practice of the QA system in the institutions’ internal units has not been studied and documented in Botswana. In the same vein, Botswana established new quality assurance regulations, procedures, guidelines and standards in 2016, which every institution should implement and adhere to (BQA 2016). It is ambiguous whether institutions in Botswana have actually implemented quality assurance process internally as expected. Based on that, it becomes essential to conduct a study on internal quality assurance implementation in Botswana TVET institutions, contextually MTTC. This is therefore the aim of the study, to examine the extent to which the above mentioned case institutions are implementing the National Quality Framework within their organizations.

## **1.5 Objectives of the study**

### **Research Objectives**

1. To evaluate the current TVET institutions' internal quality assurance systems and practices in Botswana.
2. To investigate the extent of implementation of the internal quality assurance system in TVET institutions.
3. To determine the main challenges faced by TVET institutions in implementing their internal quality assurance systems.
4. To propose strategies to improve the implementation of the internal quality assurance systems in the TVET institutions.

## **1.6 Research Questions and Hypothesis**

1. What is the nature of internal QA systems and practices in TVET institutions in Botswana?
2. What are the main challenges faced by TVET institutions in implementing internally the national quality assurance policies, standards, procedures?
3. To what extent are the TVET institutions implementing the national quality assurance system internally?
4. How can the TVET institutions improve the implementation of the new National Quality Framework internally?

*Assumption 1:* Institutions have implemented QA internally by setting up a committee or a unit or a department.

*Assumption 2:* The practice of QA is evident amongst staff members, academic and non – academic employees.

### **1.7 Significance of the Study**

The study has a highly practical significance and the results will be of interest to institutions of higher learning. The results of the study may give insight into the importance of effective implementation of internal quality assurance, thereby helping institutions improve, develop and as well implement effective internal QA systems in their institutions. The intention behind this assessment is to expose the strength and weakness of the institution under study on its internal quality assurance program. By doing this it will serve as a model for other institutions that are still lagging behind in implementing internal QA systems. This is of significance to universities and colleges as the study findings can be used as well to formulate effective QA implementation strategies. Policy makers as well can use the findings to see the extent at which the national quality assurance vision has been assimilated and understood internally by institutions. The research will provide feedback, suggestions and recommendations to the TVET institutions that have implemented the internal quality assurance as well as to the policy makers. The research will also contribute new literature for academia.

### **1.8 Scope of the study**

This study sought to investigate and assess the extent of implementation and practice of IQA in Botswana TVET institutions and used the mixed method case study approach, the case institution being Madirelo Training and Testing Centre (MTTC). This research will also determine the main challenges faced by TVET institutions in implementing their IQA system and propose strategies to improve the implementation thereof.

### **1.9 Limitations of the study**

The sample under study was not an exact representation of the whole population and some respondents were not available at the time of study. However, the researcher informed the respondents in advance before visiting them. The informants were not able to answer some

questions due to the confidentiality policy of the institution since quality assurance is a sensitive area. However, the researcher assured them that the purpose of the study was not to find faults in the institution but to help improve the institution and Botswana at large to attain quality education. The researcher provided a research permit from the department of research under the Ministry of Tertiary Education to ease the discomfort. The timeframe of the research was very short and the researcher had limited finances at hand since she was sponsoring herself.

### **1.10 Conclusion**

Chapter 1 covered the introduction, the research background of the study, the problem statement, and scope of study, the research objectives, and research questions, significance of the study, the conceptual framework and limitations.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.0 Introduction**

Literature review is basically a critical analysis and evaluation of current literature. This involves an assessment of the strengths and weaknesses of the literature in order to identify current gaps that justify the study. This section will therefore cover subheadings as follows, definitions of quality, quality assurance (QA) and internal quality assurance (IQA), the relationship between external quality assurance (EQA) and internal quality assurance (IQA), components of a robust and ideal IQA system, the implementation process and possible challenges that institutions face in implementing quality assurance internally in their systems and the quality assurance landscape in Botswana and in the ASEAN region. The second section of the chapter looks at the proposed model.

### **2.1 Conceptual Discourse: Definitions of terms**

To understand quality assurance it is important to clarify the terms quality because it helps understand what quality is and what it means since quality is a relative term which is interpreted differently by different people. This is predominantly so in higher education TVET institutions since different stakeholders have different values, expectations and interests concerning quality of education.

When an institution is analysing quality assurance systems they should first establish and understand what needs to be assured. There are various reasons why implementation of quality assurance is important in higher education. It is important, to the government, the public and the other stakeholders for accountability (Harman 2000). Apart from that academics and employers prefer graduates with adequate skills and knowledge so that they can meet the needs of society and fulfill employer requirements (AUN 2010). In addition, quality assurance at higher

institutional level can contribute to quality improved teaching, management and administration, which can consequently lead to the improvement of the overall education system (Harman 2000).

This implies that institutions and training providers generally should provide relevant courses and content. To achieve this, a strategic internal quality assurance system must be put in place to guide the institution in attaining quality education.

### **Definitions of quality**

The concept of quality is complex. It is hard to define quality in the context of higher education where institutions have the autonomy to decide on their own visions and missions.

The most comprehensive definition of quality perhaps is provided by Harvey and Green (1993, p.6). The two authors perceive quality summed up in five conceptualisations which are:

- ‘quality as exceptional (excellence);
- quality as perfection;
- quality as fitness for purpose;
- quality as value for money;
- quality as transformational.’

Harvey & Newton (2004, p.150), asserted that, ‘quality is a relative concept, meaning different things to different people. Also, different stakeholders have different perspectives on quality depending on their objectives, including students, employers, teaching and non-teaching staff, government and its funding agencies, accreditors, validators, auditors, and assessors (including professional bodies).’

The World Declaration on Higher Education in 2006 and 2009 during the World Conference in Higher Education declared that quality in higher education is a multi-dimensional concept, which should encompass all its functions, and activities that is: curriculum, teaching and academic programmes, research and scholarship, staffing, students, building facilities, the characteristics of students, administration and as well as management. What is apparent from these writings is that the concept of quality in higher education is complex and dependent upon different stakeholder perspectives. However, there are components in the definitions that seem to be consistent across

the varied viewpoints. These are highlighted through terms like perfect, value for money and other quality varieties like learning, teaching and assessment.

### **Definitions of Quality Assurance**

QA in higher education gained attention amongst various stakeholders, scholars and institutions since 1990s. It is because of that, that most institutions are beginning to re-look, re-evaluate and re-define their strategic visions and missions to address and incorporate quality issues.

Brown (2004) defines QA as a process of checking if the quality of education and standards meet agreed expectations. Therefore quality assurance agencies are guided by a quality policy document or code that spells out the standards for maintaining the quality of education. He further states that standards are attainment levels against which performance is measured, in relation to the fitness and purpose of the programme.

Quality assurance is conceptualized as a continuous process of evaluating, assessing, monitoring, guaranteeing, maintaining and improving the quality of higher education system, institution or programmes. As a regulatory mechanism, quality assurance focuses on both accountability and improvement, providing information and judgment (not ranking) through an agreed and consistent process and well established criteria (IIEP 2006).

According to Harman (2000) QA is defined as systematic management and assessment procedures adopted by higher education institutions and systems in order to monitor performance against objectives, and to ensure achievement of quality outputs and quality improvements.

All these definitions show that QA is a broad term that is open to various interpretations. However, in these definitions are common elements highlighted through words like planned, systematic and structured. Common elements are apparently highlighted through the vocabulary like systematic, planned and structured meaning that QA system must be well structured and planned to ensure and maintain the quality of the educational processes.

### **Definitions of Internal and External quality assurance**

Quality assurance may be external or internal. Internal quality assurance refers to the institution's policies, mechanisms and processes put in place for ensuring quality while external quality assurance refers to the actions of an external body which assesses the university operations or programs so as to determine whether it is meeting the standards that have been set (IIEP 2006).

Internal quality assurance refers to policies academic institutions put in place to practice QA by monitoring, evaluating and improving the quality of their education provision, while external quality assurance is whereby external bodies assure the quality of HEIs and its programs (Dill 2000).

In the study conducted by Martin and Stella (2007) IQA was defined as the policies and mechanisms implemented in an institution or program to ensure that it is fulfilling its own purposes and meeting the standards that apply to higher education in general or to the profession or discipline in particular. Here, it means that institutions have to implement QA policies and clarify mechanisms or tools that will be used to assure quality thereby meeting the quality standards expected of them by the external agency, the public in general, by the industry/profession in particular.

IQA was defined in EUA (2009) in the context of higher education as the totality of systems, resources and information devoted to setting up, maintaining and improving the quality and standards of teaching, scholarship (student learning experience), research, and service to community. EQA refers to the actions taken by an external body to evaluate the operations of an institution, its QA system, its program in order to regulate and see whether it is meeting the agreed upon standards and guidelines (Newton 2007).

Summing up, from the above definitions, it is apparent that institutions are responsible for institutionalizing and establishing an internal QA system to ensure quality education in their institutions. IQA therefore can be defined as the overall internal quality management of the education system to ensure that quality is holistically practiced in the institution and the institution is meeting the standards set by the existing external bodies.

## **2.2 The Quality Assurance landscape in the Association of Southeast Asian Nations (ASEAN) region**

QA is the key to a competitive higher education globally. Against this global background, the Association of Southeast Asian Nations (ASEAN) region and its member states, regional organisations like the ASEAN Quality Assurance Network (AQAN) or the ASEAN University Network (AUN), are committed to further developing quality assurance as a back-bone of higher education across the region. The ASEAN Quality Assurance Network (AQAN) is in charge of developing, setting and implementing the EQA frameworks on a national level.

According to the ASEAN Quality Assurance Network (2014), the framework consists of the four principle statements of ASEAN Quality Assurance Framework which are the principle of External Quality Assurance Agency (EQAA), the principle of External Quality Assurance Processes, the principle of Internal Quality Assurance and the principle of National Qualifications Framework.

For the purpose of this research, the third principle will be discussed in detail.

### ***Principles of Internal Quality Assurance***

According to the ASEAN Quality Assurance Framework (2014), a fundamental principle in quality assurance of higher education is that quality primarily rests with the higher education institutions themselves and the institution has a primary responsibility for quality. The quality system should be promulgated and supported by the top management to ensure effective implementation and sustainability. Structured and functional internal quality assurance systems with clearly de-fined responsibilities should be established. Notably, sufficient resources for establishing and maintaining an effective quality system within the institution should be provided.

‘QA should be a participatory and cooperative process across all levels incorporating involvement of academic staff, students, and other stakeholders and a quality culture should underpin all institutional activities including teaching, learning, research, services and management’ (DAAD 2016, p.85).

The framework further notes that, DAAD (2016, p. 26-31), ‘every institution should have formal mechanisms for approval, periodic review and monitoring of programmes, relevant and current information about the institution, its programmes, achievements and quality processes be

accessible to public and that quality be regularly monitored and reviewed for purposes of continuous improvement at all levels. Every institution in the ASEAN region should have supporting evidence that show that there are committed to providing quality education as follows; documented policies and strategic action plans, statement of vision and mission of the university; adequacy of facilities and infrastructure to support teaching, research and services resources for teaching, research and services; organizational and management structure; establishment of quality assurance unit and resources, IQA systems for example curriculum development or improvement procedures, evidence of program specifications; feedback from stakeholders, documented information of responsibilities of faculties, schools, departments and other organizational units and individuals in quality assurance; and report of IQA activities including reviews and improvement of IQA system of the institutions'(ASEAN Quality Assurance Network 2014) .

To note, SHARE was appointed to conduct several studies in the ASEAN region and among them is the study on the state of play of quality assurance in Cambodia. The results drawn from their desk research on six national case studies concentrated on expert interviews. The major findings drawn from interviews with agency and HEI representatives in Cambodia showed that support and capacity building for HEIs was a key priority: All interviewed actors agreed that most importantly, HEIs in Cambodia needed support with capacity building that is on how to set up QA units and for training of staff on different levels. The agency and HEI interviewees perceived that understanding of the national QA standards was still limited and that most HEIs were still relatively new to the concept of QA. In some cases, other units were managing QA as an additional task to their main duties (e.g. international offices) (DAAD 2016).

The interviewed actor groups had a different perception of the current EQA system and practice. Whereas HEI representatives perceived EQA to be strongly control oriented, the agency interviewees emphasised the function as geared toward quality enhancement. The agency interviewees stated that there seems to be an expectation by HEI representatives that HEIs receive more specific support on how to implement their IQA. The HEI interviewees viewed the national standards and criteria as time-consuming paperwork and as unable to support quality enhancement within HEIs. They underlined the need for training and guidance on setting up an IQA unit. The agency interviewees, however, did not see themselves in a position where they can

set or propagate more detailed aspects beyond the general framework. They perceived IQA as the duty of HEIs and did not want to interfere in order to leave enough options for HEIs to adapt to their own context and goals.

Both interviewees from the agency and HEIs described that there was resistance to QA at different levels within HEIs, including management. Agency interviewees reckoned that HEI staff is used to a high level of autonomy in their teaching and thus feels reluctant towards new regulations. The interviewees from the agency saw a need for examples of good practice among Cambodian HEIs in order to push and support the implementation of QA.

Actor groups agreed that Cambodian HEIs needed more time to implement a possible framework compared to other ASEAN countries, as universities were not prepared and did not have the resources to move adequately fast enough. The agency interviewees doubted that it was the right time to implement a regional framework in Cambodia given that institutional accreditation had only just been introduced and first experiences had still to be made (DAAD 2016).

Both EQA and IQA representatives expressed the need for more financial resources for QA implementation. The agency interviewees reported that there was a need to clarify cost coverage of external assessments.

### **2.2.1 The Quality Assurance landscape in Botswana**

Institutions and the public need some proof for obtaining assurance that the institution is keeping its promises of providing quality education to its stakeholders. It is critical in this research to highlight the critical role played by Botswana Qualifications Authority (BQA) which makes sure that only TVET institutions, that are sound financially, materially, physically and in human resource or manpower operate.

According to Botswana Qualifications Authority (2016, p.1), quality assurance refers to ‘all the policies and processes directed to ensure the maintenance and enhancement of quality in education. It is the systematic review of institutional capacity, infrastructure and human resources to ensure that agreed and acceptable level of quality exists in the education provided by Education and Training Providers (ETPs)’.

The quality assurance processes employed in Botswana are:

- ‘1. Registration and accreditation as an Education and Training Provider (ETP)
2. Learning programme accreditation
3. Audits of the Education and Training Providers
4. Monitoring of the Education and Training Providers
5. Submission of Annual reports by the Education and Training Providers
6. Registration & accreditation of Assessors
7. Registration & accreditation of Moderators.’ (BQA 2017, p.1)

### ***The role of Education and Training Providers (ETPs) in Botswana***

According to BQA (2017), ETPs are the chief custodians of quality within their institutions. BQA’s responsibility is to safeguard the interest of the public in high standards of education qualifications but ETPs have the primary responsibility to assure quality programmes. Given the fundamental principle of quality assurance that institutions should be responsible for driving internal quality assurance processes, it is imperative for all registered ETPs to establish Internal Quality Assurance Committees (IQAC). Since quality enhancement is a continuous process, the IQAC will become a part of an institution’s management system with a goal of improving the quality of education and sustain the quality too.

### **Quality Assurance standards for TVET institutions**

BQA requires TVET institutions to have policies in the criterion of quality management and the TVET standard guideline document (QAS1 – TVET) states that, “BQA has to be satisfied that the applicant endeavours to ensure that effective quality management is the overarching principle in the business of education and training. The applicant shall ensure that:

- a) there is a policy on Quality Management System;

- b) the objectives and functions of the quality system are clearly defined and documented;
- c) objectives and mechanisms for quality management are integrated into institutional planning;
- d) the institutional quality management policy adequately provides for all key areas of operation;
- e) roles and responsibilities and levels of accountability for quality management system implementation are clearly defined and documented;
- f) there is provision for ensuring that the objectives and mechanisms for quality management within each functional area of the ETP are consistent with the institutional vision and strategic priorities;
- g) there is a system or process for monitoring and evaluation of the internal quality management system;
- h) there are mechanisms and procedures for the collection and analysis of data and dissemination of information on quality management matters to relevant stakeholders; and
- i) there is provision for involvement of learners, staff and external partners in the quality management system implementation, monitoring and evaluation.'

BQA aims to ensure that there are systems in place for learning programme review and evaluation. Therefore there should be policies that ensure a sound foundation for attaining high standards and quality in review of learning programmes. BQA also seeks to establish that the ETP has made a provision for ensuring assessment and moderation requirements are met for all learning programmes that they plan to deliver. BQA requires the ETPs to have policies on learner support services to ensure that all learners have appropriate support and guidance in order to meet their learning needs and goals (BQA 2017, p.7).

This shows that BQA expects ETPs to provide quality education by practicing and institutionalizing quality insurance within their ETP's structures by setting up an IQA committee, department or unit, having a clear QA policy in place and implementing it according to set standards and guidelines contained in the QA framework document.

### **2.3 The relationship between External Quality Assurance and Internal Quality Assurance in Higher Education**

Harvey & Askling (2003) asserted that internal and external QA approaches are both essential for a successful quality assurance system in HEIs. This means the two are not exclusive opposites. In this regard, according to Harvey (2006) there is need for balance between the internal and external mechanisms as mediated by the institutional quality culture for the effective implementation of quality assurance in HEIs.

IQA systems primarily focus on curriculum development, teaching, learning and research, which traditionally have remained the core instruments in the knowledge production process. However, the means to achieve this has undergone various phases of transformation over the years. There are changes from teacher centered to student centered learning; a push for changes in curriculum design; application of information communication technology in teaching delivery, promotion of social centered approaches to learning, and the development of evaluation approaches to monitor both teacher and student performance (Nguyen 2009). This is a great indication of the quest to constantly improve the knowledge production process to ensure that higher education institutions stay tuned to the changing intellectual demands made by stakeholders.

EQA focuses primarily on compliance and accountability. It requires that standards set by legitimate external bodies that serve as guide to the operations of higher education institutions be followed to the dot. This is achieved mostly through process of accreditation and peer review. External quality assurance usually operates at the national level and has fixed and universal regulations which are applied to all relevant institutions under their legal jurisdiction without or with little consideration to specific quality needs of these institutions (Harvey & Stensaker 2008).

The arguments above suggest that external quality assurance cannot stand alone in effecting quality improvement in HIEs and that EQA mechanisms may not necessarily lead to quality improvement, but that they should complement with IQA mechanisms. The responsibility to establish IQA system is primarily placed in the hands of higher education institutions for their desires to achieve quality standards important that each institution develop its owns effective

system of IQA. Institutions should go beyond the internal operations in order to meet the diverse expectations of its external stakeholders.

The dilemma of higher institutions is striking a balance between the internal and external quality demands, and expectations of stakeholders in the quality assurance processes. This is a realistic concern at the center of quality assurance management processes. To this end, the quest for a balance between internal and external quality assurance may require that, there is flexibility in both internal and external quality assurance systems to ensure adaptability, coordination and integration.

It is suggested by Mishra (2007) that quality assurance strategies work better by integrating the internal and external quality needs. While the internal quality assurance focus is mainly on enhancement, external quality assurance focuses on accountability, but with implied enhancement intent. An interdependent relationship should exist between external and internal quality assurance in practice with the aim of balancing accountability and enhancement.

#### **2.4 Internal Quality Assurance Process: An ideal system**

As defined, the process of internal quality assurance aims at enabling institutions to manage and control its quality-related activities. However, the question of what should be included in this process in order to manage the quality and hopefully improve the quality is not easy to answer due to the complexity in terms of defining quality management in higher education institutions.

According to Mishra (2007) the real academic life of a higher education institution mainly happens in the processes of teaching and research. She further stated that many problems often occur when it comes to the management of this part. The reason he gave out is that lecturers have all academic freedom and autonomy to perform their duties in the manner they think should be. For example, the Principal can suggest something to teachers; but fact shows that it is up to the teachers to accept and apply it in the classroom. In this context, Mishra (2006) argued that the management of quality remains a community effort and not necessarily a role of senior management or the principal alone. In the view of this, the role of leader is to disseminate the

idea of quality to all the staff members across the board in the way that they can take ownership and commit themselves to quality assurance.

Looking at the implementation process, the four major steps of the process according to Mishra (2007) are to Plan, Do, Check and Act. This process is called the P-D-C-A Deming cycle. Plan is when the institution gathers the data to identify and define the issue that need assurance and identify ways to achieve them. Do is implementing the plan and Check is analyzing the results to see if there is good arrangement between the original goals and what was actually achieved. Finally, Act is acting on the plan depending on the results from the check.

According to Mishra (2007) this cycle is a right fit for HELs and is in line with all models of quality assurance. With this respect, IQA process should include all the activities related to assuring quality, from strategic planning to staff and curriculum development. More specifically, according to Vroeijsstijn (2006) in order to assure quality, it is necessary to establish a structured quality assurance system that makes it possible to monitor quality, to evaluate quality and to improve the quality. As argued by him, there is no one model that fits all; and it is up to an institution to decide which model fits it best. At least, the IQA system should cover the P-D-C-A Deming cycle and should be equipped with the basic elements for monitoring, evaluation and improvement.

According to Vroeijsstijn (2006), the IQA process contains four basic elements which are institutional goals, monitoring instruments, evaluation instruments and instruments for improvement of quality.

### ***Institutional goals***

Vroeijsstijn (1995) defined goals and aims of the institution or faculty as the frame of reference for the quality assurance. Therefore, according to him, institutional goals and aims must be formulated clearly and must meet scientific and societal requirement. Additionally, institutional goals and aims should also reflect the requirement of different stakeholders. In other words, the requirement of stakeholders should be clearly embedded into institutional goals, the objectives of faculty or educational programs.

### ***Monitoring instrument***

A good monitoring system is considered essential to the process of internal quality assurance.. Monitoring system contains the information that higher education institutions collect and store by themselves, reflecting how the information feeds into internal discussion and decision making process, and how institutions communicate on the basis of this information (Vroeijenstijn 2006). As argued by him, by using monitoring instruments, institution can follow input, process and output. As a result, institution or faculty can keep track of the performance and developments in institution and can take action whenever necessary.

In the similar vein, the three main motives for creating a monitoring system in education should be to formally regulate desired levels of quality of education outcomes and provision, to hold educational service providers accountable and to support ongoing improvement in education (Mhlanga 2008).

It is also mentioned in the AUN (2010) that a good monitoring system should include: student progress, pass rates and dropout rates, outcomes of the structured feedback from employers and outcomes of the structured feedback from alumni.

### ***Evaluation instrument***

Evaluation is the most important link in the process of IQA, therefore, an institution is expected to conduct at least every 5 years, a self-assessment of the University as a whole to figure out its strong and weak points and the result of self-assessment should then be embedded in a self-evaluation report (Vroeijenstijn 2006). He further says that, the self-assessment will serve as preparation for and provide basic information for a visit from external experts. Apart from self-assessment, which might be part of external quality assessment or accreditation process, institutions will be also expected to conduct the internal audit based on the self-evaluation reports when the self-assessment is not connected with the process of accreditation or external quality assessment (AUN 2010).

In addition, beside self-assessment conducted for accreditation process and internal audit conducted in the absence of accreditation, it is also suggested to include student evaluation, course evaluation and curriculum evaluation in the evaluation instruments (AUN 2010).

Student evaluation should be a regular activity in the institution to learn what students think about the program, the staff, the form of lecturing etc. In terms of course evaluation, although the students will evaluate the course during the student evaluation, there might also be a need to include other stakeholders. Other stakeholders have to be included for the evaluation of the curriculum (AUN 2010).

### ***Quality improvement***

Monitoring systems and internal evaluation are considered essential for improving activities and services and for planning future activities in an institution. The results of evaluations or the analysis of the strengths and weaknesses from self-assessment, therefore, are assumed to lead to the measures for quality improvement (Vroeijerstijn 2006). In this view, evaluation results are seen as the feedback part of the process. The feedback provides information about quality to the ones who are responsible for the improvement of quality in institution. For this point, in order for the IQA process to be effective, the evaluation feedback should be implemented by the institution. This summarizes the four basic elements contained in the process of assuring internal quality when considering the implementation of quality assurance system in institutions.

#### **2.4.1 Proposed components of an ideal Internal Quality Assurance System**

##### ***A Quality Assurance Code***

A quality code is a very important resource for quality assurance process, both internal and external in the higher education fraternity. It is a holistic tool that brings order into the higher education industry while ensuring and safeguarding quality education.

A quality assurance code is a primary resource for quality assurance, quality control, quality audit and quality enhancement purposes. The quality assurance code provides a reference and starting point to institutions for setting as well as maintaining academic standards of programmes while assuring quality of learning. This helps ensure comparable and consistent higher education delivery across the board.

The quality assurance code also provides a reference point for the management of quality and academic standards. The Quality code offers a framework for assuring quality by providing guidance to institutions, specifically their staff involved in admission, recruitment and selection. It guides the institutions in developing appeals and complaints policies and procedures about recruitment, selection and admission as well as address issues to do with recognition of prior learning for the purposes of meeting entry requirements for a programme. Processes, policies and regulations for the recognition of prior learning are made to be accessible and transparent to its target audience. The quality assurance code spells out expectations to institutions about external examining, which they are required to meet in their use of external examiners. The review and monitoring of programmes is an important process within institutional internal quality assurance mechanisms. The presence of a robust and detailed quality code is critical to an effective quality assurance system's operations, both internally and externally. The quality code therefore assists and guides institutions in the process of reviewing and monitoring of programmes so as to ensure quality and enable institutions to reflect on the learning opportunities students have experienced, the academic standards achieved, and their continuing currency and relevance (UK QAA Handbook 2017).

The quality code guides and assures quality and structure in dissemination of information about the institution. Institutions produce information about their services to various audiences and for specific purposes (QAA handbook 2017).

Lastly, the quality code helps maintain academic standards by ensuring that awarding bodies establish transparent academic frameworks and regulations that govern how they award academic credit and qualifications. This helps ensure that credit and qualifications are awarded only where the achievement of relevant learning outcomes in the module has been demonstrated through assessment.

### ***A Quality Assurance Center (QAC)***

A quality assurance center is a unit in an organization mandated to support QA activities and processes that leads to quality enhancement in an institution.

#### ***Structure and function***

The QAC acts as an internal auditor, reporting directly to the highest authority, in this case the head of the institution. Therefore, heads of departments, deans of institutions should be responsible for maintaining quality culture in the institution as highest figures of authority (EUA 2009). According to Newton (2002, p.189), ‘the center for quality assurance performs five primary functions including supportive role, coordinating role, interpretative role, monitoring role and administrative role.’ Quality assurance center is structured as an independent unit, operating autonomously within the university and just shares the supportive role in decisions on quality management at the university’ added Newton. It contributes to the development of quality system and plan, it checks and evaluates QA activities in the institution regularly, to draw and share experiences across the whole institution, it supports the institution in the process of conducting self evaluation, it assists faculties, departments, institutes, centers and other units in data collection, analysis and interpretation through offering workshops on these subjects. (Westerheijden et al. 2010).

A QAC is established as a management support unit with quality assurance staffs responsible for quality assurance in different faculties and departments of the university. With the contribution to development of quality system and plan in institution, quality assurance center is needed to maintain coherence in the institution and bring the needed professionalism into quality assurance (Westerheijden et al. 2010).

The QAC supports the self evaluation process of the departments or the institution as a whole. It can also assist the institution to recognize the nature of the expectations which are laid upon them and to prepare for the form of external quality inspection which is about to be visited on them. Furthermore, the QAC also plays a role in institutional data collection and analysis to

support institutional planning and management and quality assurance processes and assisting institutions to monitor effectively (Sursock 2011).

### **The position of a QAC**

In general, quality assurance center has responsibility for providing information to the institution management in building the mission, strategy plan and developing the quality assurance system of the institution. The QAC supports the management of the institution in constructing a quality assurance policy, developing and implementing quality assurance plans and activities. For its responsibility in institution, Sursock (2011) has identified five primary functions of QAC which are as follows: providing expertise: the quality assurance officer visits faculty regularly and provide expertise in developing their QA processes, playing the coordination role particularly when there is a process of evaluations that is organized by the institution or when the process of evaluation is devolved to faculties. He further says that, the QAC also plays an interpretative role, where QA officers interpret the national quality assurance requirements so as to adapt them to the institutional context. The office provides instructions, collects information, point out the problems, but does not get involved in solving them which is what can be called the monitoring role. The QAC as well plays an administrative role by organizing and preparing external evaluation visits or processing institutional questionnaires (Sursock 2011). All these responsibilities of a QAC show that, a QAC is important part to the daily functioning of an institution and therefore its establishment should not be taken lightly.

### **2.5 IQA Implementation process**

The implementation process of quality assurance processes can be likened to curriculum implementation process coined by Ndawi and Maravanyika (2011). Planned events follow a certain sequence in their implementation process. Different curriculum implementation actors are engaged in order for the events to be successful. This concept identifies the actors, explain their roles and challenges they face in curriculum implementation. Actors such as the educator,

learners, the community, institution administration, education inspectors and the government are discussed (Ndawi and Maravanyika 2011). .

According to Ndawi and Maravanyika (2011) the term curriculum implementation can therefore be defined as the actual process where educational plans and intentions are put into practice to achieve certain goals. In the light of its nature, internal quality assurance ensures that an institution has policies and mechanisms in place to make sure that it is meeting its own purpose and standards. More elaborately, the fundamentals of IQA system consist of the clear goals and objectives at organizational level as well as at program level, the support in implementing all the objectives, the regular quality evaluation, and the clear procedures and support with regard to the follow-up of evaluation activities (Mishra 2007).

Accordingly, the process of internal quality assurance in institutions can be distinguished into these following phases: ‘defining institutional mission and strategic goals and knowing what quality means in the light of its own goals, setting up processes to ensure that quality is reached and to monitor progress in this regard, and finally being able to react when all is not well, or being able and willing to improve continuously even when thing seems to be working properly’ (Loukkola & Zhang 2010, p.78). This is where an implementation committee comes to play its part.

### **2.5.1 Actors in QA implementation and practice**

There are various actors that play crucial roles in the implementation and practice process for instance inspectors in the form of BQA play a critical role in the QA implementation process. The actors in an institution are as follows:

#### *The Academic staff*

The academic staff should be involved in implementing and developing QA. They should take ownership of the quality goals set in their respective institutions. Njoku (2012) noted that it requires everyone’s responsibility and involves provision of opportunities for professional development, and ensuring motivation and satisfaction of staff with their work environment and devising incentive mechanisms.

The staff expertise in quality assurance is vital in allowing the institution to monitor effectively the areas of strengths and weaknesses and to develop the appropriate actions in response to the university's requirement. Accordingly, quality assurance officers are required to have capability in collecting and analyzing the key institutional data in order to support institutional planning and management and quality assurance processes.

### *Leadership and management*

The institution's leadership should at all level and the board be involved in and committed to the development and implementation of quality assurance. This involves setting the overall direction of the institution towards improvement of quality education, introducing policies and structures for quality assurance with clear responsibility at all levels and monitoring their implementation. In this regard, an institution's leadership and management system is effective if it ensures the active participation of all actors (staff, students, etc.). A professionally capable, credible and visionary leader and/or manager is crucial (Nguyen 2012).

Westerheijden (2007), stated that leadership is essential to provide institutions with the initial steer and the broad frameworks of quality assurance mechanisms. He further says that leadership is needed to facilitate internal debate in order to trigger the intrinsic motivation to implement internal quality assurance and to make sure that quality assurance processes do not end up being bolted on. Additionally, as mentioned in EUA (2009) the ambiguity and the multi-facet mission of institution which might lead to contradictory strategy is a specific challenge for higher education institutions; therefore it is crucial to implement the institutional leadership to formulate, discuss and communicate clear priorities and guidelines and includes them in the institutional overall policy plan.

However, leadership is not only needed at the senior management level. Because of the fact that quality assurance process actually mainly happens at faculty level, the commitment of bottom-up leadership will play a more important role in sustaining the process of internal quality system. From the top, the senior leadership will be responsible for initial steer like monitoring, making decisions or facilitating the process, and the lower-level leadership will take the lead in developing the quality system process. Therefore, as argued by Sursock (2011) in order to manage the process of quality assurance in institutions effectively, it is crucial that the leadership

at all levels of the university pull in the same direction and be able to persuade the staff that they are important players in achieving the strategic orientation of the institution.

Additionally, the leadership should provide staff with assistance in improving their teaching or introducing innovative pedagogies, professional development schemes that can ensure that staff perceive quality assurance process as useful rather than just sanctions (as may be seen by them when doing self-evaluation) for failures (Sursock 2011).

#### *Administration/Quality assurance staff*

As quality assurance must be taken as a concern by all staff members, it is important to invest in staff development in order to avoid internal quality assurance arrangements becoming punitive (Sursock 2011; EUA 2009). In the self-evaluation process at institutional level, there may be a situation that staff may feel threatened if the evaluation is perceived as an appraisal process rather than an opportunity for improving performance; therefore, professional development programs in this case can help staff gain confidence and trust in their institution, and avoid that staff may perceive quality process as a threat to individual career development (EUA 2009).

As argued by Materu (2007) the availability of competent professional QA staffs potentially affects the effective quality assurance in institution. The need for QA training in institutions is highly mentioned in AUN (2010) as one of the factors that can help institutions set up an effective QA system.

According to Materu (2007), to enhance QA knowledge, it is necessary to include training of self evaluators and peer reviewer who would also be available to serve in accreditation set up by the national QA agency to support institutions in developing a strong internal quality assurance system. Furthermore, it is also suggested that the national agencies should support the development of quality assurance at institutional level by providing methodologies, methods, standards and organization models for use by universities in their internal quality assurance process. Professional development is considered as a major requirement for enhancing the quality of staff and raising their quality awareness so that the quality assurance process can be implemented effectively at local level. Staff development schemes may include training to develop skills and increase the motivation of staff.

However, the problem is how to implement staff development schemes in an integrated and coherent way so that when quality culture is introduced and quality process is implemented, staff will perceive the quality issue of their institutions as being part of a framework that can benefit everyone (EUA 2009). Another challenge in the area of staff development is that it is quite expensive because it always requires appropriate human and financial resources, and even some changes in equipment and facilities. Therefore, some institutions cannot pay much attention on this issue, causing some barriers for internally implementing the process of quality system effectively.

### *Students*

The quality assurance systems should value the role of students in quality improvement. This shall involve creation of a learning environment that ensures the active participation and commitment of students in their learning and in the quality assurance processes.

Therefore, one can safely conclude that curriculum or QA implementation's successes and failures solely depend on the mentioned actors as alluded in the foregone discussion.

## **2.6 Strategies for promoting an effective IQA system**

### ***Having a strategic organizational structure***

One of the key influential factors for a well-functioning internal quality assurance system is the appropriate organizational structures for quality assurance. There are not only the senior managers responsible for the institutional quality but also there should be the involvement of staff and even students. According to Westerheijden (2007), this affects the way quality process is introduced into the institution. He further firmly argued that quality assurance mechanisms can only be developed if responsibilities are shared and accountability lines are clear at local level. Quality is thus assured at each stage in the production or delivery where responsibilities are devolved to the lowest possible level and that the senior management team or in other words, at each level of the institution.

### ***Having an effective institutional leadership***

Leadership in institution is emphasized as a very important factor influencing the success of quality assurance process. Leadership is needed to explain the essential of internal quality processes and to create the conditions for introducing the processes by clarifying the responsibilities, developing frameworks and ensuring the appropriate follow up of internally organized quality reviews (Nguyen 2012).

EUA (2009) has addressed four important functions of the institutional leadership as follows: setting the overall institutional strategy and coordinating its implementation, promoting and communicating quality culture, developing relations with the staff and monitoring quality.

Since the senior leadership is in charge of the strategic direction of the institutions, it is responsible for setting guidelines to guide the activities of staff in the institution. After setting the basic strategies, the leadership's task is to promote and communicate the strategy, quality goal and related decision to staff members, students and external stakeholders. The leadership also needed to create conditions for quality culture in institution and to ensure that staff members can perform well in a way that is in line with the values of the organization (EUA 2009).

### ***Allocating a budget for quality assurance activities***

The availability of financial and human resources (including staff development scheme) is an influential factor towards the implementation of internal quality assurance. A quality assurance system should consider that resources (human, physical, financial and support services) are deployed and utilized effectively to the improvement of quality of education. This shall also include the allocation of reasonable resources to implement quality assurance in the higher education institutions. Njoku (2012) indicated that quality assurance costs resources. Particularly, the institutional commitment to the issue of quality requires a continuous investment in financial and human resources.

It was also concluded in EUA (2009) that the lack of funding for quality measurement will cause the institutional mission to remain unfulfilled. Adding more burdens, Reichert (2008) mentioned that the resources should be reserved for the quality review process and for implementing the

recommendations as well. And more importantly, the resources for the improvements should be significantly higher than the resources for the review processes. Therefore, as mentioned in the study of EUA (2009), since the investment in quality is vital for higher education institution, and in order to reduce the cost, the scope of the review should be reduced accordingly.

In summary, the organization structure, leadership, staff's expertise and resources are factors that can have an impact on the implementation of quality assurance process in institutions and strategy to improve those areas is critical in building a robust system.

## **2.7 Common challenges institutions face in implementing IQA systems**

The international element of the demand on quality of resources and delivery is accentuated by the pervading influence of globalization, the ever-increasing mobility of students and scholars, the change of market forces in the world economy and the opening up of national, political and economic borders to free trade in services have had a great impact on the need for quality assurance in higher education in recent times. Globalization therefore has made the need for internationally recognized standards among and between nations more urgent (Lukket 2006). With many new providers offering options for postsecondary study, it is sometimes difficult to distinguish legitimate institutions and fake institutions that make credentials available for purchase. This further increases the urgency of mechanisms for quality assurance. To this effect, UNESCO has launched an online portal to guide individuals to sources of information that will help them distinguish legitimate from bogus documents and institutions.

Materu (2007) asserted that institutions of higher learning have become overwhelmed by the large number of applicants, which have forced many of them to admit students beyond their intake capacity. However, overwhelming numbers beyond the intake capacity affect quality delivery because of limited resources such as library, furniture, computer laboratory, lecture rooms.

Running an institution, requires significant investment in providing and maintaining a basic level of infrastructure, facilities, and equipment. Most institutions in Botswana no longer get full support from the government, private institutions equally private universities have to fund

themselves and therefore face quality assurance challenges brought about largely by poor financial resources which render it impossible for them to acquire adequate human and material resources to support quality teaching and learning and this has invariably led to the quality being adversely affected.

## **2.8 Conclusion**

The main question pursued in this study is: What is the extent of internal quality assurance implementation of QA policies and practices at MTTC, the case institution used in this study, and what are the challenges in the implementation process? The proposed conceptual framework for this study is such that an ideal robust IQA implementation at any institution includes the establishment of quality assurance code or policy, a quality assurance center, an implementation committee which oversees the implementation process, guided and informed by a national quality framework which is the external quality assurance system. However important insights have emerged from the literature of QA models written by various authors and there are some commonalities in focusing on the internal and pedagogical processes (Dill 2000). For the transformative model, a culture of continuous quality improvement is at the center of quality assurance. These models focus on the conditions and internal processes including aims, policies and methods that drive improvement at the student-staff interface. The quality management framework for higher education and Massy's model focus on quality processes that emphasize on the the quality of the curriculum, student learning outcomes and the factors that affect quality.

Considering the main views of these QA models, it is still important that a robust QA system should have a structured quality assurance unit, guided by a clear quality assurance code and supported by a QA implementation team as shown on the proposed conceptual model in Fig 1. While it is ambiguous whether institutions in Botswana have actually implemented quality assurance process internally as expected by BQA this study examined the extent to which MTTC implemented the National Quality Framework within its organization. The research also assessed the extent of practice of quality assurance by looking at the QA activities and processes present within the institution thereby investigating whether the QA vision of the institution has been

assimilated across the board that is amongst all employees of MTTC. Based on that, it becomes essential to conduct a study of this nature in Botswana.

## **CHAPTER 3: METHODOLOGY**

### **3.0 Introduction**

The aim of this chapter is to expound on how the research was conducted. The chapter will cover the research approach, mainly the data collection methods and techniques used to gather information from the respondents as well as the sampling methods, size and procedures. In this chapter the researcher will as well, justify why specific research instruments and data collection procedures were used.

### **3.1 Research Paradigm**

This study used pragmatism and critical realism paradigm since they offer particular implications for mixed methods research according to (Creswell & Clark 2011). Pragmatism places primary importance on the research question.

According to Creswell et al (2011), critical realism utilizes the compatibility thesis of worldviews, supporting the point that quantitative and qualitative research can work together to address the other's limitations. In this respect, the paradigm followed is appropriate for this study as the study is using the mixed method approach and as well use research questions to guide the study.

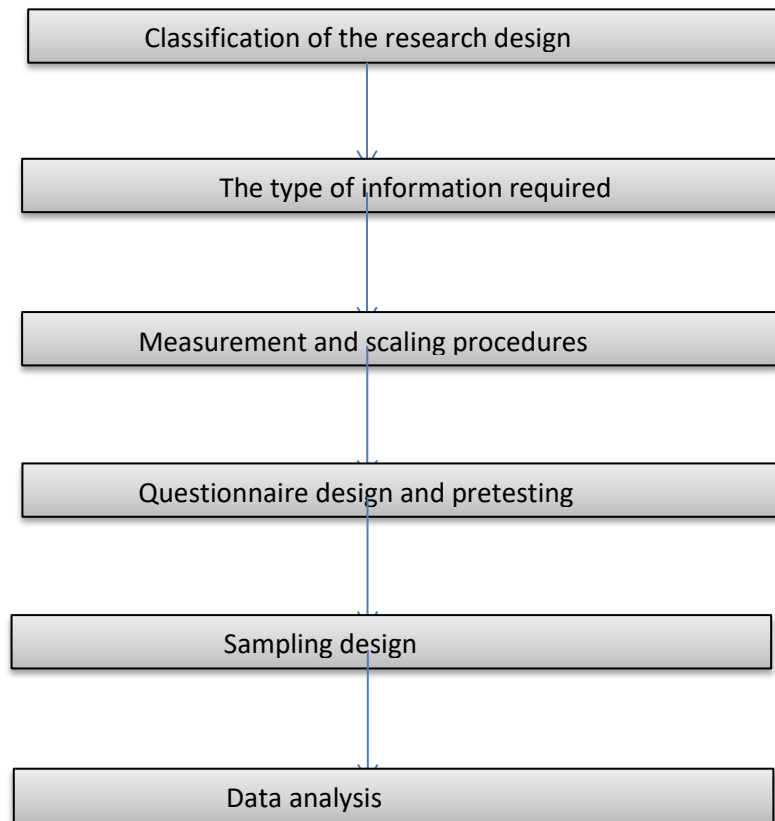
### **Research Design**

#### **Formulating a research design**

Burns and Bush (2010) asserted that a research design is a blue print and a frame-work for conducting a study. It is a plan that describes how, when, and where data are collected and analysed. The blue print is for collection, measurement and analysis of data.

Research design includes a number of components. These components are illustrated in Figure 2 Malhotra (2007, p.78) and will serve as a guideline to explain the research design used in this study.

**Fig 2                      The components of the research design**



***Source: Adapted from Malhotra (2007, p.78)***

## **Classification of the research design**

### **Explorative research design**

This study used the case study approach as described by Yin, (2003) and drew data from MTTC. The case study approach was used because of the interest in understanding the contextual circumstances pertaining to the phenomenon under study (Yin 2003). Burns and Bush (2010, p.18) propounded that, ‘exploratory research design is mostly unstructured, informal research that is undertaken to gain background information about the general nature of the research problem The design was employed so as to investigate and discover the real state of the institutions in Botswana.

This type of research design is mostly used when there is little prior knowledge on which to build and it is conducted on a small and non-representative sample.

The aim of using exploratory research was to collect secondary and/ or primary data and use an unstructured format to interpret them. For this research, data was gathered from diverse sources ranging from the institution's assessment and exam department to reviewing documents from the institution. The researcher approached key people and experts inside the institutions to discuss the problem in greater depth. The explorative research design was complemented with the use of secondary data.

### **Descriptive Research**

Descriptive research design aims to identify meaningful relationships, determine whether true difference exist, or verify the validity of relationships between phenomena. It can be used to identify and classify the elements or characteristics of the subject (Shiu et al. 2009).

Shiu et al (2009) argue that to determine if a research design should be descriptive, it should be based on three factors: (1) the nature of the initial decision problem or opportunity at hand, (2) the set of research questions (3) the research objectives. A descriptive research design requires a clear specification of the who, what, when, where, why and way of the research. Although researchers may have a general understanding of the research problem, they still require conclusive evidence that provides answers to the questions In this case the researcher selected key informants from the exam department, QA committee members and academic staff with the primary motive being to examine the extent to which the case institution MTTC, is implementing and practising quality assurance internally as expected by BQA and other interested stakeholders.

#### *Type of information needed*

Primary and Secondary sources were employed in coming up with the data needed for the achievement of objectives of this research. To specify the type of information that is needed, Malhotra (2007, p.79) advises that the researcher should focus on each component of the problem, the analytical framework and models, and the research questions. As no evidence in the literature could be found on the extent of implementation of QA at MTTC, it was necessary to collect new

information in the case institution and in Botswana context to achieve research objectives set earlier in this study (Chapter 1). According to Malhotra (2007, p.101), ‘to obtain new (and necessary) information, a research must be able to select between a number of different descriptive research techniques, including secondary data techniques, done on a quantitative basis and primary data techniques such as questionnaires.’

### ***Secondary data***

Shiu et al (2009) defines secondary data as historical data structures of variables previously collected and assembled for some research problem or opportunity situation other than the current situation. The secondary sources consulted included the following:

#### ***Internal sources***

Printed documents like apprentice log books, exam guidelines, course curriculum, brochures, flyers, statistics records from the exam department. Internet (government websites) up to date information is easily accessible and the website is constantly updated.

#### ***External Sources***

External sources are those prepared for public distribution and are normally found in libraries or provided by variety of other entities such as trade associations, regulatory bodies, professional organisations or companies. The researcher used databases supplied by these organisations outside the institution like Botswana Qualifications Authority (BQA), Botswana’s quality assurance agency.

To come up with a well-balanced research, the secondary data consolidated primary data obtained from personal interviews. This generally combined theory and practice. Secondary data helped the researcher in discerning gaps and deficiencies as well as enhance comparison with primary data.

### ***Primary data***

Primary data is raw data collected from the actual ground where the activity is taking place to satisfy the purpose of the research objectives and question. Primary data provided the researcher with first-hand information from respondents with regards to the area of the study. Questionnaires and interviews were administered to solicit information from non academic and academic staff of the case institution, MTTC.

### **3.2 Methods of data collection**

To obtain new and necessary information the researcher used descriptive research techniques.

#### **Questionnaires**

Malhotra (2007) postulated that a questionnaire is a structured technique for data collection that consists of a series of questions, written or verbal, that a respondent answers. Shiu et al (2009) defined a questionnaire as a formalized framework consisting of a set of questions and scales designed to generate primary data. A series of questions make up the questionnaires so as to gather all the relevant information from respondents for the purpose of making investigation and conclusion of the problem understudy.

#### **Questionnaire process**

##### ***Constructing and pre-testing a questionnaire***

According to Malhotra, (2007, p. 299). A questionnaire is one of the most basic instruments that a researcher can use to gather quantitative data during a descriptive study. A questionnaire was used in this study, and it was constructed by applying Malhotra's (2007, p.300) ten guiding steps as discussed next:

##### ***Step 1 : Specify the information needed***

For the purpose of this study, the information needed from the questionnaire was determined by analysing the research questions set in chapter 1, and to transform these questions into relevant questions. Furthermore a thorough literature review was conducted and information obtained from this literature review was translated into relevant questions.

### *Step 2 : Specify the type of interviewing method*

For the purpose of this study questionnaires were distributed to respondents.

### *Step 3 : Determine the question response format*

There are three major types of questions that are mostly used in research: open-ended, closed ended and scale response questions. For the purpose of this study the researcher utilised open-ended and closed ended types of response format in designing the questionnaire.

### *Step 4 : Decide on the question wording*

Every question in a questionnaire should contribute to the information needed or serve some specific purpose (Malhotra, 2007:30). For the purpose of this study the literature review assisted the researcher in selecting wording that was used in the questionnaire's different questions.

### *Step 5 : Establish questionnaire flow and layout*

Sequencing the questions is the next step when deciding in the questionnaire flow and layout. For the purpose of this study, the questionnaire (Appendice C) consisted of three sections.

### *Step 6 : Evaluate the questionnaire*

For the purpose of this study, the research objectives linked to the questions in the questionnaire. It can be argued that the questionnaire was structured in such a way, and questions were formalised to gather information to achieve the secondary objectives formulated for the study.

### *Step 7 : Obtain approval from all relevant parties*

For the purpose of this study, the researcher obtained letters from the supervisor to get information from the case institutions.

### *Step 8 : Eliminate errors from all relevant parties by pre-testing the questionnaires*

Pre-testing refers to the testing of a questionnaire on a small group of people who are representative of the sample and who are capable of highlighting possible design error (Malhotra, 2007:319). For the purpose of this study the questionnaires were pretested to individuals that did not form part of the targeted audience.

#### *Step 9 : Prepare final questionnaire copy*

During this step, every question should be proofread again (Bell and Opie 2002). For the purpose of this study every question was proofread again.

#### *Step 10 : Implement survey*

After the questionnaire had been finalised, it is necessary to identify a representative sample of the population to take part in the study. The questionnaires were collected immediately after completion by the respondents. See questionnaire on Appendix C.

The researcher designed questionnaires addressed to lecturers to get an insight into the extent of practice and implementation of IQA system in their institutions. The use of questionnaires made it easy for respondents to respond freely without fear of persecution due to the confidentiality clause on the questionnaire. The questionnaire also covered the quantitative aspect of the study design.

### **Interviews**

Interviews were carried out to obtain information from key non-academic employees and QA management and committee members. Shiu et al (2009) defined an interview as a formal process in which a trained interviewer asks a subject a set of predetermined and probing questions usually in a face-to-face setting. Interviews facilitated the revelation of more information through the recording and taking down of notes from respondents. More qualitative and reliable data were disclosed as questions were clarified for a better understanding by the respondents.

The interviews were very flexible as a result it allowed the researcher to collect large amounts of information from the respondents. The researcher was given the platform to guide the interview, explore issues and probe respondents. Personal interviews helped the researcher to observe gestures and seek elaboration where needed.

### **3.3 Population and Sample selection**

#### **Population**

In this study, the target population was 50 for both quantitative and qualitative aspect of the study, consisting of key non-academic employees, QA management and committee members and instructors from MTTC.

The term population describes everyone of interest who could possibly be included in a research study, and target population describes the collection of elements or objects who possess the information sought by the researcher and about which inferences are to be made (Malhotra 2007).

According to Shiu et al (2009), target population is a set of elements identified for investigation based on the evaluation of research objectives, feasibility and cost-effectiveness. In essence, a target population is a specified group of people or objects for which questions can be asked or observations made to obtain required data structures and information.

## **Sampling**

Sampling refers to the steps that are employed in obtaining information from a subset (a sample) of a larger group (the universe or population). The results from the sample are then used to make estimates of the characteristics of the larger group. The reasons for sampling comprise the ability to make these estimates more quickly and at a lower cost than what would be possible by any other measures (Burns and Bush 2010). Having said that, the researcher estimated a sample of 25 respondents for the quantitative and qualitative aspect of the research.

The sample frame comprised of employees from MTTC. According to Shiu et al (2009) a sample frame is a list of all eligible sampling units or the set of source material from which the sample is selected. Burns and Bush (2010) postulates that it is a master list of the entire population.

## **Sample procedure**

The researcher used both probability and non-probability sampling methods, non-probability sampling techniques (purposive sampling) for qualitative data and probability sampling techniques (stratified random sampling) for quantitative data.

Shiu et al (2009) postulate that probability is a technique of drawing a sample in which each sampling unit has a known probability of being included in the sample used. Non probability sampling is a sampling process where the probability of selecting each sampling unit is unknown. Sampling methods are categorized into probability and non-probability sampling. Probability sampling is a sampling procedure in which each element of the population has a fixed probabilistic chance of being selected for the sample.

Stratified random sampling was used because the target population under study contained a well-defined strata. The target population therefore allowed strata formulation, in other words respondents were selected from defined institutional departments. The purposive sampling technique was used as it helped the researcher to concentrate on people of particular characteristics who would better assist me with the relevant information that I needed for the research problem under study. The purposive nature of the sampling process meant that potential respondents were pre-determined, categorized into specific units that is relevant to the research question. This was done to ensure that respondents bring different perspectives that will adequately respond to the research objectives.

### **Sample size**

In this research the sample size was 25 respondents. According to Shiu et al (2009, p. 9) sample size 'is the determined total number of sampling units needed to be representative of the defined target population; that is the number of elements (people or objects) that have to be included in a drawn sample to ensure appropriate representation of the defined target population.'

The sample size was determined by the bigness and capacity of the institution in terms of staff. MTTC is both a testing and training centre, and their mandate is not only limited to training. There have approximately fifteen instructors for the 15 vocations offered. Therefore 25 respondents were identified for both qualitative and quantitative aspect of the study as the relevant informants needed for this particular research. The 25 included fifteen instructors, two key informants from the IQA committee, two from the examination department and six non academic staff members. These were purposively selected to participate in this study because of their significance to the study.

**Table 1: Sample size**

| <b>Elements</b>      | <b>Sample size</b> |
|----------------------|--------------------|
| Exam department      | 2                  |
| Non-academic staff   | 6                  |
| QA committee members | 2                  |
| Lecturers            | 15                 |
| <b>Total</b>         | 25                 |

Source: Authors construct

### **3.4 Validity and reliability of instruments**

In this research to ensure validity of the instrument, the researcher's instruments were thoroughly checked by the supervisor to make sure that the data gathered was directly addressing the research questions for the problem under study.

Kothari (2004) defines reliability as the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable.

Shiu et al (2009, p.76) postulated that, 'validity is the degree to which a research instrument serves the purpose for which it was constructed; it also relates to the extent to which the conclusions drawn from an experiment are true. Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are.'

To ensure reliability for the quantitative aspect, the researcher used simple English in the construction of questionnaires, pre-tested the questionnaires and included the confidentiality clause. In terms of the qualitative aspect, to improve the credibility and trustworthiness, the researcher used semi-structured interview questions which made it possible to seek for fact as well as critical opinions of respondents which are essential in understanding the topic from the perspective of the respondents. Generalizability of this research to other cases in the national

context was problematic because case study designs are not easily generalised, moreover the qualitative research approach, however efforts were made to preserve the credibility of the findings. Thus, external validity was not totally guaranteed by this research. Generalization was however not the focus of the research, therefore the study still provided useful lessons, which may be used later in other cases similar to this study.

### **Triangulation**

Kothari (2004, p. 8) postulates that, ‘triangulation involves cross examination of evidence through procurement data from more than single source, associating and opposing one account with the other.’ Triangulation is commonly used to demonstrate that more than one technique was used in the study with the goal of triple or double checking the results (Creswell & Miller 2000). Triangulation method was used to confirm the results and to prove validity and reliability of the data gathered. The researcher used interviews, questionnaires and secondary material to collect pertinent data.

### **Pilot study**

The researcher used pilot study to disclose gaps in the design of research instruments so that the gaps could be apportioned to avoid wasting resources and time. Martin and Stella (2007) stated that a pilot study involves respondents who are different from, yet as close as possible to, those who are to be requested to complete the final versions of the questionnaire. The pilot was done at Botho University Campus. The questionnaires were pre-tested using postgraduate students who were not part of the targeted population but covered a module on quality frameworks. The students contributed significantly to the content and structure of the questionnaire. The pilot study provided the researcher with insights and gaps that may have been ignored before engaging in the study, for instance some of the questions were restructured and some of them simplified. The interview guide was also pre piloted to check possible ambiguity, complexity and inconsistencies as well as to enhance credibility of the data collection instrument. A few questions were removed as there were saying the same thing but only in a different way.

### **3.5 Data Collection Procedures**

**Interview Process:** Qualitative interviews were conducted. A total of 10 respondents were targeted for the interviews but only 7 managed to avail themselves. The interviews were face-to-face verbal interactions between the researcher and the respondents guided by an interview guide. Identified respondents were notified before the interview verbally describing the nature of the study and their role. Interview appointments were then booked with those who indicated their availability and their willingness to participate in the study.

Furthermore, before questions were asked respondents were informed about the objective of the research in order to put the interview discussion in to proper perspective. Respondents were reminded of their rights to refuse questions that might compromise their personality or office. They were also assured of confidentiality of information provided and also, appropriate usage of the data collected. Finally, consent to record the interview was sought and those who allowed for audio recording were recorded. The interviews were carefully guided by the use of interview guide. The interview guide ensured among other things that, respondents were asked similar questions in the context of respective. See interview guides used in Appendix A and B.

#### **Questionnaire Process**

The researcher obtained letters from the supervisor to get information from the case institution MTTC. The questionnaires were hand delivered to 15 respondents and only 12 were completed because the data collection was done during exam time and the lecturer respondents were very busy, hence could not find time to fill up the questionnaires even though the researcher made efforts to encourage them by mentioning that it was going to only take 15minutes of their precious time. The researcher even left the questionnaires and collected them after 5 days including a weekend to allow the respondents to fill in soberly without hurrying through the paper. See questionnaire used on Appendix C.

## **Document Analysis process**

Though interviews and questionnaires were chosen as the main research methodology, critical documents were sought for to complement the interviews and questionnaires through systematic document analysis method. Document analysis was done from two different sets of data; policy documents on quality assurance from the institution and BQA documents that provided an overview and expectations of the quality assurance processes. Other administrative documents were used to supplement the quality assurance policy documents. This was done to give meaning and also, to understand the context within which the internal quality assurance policy operates.

The researcher examined the documents with an open mind taking into consideration, the content and the context in which the documents were produced. Content analysis also provides an opportunity to compare expectations and actual outcome of the quality assurance processes to enhance understanding of the process.

## **3.6 Ethical Considerations**

Ethical issues were highly considered in the conduct of this research. The researcher was human sensitive and did not only focus on the subject matter of investigation. On interviews and questionnaires, consent, confidentiality, and accurate representation of data were the main ethical issues of focus to the researcher.

The researcher ensured that respondents voluntarily accept to participate in the study by confirming their acceptance to a written request for interview appointment or for filling in the questionnaire. Prior to each interview, respondents were informed about the purpose of the study, how the data collected will be used in future and their right not to answer questions that may compromise their personality or office. This was done to ensure that information is provided at the free will of the respondents. Anonymity was guaranteed in both questionnaires and interviews, by concealing the respondents names. Anonymity is considered critical to prevent possible trace of specific quotes to specific respondents. Finally, to ensure accurate representation of data, digital audio recording of the interview and field notes were carefully reviewed several times in order to guarantee accuracy in transcription. Documents were analyzed with an open mind to avoid

misinterpretation and misrepresentation, or be influenced by preconceived ideas of the researcher. To avoid plagiarism, the researcher ensured that appropriate quotation and referencing was done to give credit to works of others used in this research.

### **3.8 Data analysis and Interpretation of results**

Data collected from the respondents was presented, deduced, and analyzed through descriptive narration and tables in Chapter 4. Descriptive narration was used to examine the qualitative data collected from respondents whilst tables present, interpret and analyze the quantitative data collected from the respondents. Tables were used because of their ordinary and minimal descriptive statistics since the mixed method approach of this study was skewed towards qualitative. This is Malhotra's last step (2007, p110-11) research process, to report on the preparation of the results and to present the results.

### **3.9 Conclusion**

Chapter 3 addressed the research methodology that was used and outlined the research process as proposed by Malhotra (2007). A mixed research study that is skewed towards descriptive analysis was employed using personal interviews to collect data, and less emphasis was on the quantitative analysis of data using a paper – based questionnaire as the method of data collection. Stratified random sampling technique and purposive sampling was used to select the sampling units.

## **CHAPTER 4: PRESENTATION AND ANALYSIS OF RESULTS**

### **4.0 Introduction**

Quality vocational education is the hope of Botswana to produce quality and skilled manpower that will in turn improve its economy as well as reduce high levels of poverty amongst Botswana. This means that TVET institutions have to institutionalize QA so as to complement the vision of the country and its existing NQF mechanisms to provide quality education. The research examined the current practices and challenges prevailing in the implementation of robust IQA systems in the TVET institutions.

A case study design was used, with MTTC as the case institution. Mixed method research approach was used for the study with in-depth interviews, questionnaires and document analysis as the research tools. The mixed method approach of this study was skewed towards qualitative therefore the qualitative would get most of the data required hence less emphasis on the quantitative aspect. Data collected was presented and analyzed through the use of tables for quantitative analysis and descriptive narration for qualitative analysis. Tables were used to quantitatively analyse data because of their ordinary and minimal descriptive statistics. Fifteen instructors, two key informants from the IQA committee, two from the examination department and six nonacademic staff members were selected to participate in this study. These key personnel enabled the researcher to acquire rich and relevant data.

Even though the population sample used in this research is not big enough to be statistically representative of all TVET institutions in Botswana, the mixing of data findings from the questionnaires and interview responses increased the accuracy of the findings.

According to Creswell (2009) chapter four interprets the results by organizing, synthesising and interpreting the data collected according to research questions and hypothesis. The researcher followed this approach and therefore the following research questions and hypothesis guided the study:

1. What is the nature of internal QA systems and practices in TVET institutions in Botswana?

2. What are the main challenges faced by TVET institutions in implementing internally the national quality assurance policies, standards, procedures?
3. To what extent are the TVET institutions implementing the national quality assurance system internally?
4. How can the TVET institutions improve the implementation of the new National Quality Framework internally?

*Assumption 1:* Institutions have implemented QA internally by setting up a committee or a unit or a department

*Assumption 2:* The practice of QA is evident amongst staff members, academic and non – academic employees.

The conceptual model was such that for an ideal robust IQA system to be implemented at any institution, there should be three important components which are, a clear quality assurance code or policy, an established quality assurance committee or unit or center or department (depending on the capacity of the institution) and an implementation committee which oversees the implementation of QA processes (monitoring, evaluation and quality improvement) as guided and informed by a national quality framework.

Therefore the purpose of this chapter is to interpret and present the results that were obtained through the data collection phase in Chapter 3 of the study. The chapter concludes with giving a summary of findings of the research.

#### **4.1 Findings on the Institution: Madirelo Training and Testing Center**

Document analysis revealed the background of the institution (MTTC) as follows, MTTC was established in 1986 through the Apprenticeship and Industrial Training Act, No. 2 of 1983. MTTC has the mandate to coordinate apprenticeship and industrial training and Trade Testing programmes so as develop industry skills required in Botswana.

### ***Qualifications Offered***

There are 15 apprenticable vocations offered by MTTC. The vocations are Automotive vocations, Building and Construction vocations, Electrical or Electronic vocations, Heavy plant vocations, Mechanical vocations, Hotel and Catering vocations, Agricultural vocations, Automotive vocations, Construction vocations, IT vocations, Mechanical vocations, Textile vocations and Health and Beauty vocation. MTTC awards nationally recognized qualifications (Theory and Practical) at three levels, which are:

- National Craft Certificate (NCC)
- Trade Test 'B'
- Trade Test 'C' (MTTC 2015).

## **4.2 Findings by Research Questions and Hypothesis**

### **Research Question 1:**

*What is the nature of internal QA systems and practices in TVET institutions in Botswana?*

Interviewees revealed that efforts of establishing an internal quality assurance system are there even though faced by challenges, therefore there is only a QA committee at the moment. QA systems and practices for assuring examinations are there, clear and robust but there are no mechanisms for assuring quality of teaching and learning. The current nature of IQA systems according to respondents is that there is no QA policy in place and no clear mechanism for evaluation of teaching, learning and work of the lecturers. The internal quality assurance committee is structured as shown in Fig 2 below which shows MTTC's internal quality assurance structure.

**Fig 2: MTTC'S IQA committee structure**



The IQA committee meet three times in a term, at the drafting stage of the exam, at the copying stage and lastly on the correction stage of exams. As shown above the TAC is made up of trade representatives from the 15 apprenticable vocations offered by the institutions. The subject experts are the instructors for each vocation.

The establishment of this committee was an individual set up after seeing the need to put things in order. According to the conceptual model the QA process should involve monitoring, evaluation and quality improvement. It is evident from the research findings that only one element which is monitoring is evidently being practiced in the area of exams and student progress. There is no evaluation of courses and continuous improvement processes in place.

Although the purposively selected interviewees were not big enough to be statistically representative of the staff population, the results still give a fairly accurate representation of the nature and state of practice of QA in the TVET institutions, especially given that the interview response data is augmented by data from questionnaires.

## Research Question 2:

*What are the main challenges faced by TVET institutions in implementing internally the national quality assurance policies, standards, procedures?*

The analysis of findings based on section C of questionnaires administered to lecturers suggested that the main challenges faced by TVET institutions in implementing IQA systems internally are lack of resources and manpower. Interviewees also similarly revealed that there is not enough equipment and tools for teaching practical courses and that the little equipment available no longer meets today's technology. Some substantiating statements were:

*Availability of equipment in vocational training is critical because this is a hands on institution. We work with machinery, tools and equipment and without these there is no learning. Therefore the government must increase the budget for vocational institutions if we want to produce quality graduates.*

*It will be better if we also have strong partnerships with companies so that they support us, long back then car dealers used to come and present latest cars and our students would work with new and latest car models. This will also help us to teach relevantly to this ever changing global market.*

Respondents interviewed also identified the absence of manpower as a major setback in assuring quality education in vocational institutions. The responses showed that experienced instructors are inadequate. One respondent alluded to the fact that lecturers are wrongly placed because of that shortage. One of the statements to that effect was that:

*We do not need a fresh graduate with a Masters to teach practical courses, we rather have someone with industry experience plus a teaching qualification to teach vocational courses. Theory is one thing, and practical is another.*

In this regard, according to the respondents in this study, instructors in vocational institutions must have gained industry experience and a teaching course for them to effectively teach vocational courses and thereby produce quality graduates relevant to the industry. The responses from interviews revealed that most lecturers do not have teaching qualifications or train the trainer course. To them, the key to quality is skilled lecturers. The academic staff is the most important learning resource in an institution. It is therefore important that institutions invest in lecturers who

have industry experience, skills to teach their subject and expertise to communicate their knowledge. This implies that TVET institutions should ensure that its academic staff is qualified and competent to teach.

In the absence of adequate resources successful implementation of quality assurance in TVET institutions is difficult. The interviewees further revealed that adequate facilities and equipment are necessary for effective teaching and learning but the opposite is the current reality at MTTC. These statements appear to show that adequate resources equal quality education and successful practice and implementation of quality assurance in the institutions. Students depend on availability of resources in their learning. These include resources like libraries, ICT facilities, human support in form of academic advisors and tutors. These resources should be available and accessible to students.

Respondents interviewed identified the absence of a clear QA policy and guideline on which to work on as a major problem facing instructors and other personnel in their office of work. It was identified that it is difficult to implement quality assurance internally without a code or policy to guide them.

With respect to staff training and development in the area of QA, results from questionnaires showed that 70% of instructors do not feel enthusiastic about QA works. The interview results at the same time showed that perspectives on QA focus more on input rather than process. For this reason, the bad attitude, lack of knowhow and awareness of QA issues amongst lecturers is also one of the hindering factors for IQA implementation.

The interview response data is augmented by data from questionnaires therefore the results give a fairly accurate representation of the main challenges faced by TVET institutions in implementing internally the national quality assurance policies, standards, procedures even though the population sample is not big enough to be statistically representative of the staff population in Botswana.

### **Research Question 3:**

*To what extent are the TVET institutions implementing the national quality assurance system internally?*

The response showed that to a certain extent at a smaller scale the institution deliberately implemented an IQA committee. This was an internal and deliberate set up from the department of examination as there were faced with no choice but to put structure and guidelines to the assessment, marking and grading system. The IQA committee started as an Exam committee, and was then turned into an IQA committee.

It was revealed from the analysis of interviews that that the IQA committee only focuses on assuring examinations. One of the respondent said it was going to be ideal if the committee would grow into a department with QA experts and be able to assure any other areas like teaching, learning, admissions and so on across the board, not only assessment.

All the respondents that were interviewed in principle agreed that the assuring of quality academic standards in the area of assessment remains the focus of the QA process and they expressed the view that quality assurance should go beyond assessment but cover teaching, learning and research. For example one of the respondents said '*.... quality assurance should not be limited to marking and grading only but the entire life cycle of the institution. There should be quality evaluation on lecturers, administrative staff, student services and so on.*' This shows that ideally the quality assurance process should be expanded to cover other aspects of the academic life for it to be robust and effective.

Curriculum evaluation and review is needed for checking if the courses are in line with institutional goals and objectives. QA activities like curriculum reviews should be well organised by the institution in collaboration with industry experts, trade representatives the regulatory body BQA. Feedback from students, academic peers, BQA and relevant industry representatives should be used in the review process. This therefore implies that TVET institutions should have formal mechanisms for periodic reviews, monitoring and evaluation of the courses and the curriculum.

The respondents interviewed revealed that there are no clear procedures put in place to facilitate and to assure teaching and learning. However, lesson time-tables are prepared beginning of every semester and available teaching materials are also utilized quite effectively. MTTC uses log books to effectively monitor learning. Each student logs in the number of hours they are taught each day in specific areas. After the end of the term each student should have met a specific

number of learning hours per lesson. Supervisors are allocated to students and are responsible for checking the log books in between the term and also at the end of the term. Similarly one of the questionnaire participants wrote:

*‘The institution has effective monitoring system to track the effectiveness of learning activities.’*

Some of participants interviewed additionally indicated that procedures for exams are fair and rigorous since MTTC is an assessment centre for all vocational colleges and brigades in Botswana. The MTTC Examinations Guidelines document regulates the conduct of examinations specifying what should be done before, during and after exams and this is made available to all students. Examination procedures and guidelines in the document covers the following: invitation of Board of Examiners, setting of exams, laying up of papers, proof reading of exam papers, approval of papers by TAC, registration of candidates, attendance lists, multi copying of papers, conducting of theory and practical exams, list of candidates attendees/absentees, the marking process, collations of results, publishing of results, remarking procedures, certificates, re-sits/supplementary exams and finally re-registration for re-sit or supplementary exams.

It could be deduced from these findings that MTTC has proper guidelines and procedures for conducting effective and transparent examinations. Student assessment is an important element in an institution and in education at large because the outcomes of exams have a weighty effect on a student’s future career life. This is therefore why assessment should be carried out professionally and assured at all times. In addition, assessment provides with vital information to institutions about the efficiency of their teaching as well as how committed the lecturers are to their work.

The findings from questionnaires revealed that student-lecturer assessment is not well done, only two out of 12 lecturers who participated in the study confirmed that they do those assessments as an individual deliberate move. The institution does not necessarily require them to do so as it is not written anywhere. This is why a QA policy is relevant. Students are the best people to judge the quality of learning and teaching as they are the ones who experience the teaching methods used. They have a more valid opinion about the quality of education and staff. They are supposed to assess the course as well as the lecturer who taught the course. Areas of assessment should include provision of a course outline with detailed references; amount of content covered in the

course, the pedagogical methods of teaching, availability of notes or course materials among others. However, the student's feedback needs to be evaluated and counter-balanced well by other opinions. HIEs should make use of student feedback and evaluations regularly as the feedback is vital for quality improvement. These outcomes of evaluation exercise must also be communicated to students so that in future the students will be willing and enthusiastic to engage in the student-lecturer assessment activities at any given time.

Even though the population sample used in this research is not big enough to be statistically representative of Botswana TVET institutions, the mixing of data from the questionnaires and interview responses increased the accuracy of the findings on the extent at which TVET institutions are implementing the national quality assurance system internally.

#### **Research Question 4:**

*How can the TVET institutions improve the implementation of the new National Quality Framework internally?*

In responding to this question, respondents interviewed suggested that BQA advises the government or institutional leaders to set up IQA departments in government institutions. Analysis of data showed that the IQA committee has a limited mandate within the bigger institutional or BQA quality assurance vision. This was explained in the following quotes:

*'This department is responsible for implementing one aspect (assessment) of the quality assurance policy strategy stated by BQA. We cannot do any other thing outside our mandate, because we will not have the legal authority to act. We can initiate change in the implementation process but not the policy itself. Our job is to ensure that what is in the quality assurance strategy in my department is implemented to achieve results. And because our decisions are not laws but conventions, it sometimes hampers our ability to take certain initiatives. But we do cooperate well with the management to cause change. This is the reason why a department on IQA should be set up and stands on its own, assuring quality in all aspects of the institution and not only in assessment.'*

Analysis of the responses showed that there is need for incentives to motivate IQA committee members. It was however noted that, when incentives were easily available then, IQA committee members were committed and would attend meetings without fail.

Samples of responses are given below:

*'Long back IQA committee members from other industries used to get some incentives upon attending meetings. This motivated people from other industries to join and contribute to the quality matters discussed. Now when you call for a meeting to review exams only a few interested parties from big organisations come, but other middleman with vast experience no longer come because it is difficult for them to claim those incentives through HRDC and that is what used to motivate them. Something should be done about it because these are important people whose contributions are very relevant to the learning process.'*

This implies that the government needs to revisit the area of giving incentives to IQA committee members as the results show that it was effective.

There should be adequate staff development activities. Staff members should be given opportunities to develop their skills and know-how as this is a vital building block of IQA assurance and continuous quality improvement.

Given that the interview response data is augmented by data from questionnaires the results give a fairly accurate representation on how TVET institutions can improve the implementation of the new National Quality Framework internally.

#### **Assumption 1:**

*Institutions have implemented QA internally by setting up a committee or a unit or a department.*

The assumption was proved right as the findings show that the institution under study has an internal QA committee in place.

#### **Assumption 2:**

*The practice of QA is evident amongst staff members, academic and non – academic employees.*

The findings show that it is not so, the QA practice is only evident in the exam department. The instructors are not familiar with assuring learning and teaching process, similarly other departments do not have knowledge on QA issues and processes.

#### **4.3 Findings from the conceptual model reviewed**

##### ***The role of the quality assurance unit or center (A qualitative analysis)***

The role of a QAC unit is one of the most important construct in this research. All the respondents interviewed welcomed its establishment but showed that they had less knowledge on its purpose and doubted its viability. One of them raised some questions this regard:

*'Establishing a QA department is possible but the question is: Do institutions have this capacity, in terms of manpower and resources.'*

This came as a realization that for a department to be functional it needs staff members trained on QA and these need salaries. The establishment of a QA unit was hailed in this study as a step in the right direction. It was alluded to be a robust unit with highly qualified QA professionals that has to be established in all the institutions in Botswana.

The following experts from interviews pointed that:

*'If you want to improve a system, you need trained people to initiate and coordinate the efforts. A training project must be put in place that will help to sensitize staff members across the board on QA issues.'*

Therefore the results of this study appear to illuminate the fact that the quality assurance unit is an important concept in the institutions.

However, the quality culture needs to be instilled across the board through training staff members on quality assurance. Institutions must therefore launch a programme for training staff members for examples instructors.

#### 4.4 The quantitative analysis of the research

Tables were used to quantitatively analyse the extent of knowledge, awareness and practice of QA among instructors in their teaching process because of their ordinary and minimal descriptive statistics. To note, the mixed method approach of this study was skewed towards qualitative therefore the qualitative would get most of the data required hence less emphasis on the quantitative aspect.

Findings from questionnaires analysed show that most lecturers have a misconception about QA exercises and its advantages. Most academic staff view IQA units a witch hunting, policing and fault finding departments. This implies that QA is still not yet embraced fully as an important aspect for the institution to fully function efficiently and excellently. For instance, one lecturer felt that it is possible that student-lecturer assessment is not popular among lecturers as most lecturers think students are reporting and exposing their weaknesses, and quality of lesson delivery.

It is interesting to note that, section A of the questionnaire was meant to measure the extent of knowledge and awareness of QA in general and QA terms among instructors and the results showed that only 20 percent had knowledge on what quality assurance is. The responses also revealed that 10 percent acquired a course in quality assurance and 10 percent is studying towards one. The following table shows the results from the 10 lecturers who were evaluated on their knowledge of QA terms. Table 2, shows the results.

***Table 2: Findings on measurement of knowledge of QA terms amongst instructors***

| <b>Definitions of QA terms</b>       | <b>No answer</b> | <b>Correct Answer</b> | <b>Wrong Answer</b> |
|--------------------------------------|------------------|-----------------------|---------------------|
| <b>1. Quality education</b>          | <b>6</b>         | <b>4</b>              | <b>2</b>            |
| <b>2. Quality assurance</b>          | <b>6</b>         | <b>4</b>              | <b>2</b>            |
| <b>3. Internal Quality Assurance</b> | <b>8</b>         | <b>3</b>              | <b>1</b>            |

The responses' definitions of quality education were as follows:

*A1 'Best education'*

*A2 'When what you have learnt is applicable to work market.'*

*A3 'suitable education for industry which means fit for purpose'*

*A4 'Education that can market the graduates'*

The responses' definitions of quality assurance were as follows:

*A1 'Checking of examinations or test papers whether there are applicable to assess the learners'*

*A2 'adherence to set standards'*

*A3 'when a student is productive at the work place'*

*A4 'good quality'*

The responses' definitions of Internal Quality Assurance (IQA) were as follows:

*A1 'What is learnt is relevant to what is needed at work.'*

*A2 'adherence to set standards and regulation within the institution'*

*A3 'checking of test papers within the institution'*

The respondents in this study were also of the opinion that the training they were advocating for should lead to capacity building in the institution. Capacity building was seen as directly influencing the improvement of quality.

To compliment the response from the questionnaires, the idea that quality assurance must spearhead capacity building was also hailed during interviews. The main activities of the quality assurance unit should include conducting workshops for staff said one respondent. This is yet to be seen in the institution under study as less capacity building workshops on QA have not been done. Findings from interviewed participants reveal that a few of them have once attended one or two workshops hosted by BQA last year. The following were suggested:

During interviews it became evident that staff sensitisation and capacity building programmes must be instituted by allowing all staff members to attend BQA workshops. The interview

respondents were also of the opinion that there must be in-house professional training to develop workers on quality issues. The following is a response from one interviewee,

*‘There is need to ensure that academic and non-academic staff members have the necessary tools to be excellent professionals that will contribute to quality teaching.’*

Therefore, although the purposively selected interviewees were not big enough to be statistically representative of the staff population, the results still give a fairly accurate state of practice of QA in the TVET institutions, especially given that the interview response data is augmented by data from questionnaires.

### **The role of the Quality Assurance Policy**

The IQA policy should contain the guidelines for effective and successful IQA implementation. This finding implies that the institution under investigation have no policies that direct the implementation of internal quality assurance. This is in line with the literature review that indicated that ‘the aim of institutional quality assurance policy in higher education is to enhance the effectiveness of its core activities of learning, teaching, research performance, research training and management’ (DAAD 2010). An internal quality assurance policy statement must explicitly contain the relationship between teaching and research at the institution; how the quality assurance system is organised; the responsibilities of departments, schools, faculties and other organisational units and individuals for assuring quality; the involvement of students in quality assurance; and the ways in which the policy is implemented, monitored and revised, the institution’s strategy on quality standards.

The responses analyzed show that some staff members were not even aware that there is an IQA committee and those who knew alluded that the institution does not have a policy in place as shown in table 3 below.

**Table 3: Findings on measurement of the presence and of role of a QA policy in an institution**

| <b>QUESTION</b>                                      | <b>YES</b> | <b>NO</b> |
|------------------------------------------------------|------------|-----------|
| <b>Does your institution has a QA committee/unit</b> | <b>9</b>   | <b>3</b>  |
| <b>Does it have a QA policy</b>                      | <b>0</b>   | <b>12</b> |
| <b>Are you familiar with it</b>                      | <b>0</b>   | <b>12</b> |

### **The role of the Quality Assurance process**

The questionnaire measured the extent of practice of the IQA by looking at the various processes like periodic course and curriculum reviews, institutional audits and student evaluations. The responses revealed that most instructors were not familiar with the QA processes of teaching and learning. Table 4 below show the results from the 12 instructors asked. It shows how many said yes or no to each question:

**Table 4: Findings on measurement of the practice of QA amongst MTTC instructors**

| <b>QUESTION</b>                                                                                                                       | <b>YES</b> | <b>NO</b> |
|---------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
| <b>Have you ever had any formal training and certification in QA</b>                                                                  | <b>2</b>   | <b>10</b> |
| <b>Do you have formal methods for reviewing your courses and curriculum periodically</b>                                              | <b>4</b>   | <b>8</b>  |
| <b>Does your institution have a monitoring system in place to track the effective running of the teaching and learning programmes</b> | <b>2</b>   | <b>10</b> |
| <b>Are students given the opportunity to judge the quality of teaching and learning</b>                                               | <b>3</b>   | <b>9</b>  |
| <b>Has your institution been engaged in QA exercises (institutional self evaluation, quality audits) in recent years</b>              | <b>2</b>   | <b>10</b> |
| <b>Are you usually consulted by your institution n those exercises</b>                                                                | <b>2</b>   | <b>10</b> |
|                                                                                                                                       |            |           |

On answering the question on how they interpret an IQA system in an institution one of the questionnaire respondents who notably has a qualification in QA knowledgeably answered as follows:

*'It is when the institution has a clear strategy on how to maintain quality assurance within the institution. They should adhere to the set standard set by the quality assurance agency.'*

On answering the question on the aim of the reviews responses from the questionnaire were of the view that these are important and help make sure that the curriculum is meeting technological changes of today and also to ensure that the institution is still following the set standards set by BQA. Similarly interview respondents added on to say that the reviews are done once in 5 years or so and recently a review was done, but by only one person. One of the respondents interviewed showed dissatisfaction and insisted that review of curriculum should not be done by one person but it should be a collaborative effort of industry and institutions, and industry experts should be consulted or involved at every stage.

Therefore, although the sample used was not big enough to be statistically representative of the staff population, the results still give a fairly accurate state of practice of QA in the TVET institutions, especially given that the survey data is augmented by data from interviews.

#### **4.5 Major findings of the research in both qualitative and quantitative analysis**

The participants interviewed indicated that the IQA system has not developed in the institution and therefore it is not adequate enough to assure quality. The interview reviewed that the IQA system was formed and introduced at a committee level, within the exam department implying that it is not a centralized unit with specialized QA staffs. In other words MTTC do not have a sufficient robust IQA system in place.

The data collected from the interviews showed that MTTC does not have a QA policy to guide the institution in assuring and practicing quality. The QA practice at present focuses only on assessment practices, pass rates and dropout rates. There is absence of assuring quality in the following areas, teaching and learning processes, curriculum design, evaluation and review, student-lecturer assessment, research and student support services. Monitoring instruments to

collect the data on student progress are there, MTTC uses log books to track progress of students on apprenticeship. However, there is also a need for instruments for monitoring employers' feedback and alumni's feedback. In light of these results, it can be deduced that MTTC's QA system is not yet fully developed to the capacity of monitoring the core QA activities in the areas mentioned above.

The interviews revealed that there is no systematic monitoring and evaluation of the curriculum. *'Review of curriculum is done by one or two people and does not include trade representatives,'* said one interviewee. It is understood that the key principle in the QA process is participation of various stakeholders in the education system when evaluating and reviewing the curriculum. The collection of feedback from alumni, from labor market and other stakeholders is therefore an important element of IQA system. It can therefore be deduced that the monitoring system at MTTC is not yet well developed and the activities that focus on quality assurance are not being carried out regularly as there are supposed to.

The purpose of setting up an IQA is not only for accreditation. Institutions should be seen doing QA activities that help in regularly reviewing the institution, its strengths and its weaknesses, which in QA terms is an internal audit. With reference to this point, according to respondents interviewed the institution under study has not had program evaluations and an internal institutional audit in a long time. The questionnaire respondents indicated that courses are not regularly evaluated and that the institution has not had an institutional self-evaluation process in 5 years.

Questionnaires analyzed show that 80 % of the respondents believe that lack of funding or budget constraints, lack of human capacity and lack of quality knowledge, quality awareness and culture amongst administrative staff members were found to mainly affect the implementation of IQA in the institution, MTTC.

IQA activities are costly, human resource and also time consuming. Accreditation processes require time for example for the conduction of self-evaluations and data collection. It is also costly to hire QA staff experts. In addition to the above costs, one of the respondents interviewed highlighted the importance and need of enough funding to invest in buying equipment, develop and renovate MTTC's educational facilities in the process of assuring quality. This implies that

there is need for MTTC to have adequate funding in order to assure institutional quality. The documents analysed reveal that amongst other priority areas contained in the NDP 11 is Human Capital Development. During the budget speech, it was said in the area of Tertiary education, priority during the 2017/2018 financial year will be on ensuring that there is a direct link between skills development and the needs of the domestic job market. This therefore implies that authorities in TVET institutions and BQA should spearhead the development of human capacity in the TVET institutions as well as lobby for funds for QA activities.

#### **4.6 Summary of findings and conclusion**

The findings of the research indicate that the QA processes at MTTC are still not explicit and their monitoring system is not well developed. Even though the institution under study has an IQA committee in place, the quality of the academic standards (assessment, marking and grading) remains the focus of their internal quality assurance process. Quality assurance should go beyond assessment but rather it should cut across teaching and learning among others areas. It became evident from the responses that ideally the internal quality assurance process should cover lecturers, administrative staff, student services, all departments of the institution in general. With this, it can therefore be concluded from the findings that MTTC has not yet developed a robust IQA system even though they have an IQA committee structure.

## **CHAPTER 5: DISCUSSION AND INTERPRETATION OF RESULTS**

### **5.0 Introduction**

The purpose of this chapter is to discuss and interpret results, drawing a number of conclusions based on the findings obtained in chapter 4. The chapter will suggest educational implications of the study and ends with giving recommendations.

### **5.1 Interpretation of results**

Based on the analysis and discussion of the study, it can be concluded that lack of resources is a major challenge that institutions in Botswana face in the implementation of IQA systems. Having a department on its own needs more resources hence the reason why probably institutions end up settling for IQA committees instead of a department. Instructors conducted perceive that the provision of training on QA to faculty staff would help build knowledge, awareness and capacity in the institution as well as enhance quality education at large.

The findings of this study also identified challenges that institutions face in implementing IQA systems as the political atmosphere with some saying that “one cannot bit the hands that feed”, implying that there is a need for an autonomous QA agency to oversee both public and private institutions. An interviewee indicated that the QA capacity among private institutions is better developed compared to that of the public TVET institutions. The perception is that public institutions have no knowledge on QA issues since there are not per ser subject to accreditation the way private institutions are.

### **5.2 Summary**

TVET institutions therefore are responsible for maintaining quality education. It is important for TVET institutions to adopt QA policies and the necessary tools for assuring the quality and of their programmes. It is recommended that institutions provide necessary support systems, learning facilities and resources to ensure and assure the quality of learning and teaching. The concept of quality should be shared and embraced across the board, in all departments.

The fact that MTTC has QA committee structure as mentioned in the previous chapter evidently means that the institution has always been fully committed to quality assurance matters only that there is a need for capacity to make it a robust system of quality assuring all aspects of learning achieving excellence in all areas of teaching and learning.

It was apparent from the findings, that the implementation of effective IQA system is heavily constrained by lack of manpower and resources. The main business of any institution is to develop and transmit knowledge so as to develop student's intellectual capacities. This goal is only possible if adequate resources and manpower are available. Indeed, quality education in an institution is a result of the amount of resources and manpower available in order for it to run with minimum constraints. There is need for staff quality with excellent academic qualifications and teaching experience in one's field of specialization.

An important finding of this study was also the absence of a QA policy in the case institution, and a tangible QA culture and practice on the ground. This became obvious that it is difficult for any TVET institution to practice QA without a document to guide them.

### **5.3 Educational Implications of the study**

The findings of this study have implications for MTTC and other institutions in Botswana. The objective of this study sought to examine the implementation and extent of practice of the QA system in the institutions' internal units. The results of this study are beneficial to MTTC in crafting strategies to implement a robust QA system. Findings of this study featured lack of resources and manpower as roadblocks to effective implementation of QA system internally. The implication is that, in order for MTTC to effectively implement and practice QA in their institutions the government should allocate a budget for setting up a QA department with professional trained QA personnels and a budget for frequent training of instructors on QA so as to build capacity.

Capacity building and support for institutions should be of key priority. Institutions in Botswana need support with capacity building. Not many institutions have experience with IQA processes.

Institutions need to be assisted on how to set up IQA units and as well with training of their staff members on QA matters. Training is needed not only for QA officers but also for faculty staff. There is also a need for the provision of training materials on how to set up and run IQA departments, on the one hand, and the availability of a national model that can function as an example of good practice of QA for other TVET institutions to learn from. This maybe be a possible way to promote QA in institutions.

Results revealed that a different department (the exam unit).is managing QA as a voluntary and additional task to their main duties. There is also the need for motivational (incentives) given to voluntary QA staff as faculties would end up not engaging in (voluntary) QA. Interviewees revealed that individuals who form part of QA committee should receive incentives to motivate them. This implies that the government needs to consider giving attractive incentives to individuals who form part of QA committees in their institutions.

It was also clear from the study that a deep understanding and knowledge of QA is still limited and that most staff members are still quite new to the notion of QA and knowledge and awareness of what QA means in an institution. This implies that MTTC should organize in house intensive capacity building workshops in collaboration with BQA.

Results indicate that MTTC does not have a QA policy. The conceptual model demonstrated that the absence of a clear QA policy which states clear purposes and functions of an IQA would be a missing link to the whole IQA process. This implies that MTTC should craft a QA policy to guide and spell out standards and procedures staff members should adhere to, thereby making the practice of QA easy and achievable.

#### **5.4 Further Research Direction**

A similar study can be conducted with other institutions both private and public to determine if there are similarities with the main findings from this study, which focused on MTTC. Although the study revealed challenges of lack of resources and manpower as major barriers to effective implementation of IQA, these factors may be unique to MTTC. Future research is needed that can

build on these findings especially in the contexts of Botswana private and public institutions at large.

## **5.5 Recommendations**

Regarding how to promote IQA implementation in Botswana TVET institutions a few recommendations can be made. The recommendation of this study is based on the current QA system and procedures in Botswana and focuses on the gaps that have been identified through the analysis of this study.

BQA should consider adopting communication strategies within their website to explain IQA and its purpose (including frequently asked questions, etc.) The interviews showed that the purpose and function of an IQA and even EQA system is not always clearly understood. A better communication of purposes and goals is critical for effective implementation of IQA. For future IQA department set up and implementation, I recommend BQA to facilitate understanding of IQA by supplying documents and manuals on how to set up IQA. Information on the importance of IQA in institutions should also be published on the BQA website.

Incentives should be given to IQA committee members within the institutions, whose main job is not QA but who take up QA work as additional to their day to day work, as well trade representatives and experts from outside the institution should get incentives as a way of motivating them to attend meetings and contribute to QA matters.

BQA should select companies to provide consultancy and trainings for ministries and institutions on how to set up IQA units. These companies can also supply institutions with sample evaluation, monitoring and quality improvement instruments that can be used in their QA processes.

There is therefore a need for separating the agency (BQA) into primary, secondary and higher education QA agency. Independent private QA agencies for each category can then support BQA

categorically with pilot institution audits, pilot reviews, monitoring of IQA practices and implementation in institutions in Botswana.

There is need for capacity development for different IQA implementation actors with conferences, workshops, online material like webinars, videos and documents available. Experiences from other countries could enrich the activities and materials.

In the case of establishing an IQA system, the establishment of a handbook or manual on how to set up an IQA system will be of great assistance to institutions especially those that are still starting. It is thus recommended for BQA to release a manual for the actual implementation of IQA systems in higher institutions. The resource for successful implementation of the IQA system will now be in the hands of institutions and their commitment will be tested based on that.

A clear Staff Development Policy should be in place which will guide professional advancement of staff in QA matters. Staff sensitisation and capacity building programmes must be instituted. These include giving staff members' opportunities for further studies, having periodic workshops, retreats, seminars, in-service training and refresher courses organised for all staff.

It is therefore conclusively recommended that TVET institutions fully develop and implement autonomous IQA departments and have a QA policy to guide the department as a way of continually improving the quality of education as well as perpetuating a quality culture.

## APPENDIX A

### Interview Guide for Management (Internal Quality Assurance Unit)

---

My name is Precious Chanaiwa a student at Botho University studying Masters of Education in Higher Education. I am carrying out an academic research on: **Implementation of Internal Quality Assurance in Technical and Vocational Education and Training (TVET) institutions in Botswana**. I kindly ask for your participation in answering the following questions.

---

*All responses will be used for academic purposes only and confidentiality clause is honoured.*

---

#### *IQA in practice and Implementation*

1. Just to get your institutional meaning of quality, how does your institution define internal quality?
2. May you briefly explain the provisions stated in your Quality Assurance (QA) policy in terms of assuring quality?
3. What is the purpose of the Internal Quality Assurance (IQA) committee/unit/department established by your institution?
4. What is the organizational structure of your IQA Unit?
5. Relating IQA and External Quality Assurance (EQA), was the establishment of your IQA system a deliberate institutional policy?
6. Are the decisions of the IQA unit of the institution independent and final?
7. What specific processes did you put in place to implement an IQA system?
8. What do you think are currently the main challenges and limitations at institutional level in terms of implementing IQA systems internally?

9. In what ways do you think can your current quality assurance practices be improved?
10. Do you have mechanisms to recruit qualified QA staff?
11. Do you have a clear mechanism for evaluation of teaching, learning, research and work of the lecturers?
12. Do you offer training to staff members on QA?

## APPENDIX B

### Interview Guide for other key informants (non-academic post holders)

---

My name is Precious Chanaiwa a student at Botho University studying Masters of Education in Higher Education. I am carrying out an academic research on: **Implementation of Internal Quality Assurance in Technical and Vocational Education and Training (TVET) institutions in Botswana**. I kindly ask for your participation in answering the following questions.

---

*All responses will be used for academic purposes only and confidentiality clause is honoured.*

---

1. How does your department show that it is providing high quality education?
2. What procedures are in place to ensure quality in your department?
3. Could you briefly tell me about the IQA processes of your department?
4. How does the Quality Assurance (QA) policy of your institution affect the work of this office?
5. What are the specific internal quality needs of this office?
6. Is the IQA unit/committee/department sufficient enough to meet internal quality needs of your office?
7. Has your department been engaged in quality assurance exercises in recent years? (e.g institutional self-evaluation, quality audit)
8. Were you consulted by your institution during the development of the quality assurance policy?
9. How do you evaluate the effectiveness of the quality assurance practice in particular in your department?

10. What do you think are main challenges and limitations at institutional level in terms of implementing IQA systems internally?
11. In your view, what are the necessary resources and conditions required for the effective practice of quality assurance in your department?
12. In what ways do you think your current quality assurance practices be improved in your department?

## APPENDIX C

### Questionnaire for Instructors

My name is Precious Chanaiwa a student at Botho University studying Masters of Education in Higher Education. I am carrying out an academic research on: **Implementation of Internal Quality Assurance in Technical and Vocational Education and Training (TVET) institutions in Botswana.**

I kindly ask for your participation in completing this questionnaire. The questionnaire should not take longer than 15 minutes to complete. This questionnaire is designed to collect relevant information about your views on the systems and practices of assuring quality of education in your faculty in particular and the institution in general. Your response to the items of this questionnaire will remain confidential and the results will be used to examine the existing quality assurance systems and practices in Botswana. We hope you will be able to take time and carefully complete this questionnaire

#### Section A – Academic and Personal details

|                                                                                                                                                                                     |                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <b>Faculty:</b> .....                                                                                                                                                               |                                             |
| <b>Department:</b> .....                                                                                                                                                            |                                             |
| <b>Status:</b> Full-time <input type="checkbox"/> lecturer                                                                                                                          | Part-time lecturer <input type="checkbox"/> |
| <b>Email:</b> .....                                                                                                                                                                 |                                             |
| <b>Level that you are teaching:</b> Post Grad <input type="checkbox"/> Undergraduate <input type="checkbox"/> Diploma <input type="checkbox"/> Certificate <input type="checkbox"/> |                                             |
| <b>Programme that you teach:</b> .....                                                                                                                                              |                                             |
| <b>Year of students you teach:</b> .....                                                                                                                                            |                                             |

**Personal Details**

|                           |        |   |         |   |       |   |       |   |        |   |         |
|---------------------------|--------|---|---------|---|-------|---|-------|---|--------|---|---------|
| <b>Age:</b>               | 20 -25 | ↑ | 26 – 30 | ↑ | 31-35 | ↑ | 36-40 | ↑ | 41- 50 | ↑ | Over 50 |
| <b>Sex:</b>               | Male   | ↑ | Female  | ↑ |       |   |       |   |        |   |         |
| <b>Nationality:</b> ..... |        |   |         |   |       |   |       |   |        |   |         |
| <b>Home Village</b> ..... |        |   |         |   |       |   |       |   |        |   |         |

**Section A – Knowledge and Awareness of Quality Assurance**

a. How would you define (1) quality education, (2) quality assurance and (3) Internal Quality Assurance?

1.....  
.....

2.....  
.....

3.....  
.....

b. Have you ever had any formal training and certification in quality assurance? YES/NO.....

c. Does your institution have a quality assurance committee/unit/department? YES/NO.....

i) Specify (Committee/ Unit/ department).....

ii) Does it have a QA policy/code? YES /NO.....

iii) Are you familiar with it? YES/NO.....

d. Does the internal quality assurance policy statement clearly contain information on the following?

ANSWER YES/NO

- I. how to assure teaching and learning activities at the institution.....
- II. the institution's strategy on maintaining quality and standards.....
- III. how the quality assurance system is organized.....
- IV. the responsibilities of departments and faculties and other organizational units.....

- V. individuals responsible for assuring quality.....
- VI. the involvement of students in quality assurance.....
- VII. the ways in which the policy is implemented, monitored and revised.....

## **Section B – Internal Quality Assurance (IQA) processes**

- a. How do you view or interpret an IQA system in an institution? .....  
.....  
.....  
.....
- b. Do you have formal methods for reviewing your courses and curriculum periodically?  
YES/NO.....
- c. Give examples.....  
.....
- d. What is the aim of the reviews? .....  
.....  
.....  
.....
- e. Does your institution have a monitoring system in place to track the effective running of  
the teaching and learning programmes and/ or activities? YES/NO.....
- f. Does your institution have in place clear written procedures for students' assessment that  
is guidelines, rules and regulations for grading? YES/NO.....
- g. Are student given the opportunity to judge the quality of teaching and learning? (student  
evaluation) YES/NO.....
- h. How often is student lecturer assessment done? .....
- i. Has your university/faculty/department been engaged in quality assurance exercises  
(institutional self-evaluation, quality audit) in recent years? YES/NO.....
- j. Are you usually consulted by your institution on those exercises? YES/NO.....
- k. Have you ever been consulted during the development of the quality assurance policies and  
systems? YES/NO.....

### **Section C – Challenges in the Implementation of Internal Quality Assurance (IQA)**

In your own words, state and explain the major challenges your institution face in implementing IQA systems?

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.....

In your own words, state and explain the major challenges institutions in Botswana are likely to face in implementing IQA systems in their institutions?

.....  
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.....  
.....  
.....

**Thank you for participating in this research.**

**Precious Chanaiwa**

**Email:** [precious.chanaiwa@botho.ac.bw](mailto:precious.chanaiwa@botho.ac.bw)

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