

**Development of a programme
accreditation system to address quality in
tertiary education institutions in Botswana**

by

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Map of Botswana



Botswana is in South-Central Africa, bounded by Namibia, Zambia, Zimbabwe, and South Africa with a Parliamentary Republic Government.

Dedication

This thesis is dedicated to my father, Reverend Mokue Malau.

You educated me and encouraged me to go as far as possible.

You disciplined me. Your iron hand is engraved in my genes therefore quitting was never an option, despite the challenges.

Here I am Ntate

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Abstract

Countries are developing ambitious strategies to produce a globally competitive workforce. International expectations, standards, local, and national needs contribute towards the desire to improve on the quality of education provided to the nation. With the realisation that diamonds are not forever, Botswana is striving 'towards a knowledge society'. Quality tertiary education has been identified as a catalyst that can propel Botswana towards an educated and informed nation as per one of the vision 2016 pillars. In this light, programme accreditation as one of the quality assurance tools used in the tertiary education sector needs to be up to date. The accreditation status can be regarded as a mark of quality. The aim of this study was to contribute towards improvement of the programme accreditation system by developing characteristics of an effective programme accreditation system for tertiary education institutions in Botswana.

Educational design research was found suitable for this study because it is a methodology that is aimed to improve educational practices. The research subjects were people in the tertiary education sector who participated in the programme accreditation process of tertiary education institutions in Botswana. Data was collected through interviews, questionnaires, and document analysis. Formative evaluation was done throughout to approach product quality.

The findings indicated that Botswana's programme accreditation system is in line with international procedure of self-evaluation, a site visit resulting in a programme accreditation report, followed by a programme accreditation decision. Accreditation agencies studied subscribe to such a model. The model allows institutions to do a critical analysis of their programme environment and find ways of providing 'an exemplary programme' by designing improvement strategies, thereby allowing them to be innovative.

The quality of the self-evaluation report is partly determined by the intensity of the research into the programme provision, which should contain the programme content, resources and delivery. The institution is expected to give an authentic view of the situation as it exists, stating both strengths and weaknesses and the opportunities for improvement being guided by programme accreditation standards, requirements, and criteria. Assessment for conferment of the accreditation status is carried out by a team from academia and industry, the programme review team. Every accreditation report is expected to contain recommendations for programme improvement.

An effective programme accreditation system should be relevant to the environment in which it is carried out, transparent so that all stakeholders are clear about the requirements, inclusive and adaptable to accommodate different situations and responsive to contemporary issues.

A prototype of a relevant, practical, and valid programme accreditation system that is appropriate for use in the tertiary education institutions in Botswana as well as characteristics of an effective programme accreditation system were realised. The long-term goal of the output of this research is that the designed characteristics should be applicable not only to tertiary education level but also to the whole education system, and should be internationally applicable so that other programme accreditation systems, both emerging and maturing, could benefit.

Key words

Accountability, Accreditation, Design Based Research, Development, Improvement, Programme, Programme Reviewers, Programme Review Report, Tertiary Education, Self-Evaluation Report.

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ABBREVIATIONS

AAU	Association of African Universities
AfQAN	African Quality Assurance Network
ANQAHE	Arab Network for Quality Assurance in Higher Education
APDC	Academic Planning and Development Committee
AUQA	Australian University Quality Agency
BAC	Barbados Accreditation Council
BGCSE	Botswana General Certificate of Secondary Education
BOCODOL	Botswana College of Distance and Open Learning
BOTA	Botswana Training Authority
BQA	Botswana Qualifications Authority
CHE	Council on Higher Education
CHEA	Council for Higher Education Accreditation
COL	Commonwealth of Learning
DOSET	Department of Out of School Education and Training
DQAR	Directorate of Quality Assurance and Regulation
EFA	Education For All
	European Association for Quality Assurance in Higher Education
ENQA	
GeSCI	Global e-Schools and Communities Initiative
GUNI	Global University Network for Innovation
HEI	Higher Education Institution
HEQC	Higher Education Quality Committee
ICRA	Independent Conflict Research and Analysis.
ICT	Information and Communication Technology
INQAAHE	International Quality Assurance Network for Higher Education
KSAVE	Knowledge, Skills, and Attitudes, Values and Ethics
LIA	Letter of Interim Authority
MQA	Malaysian Qualifications Agency
NAAC	National Assessment and Accreditation Council
NCHE	National Council for Higher Education
NDP	National Development Plan
NZQA	New Zealand Qualifications Authority
OAC	Oman Accreditation Council
OECD	Organisation for Economic Co-operation and Development

QAA	Quality Assurance Agency for Higher Education
RNPE	Revised National Policy on Education
TEC	Tertiary Education Council
TEI	Tertiary Education Institution
TEQSA	Tertiary Education Quality and Standards Agency
	United Nations Educational, Scientific and Cultural
UNESCO	Organisation
UNICEF	United Nations Children's Fund
UNU	United Nations University

Chapter 1

Introducing the Study

1.1 Introduction

Improvement of the quality and relevance of tertiary education is high in the national agendas. The message is *quality tertiary education opens doors by creating opportunities for one to be resourceful, innovative, acquire problem solving skills, knowledgeable, and be able to survive in the global market after leaving the doors of academia*. “The policy challenges facing most countries at the beginning of the 21st century—including developing countries—are ones that have to do with quality, rather than quantity” (Hanushek, 2005, p.1). In the World Bank’s working paper ‘*Higher education quality assurance in Sub Saharan Africa, status, challenges, opportunities and promising practices*’ Materu (2007, p. vii) posits that:

Concerns about the quality of higher education is on the rise in Africa. It comes at a time of growing recognition of the potentially powerful role of tertiary education for growth, and it is a natural response to public perception that educational quality is being compromised in an effort to expand enrolment in recent years; growing complaints by employers that graduates are poorly prepared for the workplace; and increasing competition in the higher education market place as numerous private and transnational providers enter the scene.

According to Woodhouse (1999), Kis (2004), Vlăsceanu, Grünberg, and Pârlea, (2007), Materu (2007), Schwarz and Westerhejden (2007), Harvey and Newton (2004), quality assurance is a generic term used as a short term for all forms of external quality monitoring, evaluation or review in order to formally recognise the programme as having met certain pre-determined minimal criteria or standards (Rozsnyai, 2004; Szanto, 2004; Attiya and Khalifa, 2009). Programme accreditation is a form of external monitoring. Harvey and Newton (2004) summarise the current approaches to external quality monitoring as accreditation, audit, assessment, and external examination. External quality assurance processes cannot be divorced from internal quality assurance processes; in fact, external processes motivate or act as catalysts for internal processes, because internal processes are a pre-requisite for external processes.

The provision of quality tertiary education in Botswana is one of the priority areas and as early as 2008, the TEC developed a set of regulations to guide the programme accreditation process which enabled commencement of the accreditation of academic programmes in private tertiary education institutions. One of the ways of assuring the quality of education provision in tertiary education institutions is through programme accreditation, a process intended to assess, strengthen, and sustain the quality and integrity of education, making it worthy of public confidence. The process culminates in an accreditation status awarded to a programme after assessment of key areas that contribute towards delivery of the programme.

The premise of this study, *Development of a programme accreditation system to address quality in tertiary education institutions in Botswana* is that a regular modification of the programme accreditation system could ensure that the education system is effective and efficient, consequently producing graduates who are relevant to the economy. Botswana currently has an operational programme accreditation system in place; therefore *development* in this study denotes *improvement* to the existing programme accreditation system. One of the pillars for development in the country is that people are educated and trained to take up vital roles in the economy. Programme accreditation thus contributes towards an educated nation.

The chapter launches and focusses the study by defining programme accreditation, discussing the educational policies that ground the Botswana education system, and presenting the international perspective on programme accreditation (Section 1.2). The problem statement and rationale for the study clarify the motivation for conducting the enquiry (Section 1.3). The significance of the study (discussed in Section 1.4) demonstrates that the education system cannot be operated under a 'business as usual' approach. Research objectives and questions that guided the study are presented under Section 1.5, followed by the presentation of Educational Design Research as the research design that was used in this study (Section 1.6). The conclusion to the chapter (Section 1.7) precedes an overview of how the thesis is structured (Section 1.8).

1.2 Launching the Study

This thesis presents the results of the study *Development of a programme accreditation system to address quality in tertiary education institutions in Botswana*. The study was instigated by the quest to contribute towards eliminating the anomalies that were evident in the operational Botswana tertiary education programme accreditation system. The Tertiary Education Policy of 2008 (Republic of Botswana) defines tertiary education as "all formal education programmes beyond the level of senior secondary embracing technical and

occupation specific programmes and those with a strong theoretical foundation through to advanced research qualifications” (p.16). The World Bank (2013b) corroborates this definition that tertiary education refers to all post-secondary education offered in public and private tertiary institutions such as colleges, technical training institutes, community colleges, nursing schools, research laboratories, centres of excellence, and distance learning centres. The tertiary education programmes in Botswana are offered in both public and private colleges, institutions, universities, and therefore uphold the definition offered by the World Bank.

Although the definition of tertiary education embraces all programmes after secondary education, the present study deals with programmes from diploma level upwards, excluding technical and occupation ones, because the accreditation process was being applied to those from diploma level upwards. The divide was inevitable because at the inception of this study in 2011, the mandate to accredit programmes in tertiary education, as per the definition, was delivered by two organisations: (i) the Botswana Training Authority (BOTA), directed to accredit technical and occupation-specific programmes (Republic of Botswana, 1998); and (ii) the Tertiary Education Council (TEC), mandated to accredit programmes from diploma level upwards (Republic of Botswana, 1999). The programme accreditation processes in the two organisations were not identical, nonetheless, reference to literature in this thesis adopts tertiary education as equivalent to higher education.

It is important to state that the mandate to conduct programme accreditation in tertiary education was transferred to a new organisation, the Botswana Qualifications Authority (BQA) in April 2014 (Republic of Botswana, 2013). The objectives of the BQA “shall be to provide for and maintain a national credit and qualifications framework and to coordinate the education, training, and skills development quality assurance system” (Republic of Botswana, 2013, p. A.362). Thus, the mandate for the quality assurance system of the entire Botswana education system, from early childhood to tertiary education, was transferred to BQA. The programme accreditation system is a subset of the quality assurance system, therefore the outcome of this study could be instrumental in the development of the programme accreditation system for BQA.

In the following Sub-sections, a definition of *programme accreditation* is given (Sub-section 1.2.1), then the study is given a focus by regarding programme accreditation as a quality assurance mechanism (Sub-section 1.2.2). Particular reference is made to the Botswana government policies that ground education in the country (Sub-section 1.2.3), then an international perspective on programme accreditation is presented (Sub-section 1.2.4).

1.2.1 Defining programme accreditation

Programme accreditation is one of the quality assurance tools used in the quality assurance process within tertiary education institutions (Sanyal & Martin, 2007; Weir, 2001). The three main quality assurance mechanisms employed in the tertiary education sector are accreditation, assessment, and audit. “Both accreditation and assessment monitor the quality of teaching and learning, while audit focuses on internal procedures” (Kis, 2005, p.5) and it is these processes that the tertiary education institution employs in order to achieve its objectives of providing quality education to the students.

Tertiary education in Botswana is provided broadly in units of programmes, referring to a structured learning pathway that is directed by academics, tutors, or trainers, and leads to a qualification. Accreditation of a programme denotes recognition by the accreditation agency (Tertiary Education Council, 2008), therefore the main function of accreditation is to examine programmes of study offered by institutions for quality assurance and quality management for the purposes of improvement. The process is designed to determine whether or not an institution has met national published standards for programme accreditation in order to formally recognise it as having met threshold standards (Vlăsceanu, Grünberg & Parlea, 2007). Concisely, Brock (2007) and El-Khawas (2001) emphasise that accreditation is seen as a mark of quality.

The programme accreditation process usually begins with self-evaluation by the institution, resulting in a self-evaluation report followed by a site visit to the institution by a team of specialists referred to as ‘programme reviewers’ or ‘peer reviewers’. Their assignment is to validate the assertions made in the self-evaluation report against the programme accreditation standards (Mishra, 2007). If the programme succeeds in meeting threshold standards it is awarded accreditation status for a certain period (Council on Higher Education (CHE), 2004a; National Council for Higher Education (NCHE), 2009). The accreditation process is carried out in the context of other relevant national and educational policies.

This thesis regards programme accreditation as a collegial process of *self-study* (self-evaluation) and *external peer review* for *quality assurance, accountability, and quality improvement* of an academic programme designed to determine whether or not it has met or exceeded the published standards of its accrediting association and is achieving its mission and stated purpose (Council for Higher Education Accreditation (CHEA), 2010). The accrediting process is intended to strengthen and sustain the quality and integrity of higher (tertiary) education, making it worthy of public confidence as “a valuable and prestigious

achievement among traditional and non-traditional schools” (Middle States Association of Colleges and Schools, 2012, p.1).

1.2.2 Focusing the study

The issues related to the provision of quality education to the nations are a continuing phenomenon and will be as long as there is teaching and learning. The World Bank (2013a) recognises governance, finance, quality assurance, lifelong learning, and equity as the main issues at the forefront of international tertiary education in this era. Some of the key issues that the World Bank is concerned with under quality assurance, as a means of ensuring the provision of quality education to the learners are: developing evaluation and accreditation mechanisms for distance and online education programmes; evolving evaluation methodologies for programmes using information technology; recognising the difference between part-time and full-time students; and developing standards, requirements, and criteria that take such differences into account (World Bank, 2013a).

The assumption here is that the education community is aware of the need and may even be practising quality assurance mechanisms, including programme accreditation, for the traditional mode of teaching and learning. The World Bank also encourages policymakers and academic researchers to consider issues of intellectual property, technology, academic management, and the nature of the students’ education and training experience, as they consider the future of higher education around the world (World Bank, 2013a). In the same vein, Botswana is concerned about the provision of quality tertiary education to the nation (Republic of Botswana, 1997).

To foster the development of quality assurance, numerous books and journal articles have been written by experienced quality assurance professionals to provide an appreciation of quality assurance aspects that are mainly of practical relevance to the tertiary education sector around the world. These are reviewed in detail in Chapter 3 of this thesis. In the meantime, through the Dakar Framework for Action, under Education For All (EFA) initiatives, United Nations Educational, Scientific and Cultural Organisation (UNESCO) (2000, p.8) has committed to improving all facets of education and ensuring “excellence of all so that recognised and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills”. It hopes to achieve EFA goals by creating synergy while respecting individualism among countries in the provision of quality education, with the understanding that a platform for dialogue and participation of member states could promote and strengthen the processes of education (UNESCO, 2001). In the Learning for All Education

Strategy 2020, the World Bank states that increase in access to education has necessitated improvement in the quality of education (World Bank, 2011).

Thus, the provision of quality tertiary education to the nations, including Botswana, has become a priority area in the world. Policymakers view tertiary education as one of the economic engines because during the production of knowledge through research and innovation, and the continuous education of the workforce, the individual benefits intellectually, socially, emotionally, and financially (Pavel, 2012). In addition, the leaders of tomorrow are educated by enhancing their critical thinking, and students are induced to produce knowledge not only for dissemination (Emkaay, 2010) as intellectual property but also for economic gain. Tertiary education is seen as one of the vehicles that can be used to improve the quality of human resource of a country (Mishra, 2007).

1.2.3 The foundational policies

In an effort to improve the education system of Botswana, the government introduced several initiatives through National Development Plans (NDPs) which offer strategic direction to the overall development of the country. These have resulted in new policies on education being implemented and the NDP10¹ (Republic of Botswana, 2009b) is the tenth and the latest in the series. The current economic diversification drive, which seeks to create a diverse economy based on a wide range of profitable sectors, underscores the goals of NDP10. Two of the key result areas for NDP10 are *a competitive and productive human resource and a knowledge society*. The result areas were to be realised partly through the transformation of the tertiary education sector which became more pronounced during the implementation of the National Development Plan 9 (NDP 9)².

The education system in Botswana is directed through National Policies on Education, with *Education for Kagisano* (Republic of Botswana, 1977), having advocated improvement in basic education, and the *Revised National Policy on Education* (RNPE) (Republic of Botswana, 1994) recommending the establishment of a statutory body, the TEC, whose mandate was to coordinate the long-term planning and overall development of tertiary education. The TEC was instituted through the Tertiary Education Act (Republic of Botswana, 1999) and began operating in 2003³.

¹ The NDP 10 is running from 1 April 2009 to 31 March 2016. The plan period was extended to accommodate Vision 2016.

² The NDP 9 was from 1 April 2003 to 2006.

³ Tertiary Education Act Chapter 57:04 (1999), an Act of Parliament that established the Tertiary Education Council. Educational policy in Botswana has been shaped by two major reform initiatives; the Education for Kagisano

Botswana's long-term vision is encapsulated in 'Vision 2016 Towards Prosperity for All' (Republic of Botswana, 1997), which took stock of achievements 30 years after independence⁴ to make a base line for formulating development goals for the future. One of the aspirations as stated in the vision is to ensure an educated and informed nation by the year 2016:

By the year 2016, Botswana will have a system of quality education that is able to adapt to the changing needs of the country as the world around us changes. Improvements in the relevance, the quality, and access to education lie at the core of the vision for the future (Republic of Botswana, 1997, p.5).

Achievement of the Vision 2016 pillar of an *educated and informed nation* could contribute greatly to achieving the other six vision pillars being: a prosperous, productive and innovative nation; a compassionate, just and caring nation; a safe and secure nation; an open, democratic and accountable nation; a moral and tolerant nation; and a united and proud nation (Republic of Botswana, 1997, pp.5-13). These pillars could be partly achieved through the provision of quality education.

The immediate action that was undertaken by the country to address the education pillar was to increase access at primary education level. This growth resulted in increase at secondary education level due to automatic promotion from primary school to junior secondary school. The output from secondary schools intensified the demand for tertiary education, therefore immediate action to increase access in tertiary education was undertaken reasonably through the involvement of the private sector.

One of the major assignments that the TEC engaged in at the early stages of its inception in 2005 was a review of the tertiary education sector. The study informed the formulation of the country's first tertiary education policy, 'Towards a Knowledge Society' (Republic of Botswana, 2008). The policy provided a prime direction for the NDP10 by setting a sector plan framework that assisted in the development of a system strategically focussed and linked to broader national policies and ambitions. Some of the challenges identified through the study, as elaborated in the tertiary education sector strategy of 2009 to 2016, *driving the transformation*

(Education for Social Harmony) (1977) which sought to increase educational opportunity through the provision of nine years of basic education and expand the base of skills needed for national development. This was followed by the Revised National Policy on Education (1994) which led to the establishment of the Tertiary Education Council.

⁴ Botswana gained independence in 1966.

agenda (Republic of Botswana, 2010) centred on access, quality, relevance, competitiveness and sustainability of the tertiary education sector.

A series of reforms that were meant to strengthen the tertiary education system capability and quality to ensure that the sector contributes to the development of the country were suggested:

- ❖ a coherent strategic focus to drive tertiary education
- ❖ improved co-ordination and management of tertiary institutions
- ❖ a more strategic approach to human resource development, research, and innovation
- ❖ the need for a clearer and more objective approach to funding public tertiary institutions (Republic of Botswana, 2010, p.5).

The above policy issues pivot on the delivery of quality tertiary education to the nation. Programme accreditation is one mode of monitoring the quality of provision and delivery of programmes in tertiary education institutions, and is found in the immediate action plans of most countries as will be seen in the next sub-section.

1.2.4 International perspective

There is a paradigm shift across the world to move from concentration on increasing enrolment to improving the quality of teaching and learning at tertiary level (Bray & Martin, 2003), opening access has caused an uncomfortably high enrolment that inevitably compromises quality. According to this new paradigm, tertiary education is one of the driving forces behind economic development (Mishra, 2007), expected to produce the required professional human resource and develop through research the social, economic, cultural, scientific and technological systems of society (Sanyal & Martin, 2007; van Ginkel & Dias 2007). Thus, tertiary education institutions can be regarded as agents of change in the economy and should strive to produce a globally competitive workforce that can produce knowledge and provide required technical expertise in different operational areas underpinning social and economic development to the nation.

One of the missions of UNESCO is “to promote international intellectual cooperation and to assist member states in their efforts to develop higher education systems and institutions” (UNESCO, 1991, p.7). Botswana joined UNESCO as a member state in January 16, 1980 (UNESCO, 2012), and having maintained the membership (Chube, 2014) should therefore live up to the expectations of UNESCO that the social function of higher (tertiary) education is essentially guided by:

...the pursuit for excellence in teaching, training, research and institutional performance; the relevance of services offered by higher education institutions to the perceived priority needs of their respective societies; the quest for balance between short-term pertinence and service and long-range quality, between basic and applied research and between professional training and general education (UNESCO, 1991, p.15).

Participation in tertiary education is essential as it develops a range of skills, knowledge, values and competencies considered essential to survive in the highly competitive environment. Kamba (1991) argues that it is important to development, and to improving the quality of life and wellbeing of the people. Universities are sources of knowledge creation, innovation and technological advances (Association of African Universities, 2012), and it is imperative that the education provided to the nation is protected, partly through programme accreditation.

It is significant that quality in tertiary education is a global concern as there has been an awakening of the need to monitor and ensure quality in tertiary education. In Europe, ministers of education have recognised the need for monitoring the quality of education provision and the Bologna Process⁵ (European Association for Quality Assurance in Higher Education (ENQA), 2013) was started, resulting in the Bologna Declaration, aimed at promoting European co-operation in quality assurance with a view to developing comparable criteria and methodologies. The declaration acknowledges the importance of education and educational co-operation in the development and strengthening of stable, peaceful and democratic societies. It succinctly states that:

A Europe of knowledge is an irreplaceable factor for social and human growth and is an indispensable component to consolidate and enrich the European citizenship, capable of giving its citizens the necessary competencies to face the challenges of the new millennium, together with an awareness of shared values and belonging to a common social and cultural space (Bologna Declaration, 1999, p.1).

The declaration concurs with the international recognition that knowledge is necessary to advance both the academic world and the economic stance. The UNESCO and the United

⁵The Bologna Process is a series of ministerial meetings and agreements between European countries designed to ensure comparability in the standards and quality of higher education qualifications (ENQA, 2013).

Nations' initiatives view education as an important factor in improving the quality of life for all citizenry. The United Nations Decade of Education for Sustainable Development 2005-2014 emphasised that education is an indispensable element for achieving sustainable development (United Nations, 2009).

Realising that this development could bring about inevitable change in the trends in education, UNESCO suggested a policy framework on Information and Communications Technology (ICT) competency standards for teachers that the education community could use to assess their current educational policies in the context of their current and future development goals (UNESCO, 2008). Although the policy framework seems to concentrate on ICT, the idea is to improve teacher practice in a way that will impact on improvement in the delivery of tertiary education so as to advance economic and social development of each concerned country. The model demonstrates that the curriculum should go beyond knowledge gained in the lecture room and explicitly include 21st century skills (UNESCO, 2008) to encourage graduates to be creative and innovative. Since Botswana aspires to be a knowledge economy, graduates should be able to demonstrate such skills in the workplace.

The juxtaposition of the Bologna Declaration and this study indicates that both have the same aspiration, so the later can borrow from the former regarding tertiary education as widely recognised as an irreplaceable factor for social and human growth, and as an indispensable component to consolidate and enrich Botswana. It is evident that most African countries, Botswana included, have recognised that the provision of quality tertiary education to the nation plays a central role in the promotion of economic and technological development of a country and its citizens, and that education is an engine and a driving force behind social transformation.

Based on a comparison of the activities in the world economy over the past twenty years it can be concluded that there have been considerable changes concerning the provision of tertiary education. Enrolment has increased, programme offerings have diversified, and the modes of instruction have come to include technology. The changes in the education environment suggest that the quality assurance practices in tertiary education should be accommodative and cost-effective while at the same time being careful not to interfere too much with the education practices (Woodhouse, 1998). The quality assurance activities should be modern so as to meet the demands of contemporary society. With all this in mind, Botswana needs to ensure that its programme accreditation system is up-to-date, making its development paramount.

1.3 Problem Statement and Rationale for the Study

Since one of the economic responsibilities of tertiary education is to meet the increasingly market-driven, knowledge-based economy and to address the pressures of economic growth, change and development that are evident in the country (Republic of Botswana, 2008), the TEC, through its vision, has committed itself “to be a leader in transforming Botswana to a globally competitive knowledge society through tertiary education” (Tertiary Education Council, 2010, p. 12). Survival in a competitive knowledge society dictates that the quality of tertiary education provided to the nation should be closely monitored to ensure that the graduates fit in the contemporary society. Programme accreditation is one way of ascertaining the quality of education provision.

The TEC began its first cycle of programme accreditation in private Tertiary Education Institutions (TEIs) in 2009. As in any new system, it experienced some challenges, some of which I observed to be:

- a) A decision to accredit or not to accredit some programmes that underwent programme review for the purposes of programme accreditation took more than 12 months to be finalised. The delayed decision kept the institutions in suspense over the accreditation status of their programmes, although they continued teaching them.
- b) Students continued in the programmes that were found not to satisfy threshold requirements and criteria. Some completed them before the accreditation status was pronounced. The delay in the pronouncement of the accreditation status might have compromised the quality of the programme content and in turn disadvantaged the students’ content gain.
- c) There was considerable uncertainty about the distinction between programme accreditation and institutional accreditation during the accreditation process.
- d) Since different programmes were reviewed by different accreditation teams, and in most cases there was more than one team on the ground at any particular time, the institutions were burdened by answering the same type of questions from different teams for common areas, such as finance. Though this could be viewed as ascertaining the consistency of information given out to the programme reviewers, it could also be labelled as unpreparedness, unsystematic, or disorganised on the part of the TEC.

- e) Though the programme reviewers were given the reporting structure, there were several variations in the programme accreditation reports produced. Some differences were beneficial and other disparities resulted in scanty information contained in the reports, which occasioned prolonged meetings between the TEC and the accreditation team in an effort to improve the quality of the report.
- f) The programme accreditation process begins with the institution producing a self-evaluation report. Though the institutions were given the self-evaluation report guidelines, there were several divergences from the prescribed format in the presentation styles. Some of the digressions did not add value but rather resulted in scanty self-evaluation reports. The insufficient information provided to the programme review team added extra work for both the team and the institution because the former had to demand information that should have been provided.

I perceived the above observations as constituting a problem worth investigating, towards the development of an internationally competitive programme accreditation system to address quality in TEIs in Botswana. There seemed to be shortcomings in the current practice by TEC, and these needed urgent and systematic attention for their closure, hence the motivation to conduct the present study.

The rationale for this study is premised on my observations of the programme accreditation process of Botswana tertiary education, as well as concerns that as the sector continues to experience changes in the form of mass higher education through institutional and programme diversity, there is a quantitative increase in programmes, institutions, learners, franchised programmes, and varying modes of delivery. The changes dictate that the quality of education provided should be regularly assessed using a programme accreditation system that is innovative. Such a cutting edge programme accreditation system can be reviewed when necessary by employing the characteristics of an effective one.

The tertiary education policy identified tertiary education as one of the vehicles that Botswana can use to successfully transit from being a resource-driven economy to a diversified economy that is characterised by a highly skilled knowledge-intensive service sector (Republic of Botswana, 2008). It is worth noting that Botswana's economy greatly relied on the diamond industry shortly after gaining independence in 1966 (Basdevant, 2008), while other countries relied mainly on industrial manufacturing. Botswana is also acknowledging that its diamond economy will not last indefinitely by diversifying on the economic sector, partly through intensification of tertiary education.

This diversification brings about varied education opportunities for both school-age and adult learners through increased choice of programmes and different modes of learning and teaching, as will be seen in the context of the study. The growth and expansion in the tertiary education sector could come at a cost to the quality of education, and the import of programmes from one education system to another could come with its own challenges, such as different types of programme accreditation systems, increased programme diversification and increased enrolment. All these developments should be supported by a strengthened programme monitoring and a corresponding dynamic programme accreditation system.

The world is producing an 'internet generation', living in countries whose physical borders can easily be crossed by electronic communication (Juraev, 2011), and education can be provided to different people in different countries from a central point. The quality of this type of education needs to be closely guarded through programme accreditation. Globalisation and internationalisation ought to be considered when talking about expansion in tertiary education. Students from other parts of the world should be attracted to choose to study in Botswana in order to provide an international mix in the education system. Products of the Botswana education system should be internationally competitive to give them prospects of being absorbed in the job market in any economy of their choice. These scenarios fall under diversifying education. Teichler (2004) states that the vertical attributes of diversity include quality while the horizontal attributes refer to the profile of a Higher Education Institution (HEI). Borrowing from this, programme accreditation examines both the vertical attributes and horizontal attributes of a programme to ensure that the learners are provided with a competitive quality education.

The tertiary education sector in Botswana is faced with a number of challenges, such as managing expansion, providing equitable access, increasing managerial efficiency, and offering education and training that is relevant to the labour market and in line with national standards of quality (Republic of Botswana, 2009a). Expansion in tertiary education comes in varied forms, such as an increase in the number of institutions, increase in enrolment and a diverse range of educational programmes offered, whether franchised or self-developed. Providing equitable access means ensuring that disadvantaged groups, such as people discriminated against in terms of gender, ethnic minorities and people with disabilities, are given an equal chance for admission into the education system. Giving diverse learners an equal chance of access to the system or institution calls for a distinct management structure in that some learners might need special attention which could challenge the capacity of institutional management in terms of providing essential resources. Institutional efficiency in management could therefore be partly monitored through programme accreditation.

Programme accreditation in Botswana is currently being facilitated by the TEC, the first in TEIs having begun in 2009. The concern that prompted this study is grounded on the failure, between the start of the programme accreditation process in 2009 and inception of this study in 2011 to make an evaluation of the programme accreditation process. However, international and regional studies have revealed that the currency and relevance of programme accreditation as a quality assurance mechanism in TEIs to ensure the appropriateness of educational diplomas and degrees is paramount (Lim, 2010; O'Rourke & Bulushi, 2010; Quinn & Boughey, 2009).

Although quality assurance invariably results in improved compliance with external standards, compliance does not in itself lead to improved quality. Furthermore, external quality assurance regimes can divert effort from the core business of teaching and learning, and from authentic reflection and improvement effort, and channel that energy into playing the rules of the game (Srikanthan & Dalrymple, 2003), keeping up appearances (Dill, 2000) and making symbolic responses to external requirements. (Stensaker, 2003). Another issue is that increased managerial involvement in the domain of educators (that is, in issues of the quality of teaching and learning) can be seen by educators as intrusive and undermining their autonomy (Cheng, 2009).

In addition, there might be other potential challenges facing Botswana that could impede the implementation of a programme accreditation system, some having financial and others human resource implications. One such impediment could be inadequate quality assurance experience, with both BOTA and TEC having been established within the last decade, and providers still new to the philosophies of an external quality assurance management. Education providers are challenged in the development of internal quality assurance systems which would meet the demands of external quality assurance systems by providing useful performance information. In this regard, programme accreditation could be used as a keen eye to assess the quality of education provision to the country, hence the need to ensure that the programme accreditation system is up-to-date.

Martin and Stella (2007) advise that as the demand for tertiary education around the world increases through, amongst others, privatisation of higher education, system expansion, globalisation, and international trend agreements, including student mobility, the need for accountability to stakeholders will increase. Stakeholders in this instance include students, parents, sponsors, government, politicians and investors, therefore the outcome of programme accreditation will be one way of accounting to the public about the status of education provision within the tertiary education sector.

1.4 Significance of the Study

Programme accreditation is one of the mechanisms that is used in the tertiary education sector to determine the status of the quality of education provided to the nation. Though it is the responsibility of TEIs to ensure that they provide quality education to the learners, the quality assurance mechanisms for the nation cannot be left to chance. The TEC takes a cross-sectional view of the quality of education provided to the country, provided by its interaction with various institutions locally and internationally, and with other quality assurance bodies and different sectors of the economy which makes it easier to detect the international trends of the programme accreditation system and make changes where necessary.

This study will therefore go a long way in assisting the TEC with current trends of programme accreditation which will be implemented in TEIs, thus improving the quality of education provided to the nation. This intellectual contribution would be filtered down to various academic disciplines through improvement in pedagogical approaches in an effort to ensure that the instructional approach satisfies the accreditation requirements. The findings will be shared with institutions through research seminars and publications in a periodical for academic consumption.

The TEC signed memoranda of understanding with regulatory bodies in other countries, such as South Africa and Namibia. In addition, it is a member of the International Quality Assurance Agency in Higher Education (INQAAHE) and African Quality Assurance Network (AfQAN). The regulatory bodies and members of the quality assurance networks communicate with each other when necessary. One of the agenda items could be finding out the accreditation status of a programme offered by one institution in a different country or how credible a certain institution is. Employers in other countries might want to know the accreditation status of the programme from which the prospective employee graduated before offering them employment. Prospective students, both local and international, might also request the accreditation status of a programme before enrolling. Since the TEC would like to be regarded as a credible regulatory body internationally, this understanding therefore partly makes its work an international assignment. In this regard, the graduates from programmes accredited by the TEC should be of international standard, hence the need for a more effective programme accreditation system at any time.

On the practical side, it is anticipated that the recommendations of the study would contribute to the development of an improved and more effective programme accreditation system. The programmes accredited using a present-day system are expected to give both the graduates and the employer confidence that the programmes are credible. Accredited programmes

ensure that the graduates are in a good position to apply or market themselves for appointment in the workplace both locally and internationally. The findings of the study could also be applied to education systems other than at tertiary education level, which could help address the challenges currently facing education systems. This has proved to have a more lasting impact than addressing the problem at the intermediate level because a strong foundation would have been developed.

Education is a key factor in the development of human resource needs of any country and therefore the quality of education provided to the nation cannot be left to probability. Many countries have realised that movement of their human resources to other countries help their economies in the long run because of the international experience gained, which has a potential of contributing significantly to the economy of the country. The educationists therefore need to be in tune with global educational developments.

The recommendations that result from this study will guide scholarship that aims to improve the quality of education because, in education, continuous improvement is necessary. This is partly to ensure that the educationists keep up with developments in the employment sector. In addition, Plomp, (2010, p.24) advises that “ambitious reforms cannot be developed at the drawing tables in government offices, but call for systematic research supporting the development and implementation processes in a variety of relevant contexts so as to make the desired impact”.

This research was guided by research questions, as presented in the next section (Section 1.5).

1.5 Research Objectives and Questions

The research objectives for this study were to develop an effective programme accreditation system by identifying the first set of characteristics for the development of an effective programme accreditation system in Botswana and establishing more definitively, the current accreditation practices in order to influence improvement. To achieve the objectives the main research question to guide this study was:

What are the characteristics of an effective programme accreditation system for tertiary education institutions in Botswana?

The first cycle of programme accreditation in Botswana began in 2009 and the second, without formal evaluation of the first, in 2011, although observation and feedback had revealed some imperfections that required attention. The main research question therefore addressed this

need by searching for the characteristics of an effective programme accreditation system to ensure that it is progressive.

The following research sub-questions were used to help address the main research question:

1. How is programme accreditation carried out in Botswana?
2. How does the Botswana Programme accreditation system compare with other systems?
3. What constitutes an effective programme accreditation system?
4. How can the Botswana programme accreditation system be optimised?
5. To what extent could the identified characteristics optimise the Botswana programme accreditation system?

The sub-questions were addressed during different phases of the study. Sub-question 1 set the scene for discussion by understanding the programme accreditation process as carried out in Botswana. The programme accreditation instruments and analysis of the actual process provided information. Sub-questions 2 and 3 compared the Botswana programme accreditation system with that of other countries in order to find out the practices in established systems, which might be referred to as good practices. The comparison helped in identifying the shortcomings that might have contributed to the challenges stated above (Section 1.3). Sub-questions 4 and 5 were used to discover ways of closing the deficiencies in the Botswana programme accreditation system.

1.6 Research Design

The research design used in this study is *educational design research*, referred to as *design research* in this thesis. It was found suitable for this study because, as explained by Plomp (2010, 2013), one of the aims of educational design research is to develop an intervention to address an educational matter, in this instance, a programme accreditation system, for which no or few guiding principles, ready-made solutions, or guidelines have been found, or where there are no “how to do” guidelines or heuristics readily available (2010, p.13). The principles of educational design research were found suitable because educational design research as a research design is used:

to design and develop an intervention (such as programs, teaching-learning strategies and materials, products and systems) as a solution to a complex educational problem as well to advance our knowledge

about the characteristics of these interventions and the processes to design and develop them, or alternatively to design and develop educational interventions (about for example, learning processes, learning environments and the like) with the purpose to develop or validate theories (Plomp, 2013, p.15).

The research process involves interactions with participants to share experiences and ideas (Collins, Joseph, & Bielaczyc, 2004). It allows communication in real life situations, which helps the researcher become aware of the developments within the research environment. The research design allows for the design and development of an intervention as well as the use of several data collection and analysis strategies at different stages for the purposes of refinement of the intervention (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; Wang & Hannafin, 2005). The intervention is expected to bridge the gap between theoretical research and educational practice by providing principles that can be used in different settings (Design Based Research Collective, 2003). The research process involved:

- ❖ **A preliminary phase:** the research activities included document analysis and interviews to conceptualise the specifications in order to set the structure of the prototyping phase. Reference was made to the results of a needs analysis questionnaire that was administered under a separate study to inform activities of the quality assurance section in TEC.
- ❖ **The prototyping phase:** two prototypes of the programme accreditation system were produced and evaluated through micro-cycles of research.
- ❖ **Assessment phase (evaluation phase):** this assessed the performance of the programme accreditation system (Plomp, 2010, 2013).

Throughout the research there was systematic reflection and documentation resulting in design principles for developing (designing) an effective programme accreditation system for Botswana, thus the scientific yield for this study. The research design and process will be discussed fully in chapter 4 of this study.

To be able to identify the characteristics of an effective programme accreditation system, it was necessary to conduct research into the literature on current systems in other countries, to compare and contrast this with the practice in Botswana and design the characteristics of an effective programme accreditation system. The set of characteristics developed through this study, using design research, would therefore form a starting point or a preliminary phase (Plomp, 2010, 2013) for the design of a good programme accreditation system for Botswana,

drawing from Woodhouse's (1998, p.270) claim, that "higher education must include more distant goals of those yet unborn... the quality assurance agencies must not be tied conservatively to the past but must provide a changing yet stable foundation for the future".

1.7 Conclusion

In this chapter it has been shown that the provision of quality tertiary education as one of the drivers of international economic competitiveness is high on the national agenda. Tertiary education contributes to social and economic development through the formation of human capital (primarily through teaching), the building of knowledge bases (primarily through research and knowledge development), the dissemination and use of knowledge (primarily through interactions with knowledge users), and the maintenance of knowledge (Organisation for Economic Co-operation and Development (OECD), 2008, p.2). An effective and present-day programme accreditation system is necessary for improving the quality of higher education, and recommending the characteristics will pave the way for more research to be carried out on its characteristics when time for revision of the system presents itself. Applying the leading edge characteristics of a programme accreditation system will contribute towards producing a more effective one.

1.8 Structure of the Thesis

The remaining chapters in this thesis are introduced below with a short description of the content for each chapter.

Chapter 2: *Context of the Study*

A discussion of the context of the study is presented by situating the problem within the Botswana tertiary education system. It is demonstrated that Botswana needs a globally competitive education system in order to survive in the global economy, and the graduates need to be globally marketable.

Chapter 3: *Literature Review*

Literature review starts by introducing programme accreditation as a concept, then discussing the policy behind, going on to elaborating on its purpose as being for improvement and accountability. Scholarly review on programme accreditation presents a critique of the accreditation system. The requirements and criteria employed during the accreditation process are presented. The conceptual framework for the study precedes the conclusion to the chapter.

Chapter 4: *Research Design and Methodology*

The research design and methods are introduced. The research design, research paradigm, ontological and epistemological considerations, research methods, research procedures, data analysis, methodological norms and research ethics are discussed. An overview of the research design and the choice of the research approach are presented in this chapter. Detailed descriptions of the design and methods for each cycle are provided in chapters 5-7 as each successive cycle is discussed.

Chapter 5: *Preliminary Phase*

In this chapter, the answers to research sub-question 1, 'how is programme accreditation carried out in Botswana?' are sought by analysing data from interviews and documents paving the way for the foundation to compare the Botswana programme accreditation system with other selected systems, so as to identify shortcomings in the Botswana one.

Chapter 6: *Prototyping Phase*

Research sub-questions 2 and 3 are addressed in this chapter: 'How does the Botswana Programme accreditation system compare with other systems?' and 'What constitutes an effective programme accreditation system?' As the research sub-questions state, Botswana's programme accreditation system is compared and contrasted with other accreditation systems in order to further identify strengths and weaknesses. Interview analysis helped to provide answers to these two research sub-questions. Prototypes of the programme accreditation system are developed.

Chapter 7: *Evaluation Phase*

The development of prototypes is continued in this chapter, and characteristics of an effective programme accreditation system are sieved by answering research sub-questions 4 and 5: 'How can the Botswana programme accreditation system be optimised?' and 'To what extent could the identified characteristics optimise the Botswana programme accreditation system?' An exploration of ways of integrating the resultant characteristics into the current Botswana programme accreditation system so as to distinctly list the characteristics is undertaken through interviews and mini-workshops to provide answers to the research sub-questions. A final prototype of the programme accreditation system ensued.

Chapter 8: *Conclusions and Recommendations*

The final chapter provides answers to the main research question: ‘What are the characteristics of an effective programme accreditation system for tertiary education institutions in Botswana?’ A summary of the research findings per research question, implications of the findings, and conclusions drawn from this study are presented. In addition, suggestions for further research are stated.

Presentation of the context of the study follows in Chapter 2.



Chapter 2

Context of the Study

2.1 Introduction

The Tertiary Education Policy for Botswana instituted in 2008 includes quality and relevance of tertiary education as critical in assisting the country to realise the transition from a resource-based economy to a knowledge-based economy. For the tertiary education sector to achieve this mandate, continual attention to the quality of academic programmes in Tertiary Education Institutions (TEIs) should be amongst the prioritised action items. One of the key mechanisms used to monitor and ascertain the quality of education provided to the nation is by applying external quality assurance mechanisms, such as programme accreditation.

Before the establishment of the Tertiary Education Council (TEC), individual institutions were accountable to a variety of bodies for the maintenance of their quality assurance systems, for example, the colleges of education and institutes of health sciences affiliated to the University of Botswana, which thus monitored their external quality assurance. Private TEIs offered mostly franchised programmes so endorsement of their quality was by the franchisors, who dictated standards. In most cases, programmes were quality assured by the regulatory and accreditation bodies in the place of origin. The establishment of the TEC brought about a change in this arrangement, as institutions might be affiliated to other institutions of their choice, and might carry out their quality assurance activities to boost their standards. However, they are still accountable to the TEC for their external quality assurance mechanisms, in this instance, programme accreditation.

In this chapter, the context of the study is presented. Section 2.2 gives a synopsis of the Botswana education system. A discussion of the tertiary education landscape ensues, indicating enrolment in both private and public institutions and demonstrating the need for accountability by presenting expenditure on tertiary education (Section 2.3). In Section 2.4, an explanation on how a programme becomes eligible for accreditation is given, paving the way for Section 2.5 in which a discussion of programme accreditation in relation to national development is presented. The Botswana programme accreditation system is presented in Section 2.6, and strengthened in Section 2.7, by explaining how Botswana supplements it. A

brief discussion of implications for the study is presented in Section 2.8. The chapter is concluded under Section 2.9.

2.2 The Education System in Botswana

Botswana practices a twelve-year basic (general) education system, after which students can transfer to tertiary education on merit. The first seven years of formal schooling are primary education and lay the foundation for five years of secondary education. All school-age children are eligible to enter public schools for the attainment of basic education in public institutions with the sponsorship of government. Children who are educated in private schools are sponsored by parents or guardians, with promotion to tertiary education based on aptitude and the entry requirements of the programme for which the student would like to enrol. The normal tertiary education entry requirements are a pass in the Botswana General Certificate of Secondary Education (BGCSE), obtained after twelve years of formal schooling. Those who took less than 12 years are special cases who in most cases missed some classes in the process. A diagrammatical representation of the structure of the education system in Botswana is presented in Figure 2.1.

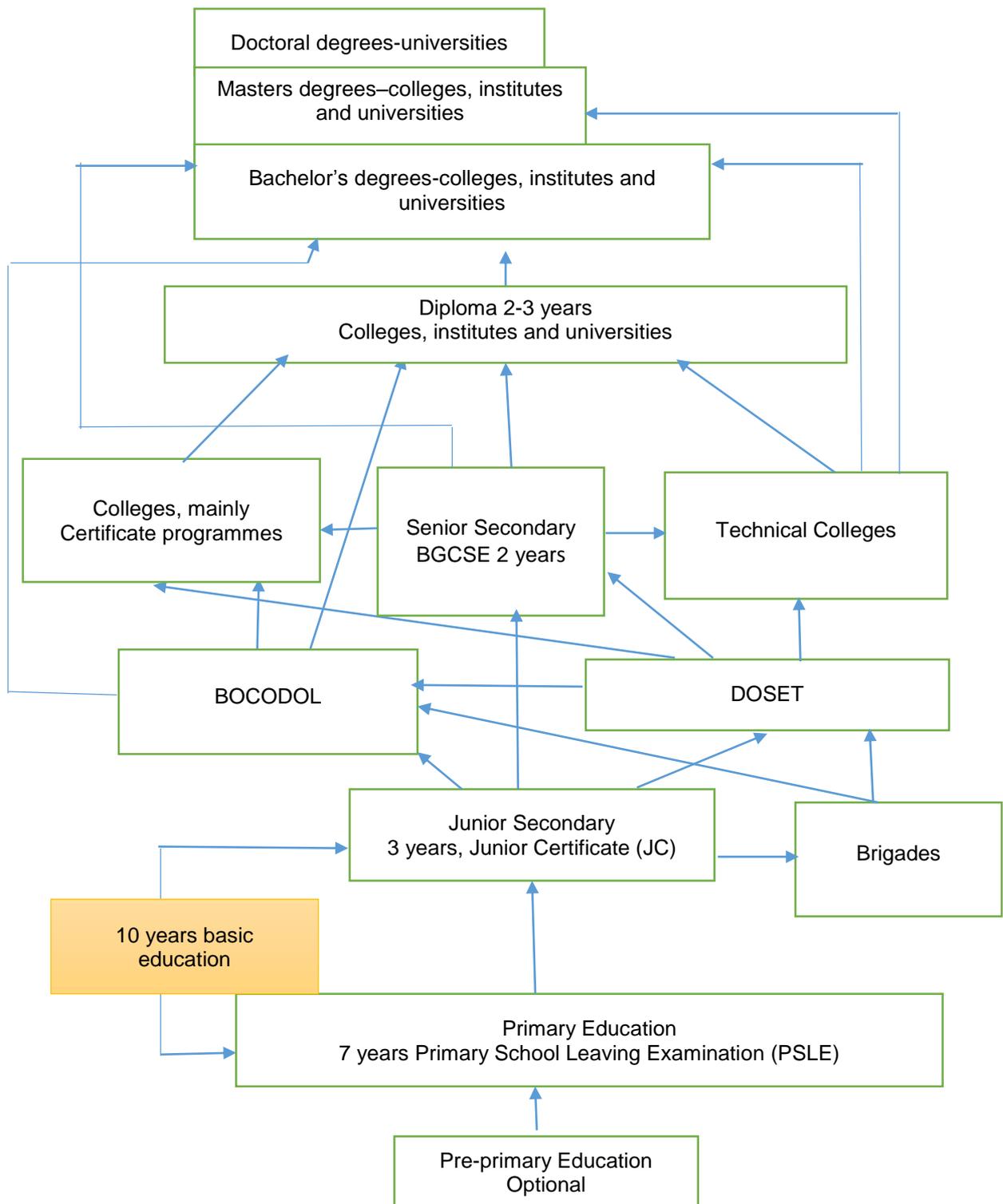


Figure 2.1: Structure of the education system in Botswana

Legend:

DOSET- Department of Out of School Education and Training

BOCODOL- Botswana College of Distance and Open Learning

Basic education is free and incorporates pre-primary to secondary education. Primary education is compulsory and takes seven years, the curriculum being aimed at equipping children with literacy skills to lay the foundation for reflective and critical thinking. Secondary education is divided into junior secondary and senior secondary. Although the students sit for primary school-leaving examinations there is automatic promotion from primary to junior secondary school. A student should earn a pass in junior secondary school to be eligible for a place in senior secondary school. Successful completion of senior secondary education ends in BGCSE, which is a passport to tertiary education. Students who do not do well at different levels can be absorbed into brigades and other programmes to give them survival skills, or they can drop out of the educational system.

At the Organisation for Economic Co-operation and Development (OECD) conference on higher education, with the theme 'a system approach to higher education institutions towards knowledge networks and societal trust', Heitor (2008) hinted that it is imperative that TEIs strengthen capacity by making the necessary changes that will assist in making their systems fit modern society. The teaching and learning resources should be improved to ensure that they contribute towards educational diversity, taking cognisance of the educational quality issues. Heitor (2008) further advised that TEIs should ensure that they have communication and partnerships with economic, political and social communities, because the networks will open communication doors and foster institutional integrity. The association or partnerships could also encourage institutions to comply with the demands of the economic forces, because they will be alert to the contemporary issues such as the changing economic landscape that dictates changes in the approach to attending to educational issues. The changes might be in the form of knowledge areas required in the economy, thereby dictating amendment in the fields of study offered within institutions. Thus, the Botswana education system should not be isolated but should rather fit in with international trends if it is to accommodate the international perspective (Section 1.2).

To give a clearer view of the education system, the education statistics for Botswana as at 2009/10 records (records relevant to this study) are presented in Table 2.1.

Table 2.1: Summary of Botswana education statistics 2009/10

Total population of Botswana (2010):	1,800,098
Literacy rate (2003):	81%
Male literacy rate (2003):	80%
Female literacy rate (2003):	82%
Population pre-Primary age group (3-5), (2010)	105,106
Population Primary age group (6-12), (2010)	302,483
Population Secondary age group (13-17), (2010)	204,090
Population Tertiary age group (18-24), (2010)	282,777
Pre - Primary Schools Total Enrolment (2010)	24,433
Primary Schools Total Enrolment (2010)	331,196
Secondary Schools Total Enrolment (2009)	164,201
Tertiary Education Institutions Total Enrolment (2010)	37,859
Primary Level Gross Enrolment Ratio (GER 6-12 years), (2010)	109.5%
Primary Level Gross Enrolment Ratio (GER 7-13 years), (2010)	108.8%
Secondary Gross Enrolment for 13 -17 years, (2009)	84.0%
Tertiary Education Gross Enrolment Ratio (18-24), (2010)	13.4%
Primary Level Net Enrolment Ratio (GER 6-12 years), (2010)	89.4%
Primary Level Net Enrolment Ratio (GER 7-13 years), (2010)	90.8%
Tertiary Education net enrolment ratio (18-24), 2010	84%
Transition rate from Primary to Secondary, (2005)	96.9%
Transition rate from Junior Secondary to Senior Secondary, (2009)	66%

Source: Tertiary Education Council (2011, p.22)

The 2009/10 gross enrolment ratio for age group 18 to 24 in TEIs was 13.4% while for secondary schools it was 84%. For industrialised countries, the transition rate from secondary school to tertiary education was 62% (OECD, 2012). Botswana is an upper middle income country with great reliance on the mining industry, therefore the wish to make a transition to a knowledge-based economy partly implies it should learn and emulate some of the developments and practices in industrialised countries, one being an increase in the transition rate from secondary education to tertiary education. However, there is already evidence of some growth in the transition rate, as will be seen in the next section.

2.3 The Tertiary Education Landscape

For a long time, tertiary education in Botswana was not given sufficient attention. Mgadla (2003) succinctly puts it that from the 1940s and 1950s the number of Botswana students who went to university was very small, with evidence of a slight increase in the 1960s attributed to improvement in the quality of primary and secondary education. More importantly, there were constitutional developments and reforms that were aimed at empowering Botswana to take

control in shaping the country's destiny towards preparation for a takeover from the colonial powers on independence. Mgadla (2003) further states that:

Schooling therefore was structured in such a manner that would produce personnel that would superintend the bureaucratic structure of Government. The pre-occupation with this pattern of educational development had the unfortunate effect of neglecting vocational or tertiary education as more bureaucrats than technocrats were needed. This conformed to the general belief that administration, bureaucracy, and management rather than skills were key to success (p.169).

It was only in later years that the country realised the need for vocational and tertiary education, hence the first university began its teaching in the 1970s with the opening of the Botswana Campus of the University of Botswana, Lesotho and Swaziland in 1973.

In this section, the tertiary education landscape in Botswana is introduced by presenting the number of registered institutions and the types of programmes on offer (Sub-section 2.3.1). The student population in the TEIs is discussed (Sub-section 2.3.2) followed by a brief indication about sponsorship arrangements for learners (Sub-section 2.3.3).

2.3.1 Registration of institutions

The establishment of the TEC as a regulatory body to support the government in developing Botswana's tertiary education system brought about considerable growth in the tertiary education system through both public and private TEIs. According to the tertiary education statistics (TEC, 2011), participation in tertiary education for the age group 18-24 years was 7.5% in 2004/2005, however, by 2009/2010 participation had risen to 15.1%. This increase had both positive and negative implications for the nation's resources, requiring more transparency and accountability to the stakeholders.

One of the first activities in managing the tertiary education landscape in Botswana was to register existing TEIs and ensure that none were operating without being registered. Registration then became the first process in quality assurance, consisting of two parts: registration, which allowed the institution to run for ten years before application for renewal of registration; and a Letter of Interim Authority (LIA), which allowed the applicant to assemble all the necessary resources within five years for the establishment of the institution. Some of the institutions that applied for registration did not immediately meet the registration threshold requirements and criteria, and as such were advised to make improvements to identified areas before being registered. Most of the private institutions were issued with LIA to allow them to

improve on the available resources before being registered. These are the same institutions that underwent programme accreditation as stated in the problem statement (Section 1.3). The law then dictated that anybody who wanted to start a TEI should apply to the TEC for registration. Some applicants were rejected and those who were operating but did not meet threshold requirements and criteria were forced to close. Any institution that classified itself as a TEI but was not registered by the TEC would be an illegal operator. Once discovered, the law takes its course, charging and then closing down the institution. The registration status of TEIs as at December 2013 is presented in Table 2.2.

Table 2.2: Registration of tertiary education institutions as at December 2013

Year	Public Institutions		Private Institutions	
	Number of institutions	Types of programmes/TEI	Number of institutions	Types of programmes/TEI Added to the list
2006	14	health, education, agriculture (<i>affiliates to UB</i>) University of Botswana, Institute of Development Management, Botswana College of Distance and Open Learning.	4	UNISA programmes, business, information technology, creative technology <i>mainly franchised programmes</i>
2009	23	engineering, technical, defence, wildlife	7	arts, fine arts and theology
2012	24	as above	13	health sciences, law, and self-developed programmes
2013	24	as above	16	purchasing and supply

Amongst the public institutions registered were institutes of health sciences offering different specialisations, colleges of education, technical colleges, a college of agriculture, the University of Botswana, and Botswana College of Distance and Open Learning. There were two universities within the private institutions and the remaining institutions offered a variety of qualifications from diploma level with a number of master's degree level programmes. An increase in the number of institutions and the number of programmes resulted in an increase in student enrolment.

2.3.2 Enrolment trend

TEIs' enrolment trend from 2003/04 academic year to 2010/11 increased steadily. The graph (Figure 2.2 next page) shows a positive trend between 2003/04 and 2008/09, and a slight decrease of 1.8% between 2003/04 and 2004/05 that is very difficult to explain. From then onwards there was a positive trend until 2008/09, when total TE enrolment began to drop. Further analysis of the graph shows a sharp increase in TE enrolment between 2006/07 and 2008/09. This is a period when the TE sub-sector experienced private TEIs registering with the TEC and government's decision to sponsor students in these institutions. However, the

decision by government in 2009 to reduce TE funding seems to have been the major factor that contributed to a sharp downfall in total TEI enrolment beginning the academic year 2009/10 (TEC, 2011).

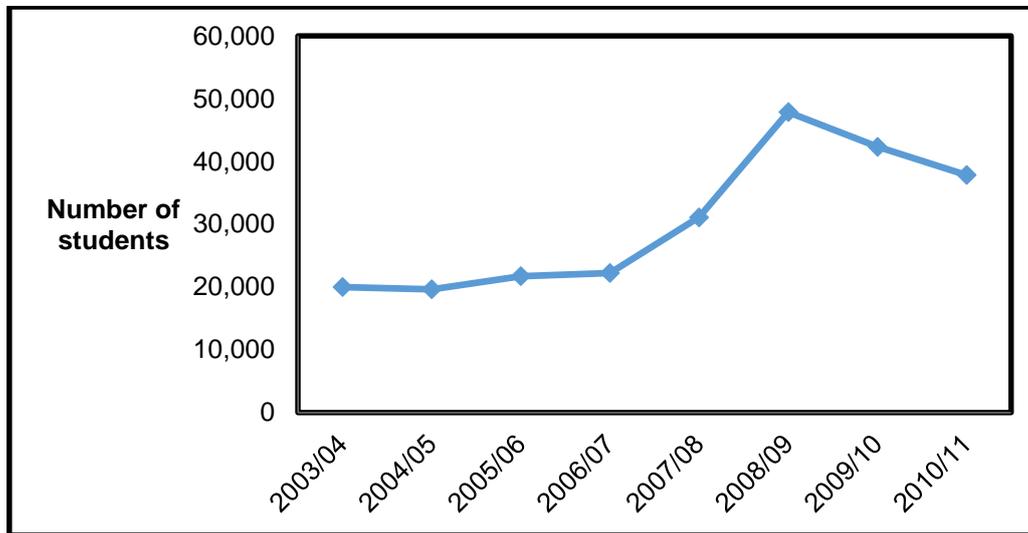


Figure 2.2: Enrolment trend in tertiary education institutions *Source: TEC (2011, p.26)*

The data shows the input but not the output, so an interesting exercise would be to compare the quality of both to see what level or numbers are absorbed into the workplace. The growth of private TEIs in Botswana plays a crucial role in accessibility of tertiary education, as well as preparing the next generation or improving the current generation for entry into the labour market. The advocacy for private TEIs in the country is an indication of the nation’s commitment towards the quest for the accessibility and provision of tertiary education.

The Long Term Vision for Botswana (Republic of Botswana, 1997, p.5) states that “by the year 2016, Botswana will have a system of quality education that is able to adapt to the changing needs of the country as the world around us changes”. Quality education implies that attention be given to improvements in the relevance, quality, and access to education. A good education system is one that succeeds in meeting its own goals, being relevant to the needs of the economy and individuals, and one that fosters the ability of children to acquire knowledge and critical thinking skills. It is an education system fit for purpose, and programme accreditation is one way of ensuring that this vision is fulfilled. It is within this context that the study intends to recommend the characteristics of an effective programme

accreditation system for use in the TEIs in Botswana by answering the research questions as stated in Chapter 1 Section 1.5.

2.3.3 Sponsorship for learners

According to the 2010/2011 records, the Ministry of Education and Skills Development enjoyed 31% of the Government’s recurrent budget, with about 17% of this going to tertiary education (Republic of Botswana, 2011a). Figure 2.3 illustrates sponsorship by different stakeholders in tertiary education for the academic year 2010/11, with the largest sponsorship being borne by the government.

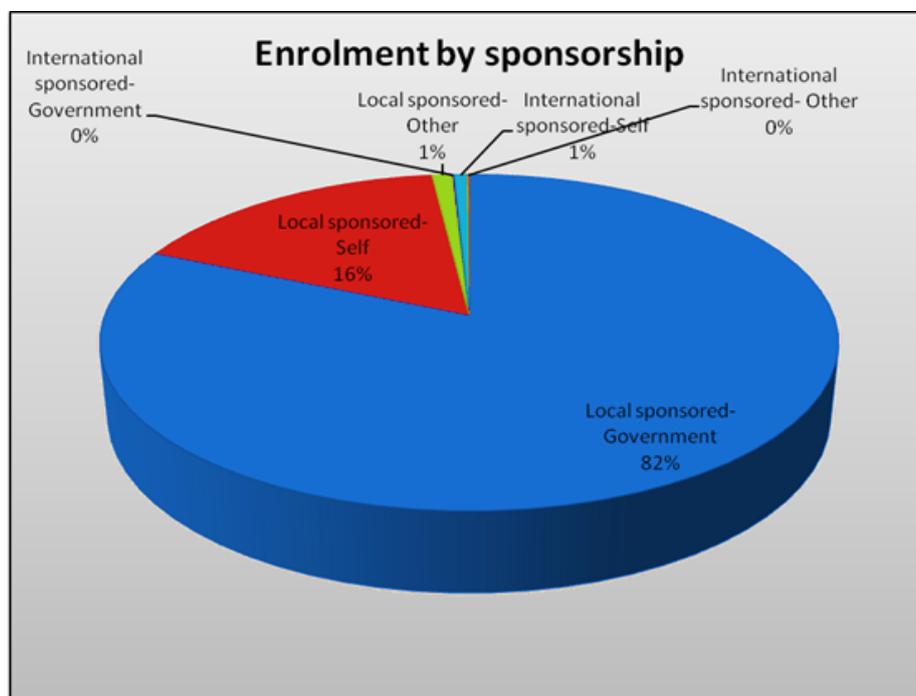


Figure 2.3: Enrolment by sponsorship Source: *Tertiary Education Council (2011, p.59)*

The pie chart demonstrates that most of the students in local TEIs were sponsored by government, whilst local students who are sponsored by government in TEIs outside the country are not considered in the calculations that led to the above illustration.

Botswana underperforms in terms of knowledge economy indices compared to other middle income countries. For example, in comparison to developed and other middle income nations, it scored 4.37 out of 10 possible points and was positioned number 85 out of 145 countries, compared to South Africa at 5.21, position 67; Mauritius at 5.52, position 62; and Sweden ranked number 1, with a convincing score of 9.43 out of a possible 10 (World Bank, 2012a).

According to the World Bank, the knowledge index measures a country's ability to generate, adopt, and diffuse knowledge for economic development. The knowledge economy index is the average of the normalised performance scores of a country or region on the key variables in knowledge economy pillars of economic and institutional regime, education and human resources, the innovation system, and information technology (World Bank, 2012b). Since it evaluates the country's progress towards the knowledge economy, the indices imply that, despite the investment, Botswana was not doing very well in the world of knowledge economy compared to regional middle income nations such as South Africa.

The above scenario calls for improvement in the education system. One of the major ways of ensuring this development would be through effective monitoring using the programme accreditation process to assist in effective accountability for the country's financial resources. It will be important to have a well-defined, structured, vibrant, relevant programme accreditation system dedicated to tertiary education to help the system improve on the quality of education provided to the nation. A state of the art programme accreditation system would support Botswana's national priorities and goals. Kemenade and Hardjono (2010) affirm that accreditation is used around the world, mainly for accountability purposes, therefore Botswana is following international practices by carrying out programme accreditation.

2.4 Eligibility for Programme Accreditation

According to the Tertiary Education Act (Republic of Botswana, 1999), programme accreditation is carried out in private TEIs only. The 2010/2011 institutional census demonstrates that the enrolment ratio between public institutions and private institutions was 65:35, suggesting that fewer than 35% of the learners graduated from programmes accredited by the TEC. The programme undergoes the accreditation process after being offered for a minimum of one year. This law prevented the TEC from carrying out programme accreditation in public institutions therefore the start in 2009 saw only six institutions with some eligible programmes. The seventh institution was relatively new and therefore the programmes had not yet matured for accreditation. The first round of programme accreditation resulted in 63 programmes being processed, some of which did not meet the threshold requirements and criteria after the first assessment. Recommendations were made for the institutions to act on and a re-assessment before accreditation was carried out. The following table (Table 2.3 next page) shows output of the programme accreditation process as of December 2010.

Table 2.3: Accreditation status of programmes as at December 2010

Institution	Number of programmes	Accredit	Provisional	Deferred
1	21	10	8	3
2	12	5	4	3
3	1	1		
4	15	3	6	6
5	5	4	1	
6	9	9		
Totals	63	32	19	12

All the accreditation reports offered recommendations that the institutions had to act upon for improvement, whether a programme was accredited or not. The institutions had to present action plans to the TEC for the programmes put on provisional and deferred status. They were then re-assessed for accreditation and appropriate recommendations made.

As part of the diversification mechanisms, some institutions opted to purchase and offer readymade quality assured programmes (franchised) in addition to developing their own. Institutions acquired franchises to offer programmes from outside the country and not from within. As at the time of the study, some local private institutions were still considering purchasing programmes from each other. Nonetheless, the import of programmes from one country to the other brings its own challenges, such as different quality assurance mechanisms. Thus, in addition to a diverse range of educational opportunities provided by franchised programmes, a diverse range of programme accreditation systems also saw their programmes into the country.

2.5 Moving Focus from an Individual to National Development

The economic responsibility of tertiary education is to produce skilled manpower so as to meet the increasingly market driven, knowledge-based economy, and address the pressures of growth, change and development. As stated in the Botswana National Human Resource Strategy (NHRDS), the country aspires to make a transition from reliance on natural resources to human resources (Republic of Botswana, 2009a). It is evident that countries such as Australia, Finland, Mauritius, and New Zealand have prospered partly because they invested in the development of their people, besides a focus on research and innovation, information and communications technology, economic incentives, and institutional regime (Republic of Botswana, 2009a). It would be prudent for Botswana to emulate countries that have reaped benefits from investing in their human resource.

In their research to inform the TEC 2010-2011/16 strategic plan, the TEC asked stakeholders to articulate what they expected from the TEC as the organisation responsible for the development of tertiary education in Botswana. The government and employers expected the TEC to be more efficient and deliver on its mandate decisively, with rapid implementation of quality standards, addressing relevance of the programmes, and ensuring that new and innovative measures relating to cost-sharing, good governance, student discipline were introduced and effectively implemented. The results would be graduates with relevant skills, who are employable and can bring about high levels of productivity, appropriate citizenry values of good morality, transparency, democracy, and accountability (TEC, 2010).

It is evident that, besides global competitiveness, the population has expectations that the TEC will safeguard the quality of education provided to the nation, but there might be different needs in the requirements and expectations from different quarters. Parents and the general public put emphasis on opportunities for access, equity, cost savings, subsidies, and returns on their investment in educating their children and themselves. The government requires economic use of resources and production of a relevant and productive labour force, and it is desirable that increase in the quantity of students enrolled in TEIs (see Figure 2.2) translates to increase in the quality of the labour force. However, this is not always the case, and it is in this vein that stringent measures on the assessment and monitoring of the quality of education provided to the nation are put in place.

Both the demand for and provision of tertiary education are growing worldwide (Materu, 2007), resulting in an increase in the talent pool of young higher education graduates. The labour market has continued to diversify, demanding a trainable, self-programmable, and flexible quality workforce (Republic of Botswana, 2009a), expected to work with little supervision at a high productivity level. The quality workforce is likely to be highly mobile within and outside their countries, but this will change the nature of jobs, thus dictating that students be educated for jobs that do not yet exist (Voogt & Pareja Roblin, 2010). To contribute towards addressing this need, Binkley, Erstad, Herman, Raizen, Ripley and Rumble (2010, p.15) suggested incorporating 21st century skills, grouped into categories in the teaching and learning process/curriculum, as in Table 2.4 (next page).

Table 2.4: The 21st century skills

Ways of Thinking	Ways of Working	Tools for Working	Living in the World
1. Creativity and innovation	4. Communication	6. Information literacy (includes research on sources, evidence, biases, etc.)	8. Citizenship – local and global
2. Critical thinking, problem solving, decision making	5. Collaboration (teamwork)	7. ICT literacy	9. Life and career
3. Learning to learn, metacognition			10. Personal & social responsibility including cultural awareness and competence

Source: Binkley et al. (2010)

The above table is in agreement with the thinking that 21st century education provision requires a different approach to teaching. Kasworm (2011, p.106) writes that the “new era and trend is not just about expertise; it is about reinventing the learner’s understandings and frames of examination and action in society”, and argues that societies should develop challenging educational venues with focus on self-directed learning, creativity, and openness to change, on critical reflective problem-solving, and on engaging in change through learning in an evolving context. The implication of this scenario is that, in designing the curriculum, the ten skills will need to be applied with reference to measureable descriptions of **Knowledge, Skills, and Attitudes, Values and Ethics (KSAVE)**. The quality of the curriculum contributes to the quality of graduates, therefore the KSAVE framework ought to be prepared by setting threshold standards that should be satisfied by the graduate (Binkely et al., 2010, p.15).

The question now arises, does the Botswana programme accreditation system embrace the 21st century skills? According to the OECD’s analysis, by the year 2020, more than 200 million 25-34 year-olds in OECD and G20 countries will have higher education degrees, and 40% of these will be from China and India alone, with the USA and European Union countries accounting for just over a quarter in the OECD and G20 countries (OECD, 2011). Botswana aspires to have a stake in this competitive global economy, but whether the graduates will be employable would be a focus of other research. This study; *Development of a programme accreditation system to address quality in tertiary education institutions in Botswana*; advises Botswana to pursue efforts to make the programme accreditation process more effective, as quality programmes will increase public returns on education by generating a competent and globally competitive workforce.

2.6 Programme Accreditation System in Botswana⁶

In this section, the steps to programme accreditation are discussed, commencing with the legal framework which underpins the accreditation process.

The programme accreditation system in Botswana is guided by the Tertiary Education Act (CAP. 57:04 Part VI (ss25-29); Republic of Botswana, 1999) and the Tertiary Education (accreditation of private tertiary institutions) Regulations (2008) also referred to as statutory instrument No 100 of 2008 (TEC, 2008). According to the Tertiary Education Act, any registered private tertiary institution, being the holder of a registration certificate issued in accordance with the TEC act, may apply to the TEC for accreditation provided that the (registration) certificate:

...has been held for at least three years or for such period that the council may in a particular case determine and has not been suspended or revoked and the most recent assessment of the tertiary institution in accordance with Section 24 indicate that the Council is satisfied with the progress so far made in the design, implementation or maintenance of an academic and administrative system acceptable in terms of the institutional standards prescribed under this Act and relevant to the needs of tertiary education in Botswana (Republic of Botswana, 1999, p.13).

Thus, programme accreditation is carried out only in private TEIs and the programme should have been taught for a minimum of one year before being taken through the programme accreditation process. It is the responsibility of the institution to apply to the TEC for programme accreditation before a programme matures. Once the institution has been allowed to submit the programme for accreditation; the production of the self-evaluation report, the verification visit, then steps towards the accreditation recommendation follow. A concise description of the programme accreditation process is given below:

⁶ Proviso: The accreditation regulations (TEC, 2008) do not contain the accreditation process but rather the application form for accreditation and the accreditation standards and criteria. The draft accreditation process is available and I wrote the accreditation process in this section using personal experience and guidance from the draft accreditation guidelines.

1. Production of the self-evaluation report

The self-evaluation report serves as a basis for programme accreditation. The institution being guided by the programme accreditation guidelines, requirements and criteria, and a report structure provided by the TEC, produces a self-evaluation report. This is a self-reflection of the institutional processes, taking into account the achievements and challenges that the institution has faced within a particular programme. The institutions themselves define and analyse their processes so as to identify indicators for focus of improvement. The onus is upon them to suggest ways of improvement. An important point to consider is that, based on the self-evaluation, the institution does not have to wait for the accreditation process to effect improvement where it finds weaknesses. They can act accordingly before the start of the accreditation process. If changes are made after submission of the report the institution is expected to provide an addendum to the report before the programme reviewers start the process, thus avoiding variations between what is on the ground and what is reported. Once the self-evaluation report is ready, the institution submits it to the TEC and logistical arrangements for the accreditation process commence.

2. Appointment of the accreditation panel

A team of three programme reviewers per programme is appointed, with careful consideration given to the mix, particularly as there should be representation from both academia and industry. The review panel are regarded as experts in the field of study and the TEC holds the team's recommendations in high regard. Their academic qualifications and experience should be higher than the programme they have been contracted to review, for example, the reviewers of diploma programmes should hold qualifications higher than a diploma.

The list of programme review nominees is sent to the institution before the accreditation visit so that the institution can rule out possibilities of conflict of interest. If the institution is not satisfied with any of the team members they submit a letter to the TEC explaining their stance. The institution is not forced to accept team members, however, professional judgement is employed to ensure that suitable people are engaged. The accreditation visit is also referred to as a validation or verification visit because the programme reviewers validate the contents of the self-evaluation report against the evidence in the institution. Once both the institution and the TEC have agreed on the composition of the review panel, a chairperson is selected and the TEC is informed. The ideal practice is that the programme should be evaluated at its site of delivery so that all resources used can be assessed there.

3. Site visit

The review panel visits the institution to verify the self-evaluation report on an agreed upon date. Apart from a member of the secretariat (TEC) accompanying the team for logistical matters, the verification is made by the accreditation team without interference from the TEC. The site visit is budgeted for three days per programme, with a briefing session between the team and institutional administration. This discussion helps to clarify issues that will have emerged during the data collection process so that the reviewers can make an informed decision on what to report and what recommendations to make.

4. Production of accreditation report

The accreditation report is a result of triangulation of different validation methods which are used during the site visit. These include:

- ❖ Document analysis
- ❖ Class observations
- ❖ Students' interviews
- ❖ Academic staff interviews
- ❖ Non-academic staff interviews
- ❖ Administration staff interviews
- ❖ Any other data collection strategy that the team deems fit.

The panel then produces an accreditation report detailing their findings, which contains, inter alia, commendations, affirmations, and recommendations. Both the institution and the TEC are given a chance to comment on the accuracy of the report, then the final recommendation on whether to grant accreditation status is based on the weight of the recommendations in the body of the report, which then becomes the property of the TEC. The TEC follows the established decision-making procedures and structures to pronounce the accreditation status, which once pronounced leads to the accreditation report being published in the public domain, such as the TEC's website, a practice which has not been followed as of 2013.

5. Accreditation decisions

Accreditation decisions may range from grant accreditation to an outright rejection. The overall decision is based on the weight of the individual recommendations per standard. The individual recommendations are classified as follows:

- ❖ *Required recommendations* – the deficiencies put the quality of a programme delivery at risk. The recommendations should be met before accreditation is granted. It is mandatory that the institution draw up an action plan detailing how it will address the deficiencies. A monitoring sequence is produced to ensure that the recommendations are acted upon.
- ❖ *Advisable recommendations* – the institution is encouraged to take action to meet the standard but it is not a condition to directly and immediately put the quality of programme delivery at risk.
- ❖ *Desirable recommendations* – the institution should consider implementing these recommendations as the panel believes they will improve the overall quality of the programme.

Before an accreditation decision is made about a programme, the TEC management ensures that there is consistency with the observations and comments made by the programme reviewers. To further ascertain consistency and fairness in the accreditation decision the Academic Planning and Development Committee (APDC), a decision making committee of the TEC with standing members scrutinise the recommendation, and they can either approve or annul the management's recommendation. The APDC's recommendation, together with the programme reviewers' recommendations, are then presented to the TEC's governing council, which in most cases approves the APDC's recommendation.

Each accreditation decision comes with recommendations, and institutions are required to implement appropriate follow-up strategies to address those of the report. The TEC then monitors implementation and once the institution has addressed the recommendations, it invites the TEC to ascertain action taken and amend the accreditation recommendation where warranted. To achieve the re-assessment for accreditation, the TEC appoints the chairperson of the programme review team if the programme was put on provisional accreditation, or appoints a complete team if the accreditation decision was to defer. The TEC has classified the accreditation decisions as follows (TEC, n.d. a):

i. Accredited

The programme accreditation team has given a number of commendations, and no 'required' recommendations. There may be 'advisable' or 'desirable' recommendations, but it is the opinion of the panel that these can easily be met. 'Advisable' and 'desirable' recommendations are often long-term in their nature, and it may transpire that there are alternative actions the institution can take, or events overtake the recommendation, or that on reflection the institution

has reasons, acceptable to the TEC, for not fully implementing the recommendation. Institutions are advised to be open with the TEC and to share their considerations so that an informed, joint approach can be used to resolve any issues.

ii. Provisional accreditation

This accreditation status is awarded with evidence that on the whole the programme is strong, but there are some 'required' recommendations that should be met in core areas of the programme. The recommendations might be addressed in the short term, for example, from three to six months. Confirmation of action on the recommendations is left in the hands of the TEC in consultation with the chair of the accreditation team as necessary. The recommendation can then be amended, based on the results of re-assessment for accreditation.

iii. Deferred accreditation

A number of critical failures in the delivery and management of the programme overpower the few positive points that might be present. In this case, the accreditation team's judgement is that the shortcomings cannot be put right in the short term, such as one year.

iv. Reject accreditation

This decision is reached once the accreditation team has serious reservations about the quality and standards of the programme, its delivery and management at the institution and believes that it is not possible, without major changes, for the institution to correct the problems. The interests of the students are put at the forefront in this case. The accreditation team resolves that it would not be fair to students or future applicants to allow continuation of the programme. The institution is either instructed to complete the teaching of the enrolled students under strict monitoring by the TEC or transfer them to another institution at the 'failed' institution's expense. The institution has the right to appeal the decision.

The list of TEC-recommended accreditation programmes is submitted to the Minister of Education and Skills Development [action by the Directorate of Quality Assurance and Regulation (DQAR)] who then pronounces the accreditation status through the government gazette. Programmes not awarded accreditation status are required to be improved at different levels of decision-making and the reports of the deferred and rejected programmes are sent back to the institution at management level, while the provisional ones are sent back at APDC's level. To date, the worst accreditation decision has been deferred, therefore no programme as of December 2013 had suffered reject accreditation.

The programme accreditation system engages with all the areas relevant to a programme, such as inputs, processes and the output. The input is actually the basis of an education sector, the students, the human, and physical resources all form the basis for a TEI. Figure 2.5 presents a hierarchical representation of the programme accreditation process in Botswana.

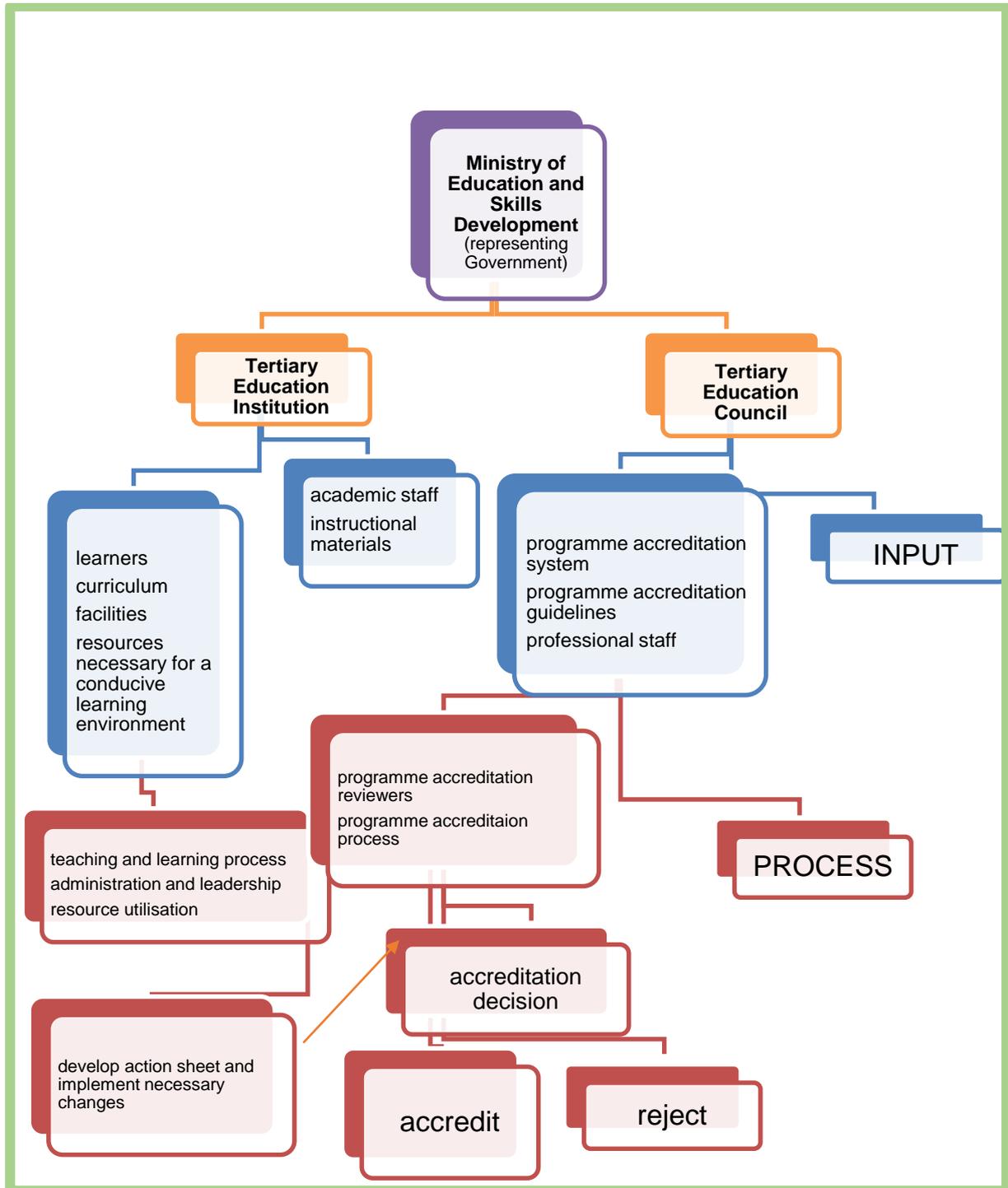


Figure 2.4: The programme accreditation system in Botswana

2.7 Augmentation of the Programme Accreditation Process

Some quality assurance or programme accreditation agencies accredit programmes before being offered, which is not the case with the Botswana system. Upon realising that this gap might compromise the quality of the programmes, the TEC developed criteria for review and approval of programmes so that private institutions submit programme curricula for review and possible approval before the programme is offered.

The programme reviewers use a five-point criteria of (TEC, n.d, b):

- a) *Relevance of the programme* – to establish whether the programme is relevant and whether it has currency in meeting the human resource needs in Botswana.
- b) *Student learning outcomes* – the programme under review must outline student learning outcomes so that it is clear what the learners are expected to know, understand and be able to do as a result of the delivery of the programme.
- c) *Programme structure, scope and sequence* – the programme reviewers must satisfy themselves that the programme being reviewed has been written by curriculum designers who are fully cognisant of curriculum design models.
- d) *Qualification requirements* – The programme being reviewed must show the modalities or forms of assessment that would be used. A learner is deemed to have met the criteria for the qualification if he/she has accumulated the required number of credits and other competencies.
- e) *Assessment tools and methodology* – The criterion seeks to find out if the programme being reviewed indicates the broad categories of assessment to be used in the programme. Evidence of categories of assessment such as written assessment, performance tasks, projects, research paper, and written tests must be shown in the programme.

The review must end with advice on the strengths and weaknesses of the programme of study, and when the reviewers judge the programme to be weak, they must indicate the improvements to be made. The reviewers should then state if the programme should be offered as is; offered on condition that it is improved; or be rejected. There is usually back and forth movement between the institution and the programme reviewers (through the TEC) regarding the required improvements to the curriculum document.

A comparison of the programme review process and the accreditation process indicates that the programme review route is not as robust as the programme review for accreditation. The criteria used for programme review ascertain the theoretical appropriateness of the programme's resources while the accreditation criteria assesses the physical presence of the resources that support programme delivery demanding evidence on the said resources. However, the programme review process augments the accreditation process.

2.8 Programme Accreditation Systems

The focus in this section shifts to an appreciation of the accreditation systems in a variety of countries. The systems were sampled because the preliminary analysis indicated similarities and differences with the Botswana system and amongst themselves. The analysis was guided by the accreditation processes and the accreditation instruments used within the different countries. The countries that were chosen subscribe to the idea of education for all and life-long learning principles (Varghese, 2011). A general aroma that attracted the choice of countries was that the countries offer internationally recognised education, their education systems go through transformation when there is need, being supported by research output. The Education For All (EFA) guidelines recognise different abilities, religious groups, ethnic groups, income levels, and ideas about teaching and learning, and it allows schools to develop their own special characters. They advise that each learner should be assisted to develop their potential in different pathways, such as academic and/or vocational, and the options should be provided. They value education as a critical factor in developing the skills and innovation needed to compete globally. Thus they have similar education ideologies as Botswana.

Programme accreditation systems in tertiary education are determined by the size of the education system. In the USA, programme accreditation has been in place for over 100 years (Eaton, 2006, El-Khawas, 2001). In 2001 there were more than 4,000 institutions offering instruction that led to a range of degrees from two-year associate degrees (diploma) to doctoral degrees, with an enrolment of more than 15 million students in formal study, and with large state universities capable of enrolling more than 30,000 students (El-Khawas, 2001). In Africa, the history of quality assurance can be traced back to 1827, to the first universities: Fourah Bay College in Sierra Leone, which was affiliated with Durham University in England; and the University of Cape Town, which was established in 1829, affiliated with the University of London (Hayward, 2006).

In an overview of quality assurance in Africa, Hayward (2006) reported that about 20% of African countries had quality assurance agencies. Botswana was counted amongst those that were in the process of developing accreditation systems. As stated in Chapter 2, the first

University began operating in the 1970s: the Botswana Campus of the University of Botswana Lesotho and Swaziland (Mgadla, 2003). Thus, tertiary education in Botswana is still in its developmental stages, which means that programme accreditation is also in its infancy. In addition, due to the small population of about 2million people, tertiary education enrolment as of 2011 was below 50,000 (refer to Chapter 2, Figure 2.2).

In the analysis of the characteristics and driving forces of regional quality assurance activity in South East Asia, promoted by the Association of Southeast Asian Nations University network, it was revealed that individual institutions and countries tried to create quality assurance systems for themselves, but the situation as observed in 2008 changed (Umemiya, 2008). There were collaborative efforts amongst quality assurance practitioners within institutions and agencies, nationally and internationally (Umemiya, 2008). However, studies have revealed that education systems cannot use a uniform programme accreditation system (Burden-Leahy, 2005; Lomas & Nicholls, 2005), but rather, a general model of external quality assurance provides a starting point from which countries can make deviations (Billing, 2004). This means that ideas may be adapted from international models but contextual differences and potential impacts must be carefully considered (Nguyeni, Oliver & Priddy, 2009) to ensure that the system is relevant to the user country.

It is notable that while a programme accreditation system should be relevant to the environment in which it operates, globalisation issues should also be considered (Mishra, 2007). Moreover, the implementation of any system should be managed thoughtfully and skilfully with decisions based on the country's systems, structures, and procedures, and take into consideration the organisational or institutional cultures (Burden-Leahy, 2005; Lomas & Nicholls, 2005). The fundamental idea behind programme accreditation should be that agencies must strive to establish quality assurance systems that will lead to the development of long-term quality assurance and enhancement practices for the country (Anaam et al., 2009). If accreditation systems are properly designed and mandated they can be powerful forces for quality and change in any complex system (Peng & Wang, 2008). It is thus incumbent upon individual programme accreditation systems to develop policies that will suit their education systems while taking cognisance of global trends in the education and employment sector.

Martin (2009) studied the quality assurance systems of Australia, Brazil, India and South Africa to analyse:

...whether the external quality assurance systems of the four countries in their orientation explicitly refer to national equity objectives, whether

quality models and quality assessment procedures developed under external quality assurance systems address national equity concerns, and whether external quality assurance processes such as follow-up and reporting mechanisms are conducive to enhance the monitoring of national equity policies at the institutional level (p.251).

The study revealed that national equity objectives can be reflected in the external quality assurance systems. National equity objectives encompass education for all citizens, regardless of gender, age and ethnic orientation (refer Chapter 1, Section 1.3 and Section 3.3). Consequently, both equity and quality need to be considered when dealing with issues of quality in education.

2.9 Implications for the Study

It is evident that the country's programme accreditation system and mechanisms must be managed, monitored and amended when necessary, or evaluated at intervals to ensure that programmes are appraised using upmarket requirements and criteria to facilitate the graduates' competitive edge in the global economy. Subsequently, a rigorous system of national accreditation could pave the way for international recognition of the programmes and open a wider avenue for their articulation with both local and international programme providers. Articulation arrangements motivate capable students and provide retraining pathways, in this way providing a second chance for those who did not make the 'right choice' in the first instance. A direct consequence of all these will be a substantial increase to the value of the programmes (Asia Pacific Accreditation and Certification Commission, 2012). In addition, accreditation of any programme considerably enhances the respectability of that programme (Brock, 2007; El-Khawas, 2001).

In his study, *Accreditation as local management tools*, Cret (2011) advises that programme accreditation is not meant to mechanically standardise processes or impose changes but rather it should be viewed as a catalyst to mobilise management tools for improvement that offer a framework and opportunities. Turnbull, Burton, and Mullins (2008) suggest that practitioners should reflect upon their institutional frameworks, whether they are there to assist them to improve their operations or for the sake of having them. Turnbull et al. (2008) clarify that a paradigm shift in the context of overall strategic planning and repositioning of institutional frameworks is a core component of a diverse range of quality models and processes to promote change in practice.

Several issues emerged from the context of the study that needed to be considered in developing the characteristics of an effective programme accreditation system for use in TEIs in Botswana:

1. The population of Botswana is just over 2 million. If all the eligible members of the population can be tertiary education graduates, the labour market would be unable to absorb them all. This raises key questions as to how the world labour market will absorb the swelling number of better educated people in the future. A conclusion can then be drawn that graduates of an internationally recognised education system will be able to compete in the world's labour market.
2. The tertiary education policy defines tertiary education as any education after BGCSE. The programme accreditation system should therefore cater for different kinds of programmes, including technical and vocational education.
3. Programme accreditation has become part of tertiary education. Students need accurate information about educational quality to choose the programmes of study, whilst academics and university administrators need information to monitor and improve on courses of study. Institutions need information to benchmark and market their performance, and governments and other bodies need information for funding, policy development and accountability. It is therefore critical that information about programmes is made available to the public.
4. Programme accreditation contributes to improving teaching and learning practices. Both institutions and the regulatory body should have a framework from which to work, regularly revised to incorporate emerging issues.
5. Botswana is aspiring to be a knowledge economy. The current trends in tertiary education imply that it should improve on the programme accreditation system in order to compete in the global economy. The OECD assists economies because it provides a forum for countries committed to democracy and the market economy to compare policy experiences, seek answers to common problems, identify good practices, and co-ordinate domestic and international policies of its members. Botswana should therefore learn good practices from other economies through OECD publications.

Programme accreditation can be considered as one of the most prominent reform issues in higher education to provide quality monitoring, accountability, consumer protection and mediation (Eaton, 2011; Teelken & Lomas, 2009). However, research has concentrated on the meaning of quality in higher education and reasons for evaluation (Stella, 2007).

Consequently, there is “lack of empirical investigation concerning existing practices of quality control” (Serrano-Velarde, 2008, p.287) which has left a gap in the quality assurance circles. The current scenario, that is, lack of empirical investigation of the programme accreditation system, poses an obligation for the TEC to mount a national agenda to systematically conceptualise, fund, implement, monitor and improve the national accreditation system, with the conviction that programme accreditation would contribute towards improvement in the quality of education provided to the nation.

It is imperative that programme accreditation takes into consideration the economic and social changes in the global market, to move as the market demands and as the environment changes (Woodhouse, 1999). This scenario dictates that the programme accreditation process be continuously improved to meet the demands of the global economy. Recommending the characteristics of an effective, that is, operative programme accreditation system that takes global trends into consideration, will help Botswana to revisit the accreditation system that is currently under use so as to improve on it and develop a more effective one.

It is likely that with time the population of qualified graduates in other countries will intensify, leaving local labour markets unable to absorb them all. Graduates from renowned providers of quality education programmes will continue to have good employment opportunities in and outside their home countries, as long as economies continue to become more knowledge-based. Botswana, with a comparatively small population will have to provide competitive quality programmes to ensure that they have a stake in the graduate competitive economy.

2.10 Conclusion

The context of the study has demonstrated that Botswana is committed to improving both the quantity and the quality of graduates from the tertiary education sector. The TEC as a regulatory body set up through an Act of Parliament has endorsed the delivery of a well-coordinated high-quality tertiary education system supplied by both public and private institutions. Despite the commitment, assessment of programmes through programme accreditation is performed only in private TEIs, an arrangement that has left the public institutions without assessment of programmes through programme accreditation. The state of affairs is considered as an anomaly that might compromise the quality of programmes in public institutions, especially since the student population in public institutions is higher than in private institutions. The quality of programmes should be assessed using an up-to-date programme accreditation system. In order to understand the study and be in a position to

address the research question, the next chapter reviews literature with a focus on programme accreditation systems and on programme accreditation in general.



Chapter 3

Literature Review and Conceptual Framework

3.1 Introduction

Literature focusing on programme accreditation systems and programme accreditation in general was reviewed following a systematic approach in order to learn what is already known about the topic that may influence how the research question: *What are the characteristics of an effective programme accreditation system for the tertiary education institutions in Botswana?* could be addressed. This chapter presents a review of the literature as it relates to theories on programme accreditation, and what prior researchers have revealed about the accreditation systems, as reflected in recent literature such as journals and books.

The chapter begins with background information on programme accreditation as a concept (Section 3.2). Focus is then shifted to programme accreditation policies put in place in different systems employed by different programme accreditation agencies (Section 3.3). It is explained that programme accreditation is done for improvement (Section 3.4) and accountability (Section 3.5). The programme standards, specific requirements, and criteria for accreditation employed in different systems are deliberated on (Section 3.6), after which an explanation of the Commonwealth of Learning Review and Improvement Model (COL RIM model) is presented (Section 3.7). Section 3.8 presents scholarly reviews on programme accreditation while Section 3.9 presents views from different studies summarised under benefits, challenges and recommendations for programme accreditation. The conceptual framework developed for the study is firstly presented then discussed in Section 3.10. Conclusions are drawn in the final section (Section 3.11).

3.2 Programme Accreditation as a Concept

Programme accreditation is a quality assurance mechanism that is used to evaluate the quality of educational programmes. It contributes towards establishing the academic standing of a programme or its ability to produce graduates equipped with professional competence to practice (Harvey & Newton, 2004; Woodhouse, 1999). Academic standing in this instance refers to the quality of a programme as evaluated against some set criteria that will give the programme a quality standard related to the degree of quality attained in the academic arena. Thus, programme accreditation is “a process of external quality review created by higher

education to scrutinise colleges, universities and programmes for quality assurance and quality improvement” (Eaton, 2006, p.2).

As noted in Chapter 1, due to its renowned benefits, programme accreditation is growing worldwide in the higher education sector (Stensaker, 2011). With reference to the United States of America (USA), a three-year study, from 1993–1996, was conducted to establish the Council for Higher Education Accreditation (CHEA), advocating for accreditation of programmes to ensure that Higher Education Institutions (HEIs) provided quality education (CHEA, 2013). In Botswana, programme accreditation in Tertiary Education Institutions (TEIs) was the policy focus as early as 1994 (refer to Sub section 1.2.3), but was only operationalised in 2008. Materu (2007) advises that quality of higher education is amongst the priority themes in national strategies for development, therefore it is necessary to have effective quality assurance mechanisms beyond institutions. In the same light, programme accreditation is a widely used method for quality assurance in OECD countries (Kis, 2005). It is possibly for this reason that the African Union (2007) identified programme accreditation as an issue that requires urgent attention in Africa.

As a concept, programme accreditation assures stakeholders that the delivery of education - fulfils their expectations or satisfies threshold educational standards (Obekula & Shabani, 2007). It may therefore function as a tool to promote the principles of the provision and enhancement of the teaching and learning process, curricular content, assessment and feedback, research, and cooperation with industry (Aqlan, Al-Araidah, & Al-Hawari, 2010). It upholds the ideals of the provision of quality education. According to United Nations Children’s Fund (UNICEF, formerly United Nations International Children’s Emergency Fund), quality education includes:

- a) Learners who are healthy, well-nourished and ready to participate and learn, and supported in learning by their families and communities;
- b) Environments that are healthy, safe, protective and gender-sensitive, and provide adequate resources and facilities;
- c) Content that is reflected in relevant curricula and materials for the acquisition of basic skills, especially in the areas of literacy, numeracy and skills for life, and knowledge in such areas as gender, health, nutrition, HIV/AIDS prevention, and peace;
- d) Processes through which trained teachers use child-centred teaching approaches in well-managed classrooms and schools, skilful assessment to facilitate learning, and reduce disparities;

- e) Outcomes that encompass knowledge, skills and attitudes, and are linked to national goals for education and positive participation in society (UNICEF, 2000, p.4).

Thus the provision of quality education encompasses consideration of the social, political, environmental, economic, and emerging issues such as gender and HIV/AIDS that are implied in the definition of an educated nation. Programme accreditation contributes towards provision of quality education. As stated in Chapter 1, Section 1.2, globally, the programme accreditation process begins with the production of a self-evaluation (self-study) report by the institution, followed by a site visit to validate the claims made within the report, culminating in a decision to accredit or not to accredit the programme (Council on Higher Education, 2004a; Eaton, 2006; Malaysian Qualifications Agency, 2013). The following figure is a concise representation of the programme accreditation process as derived from various sources of literature.

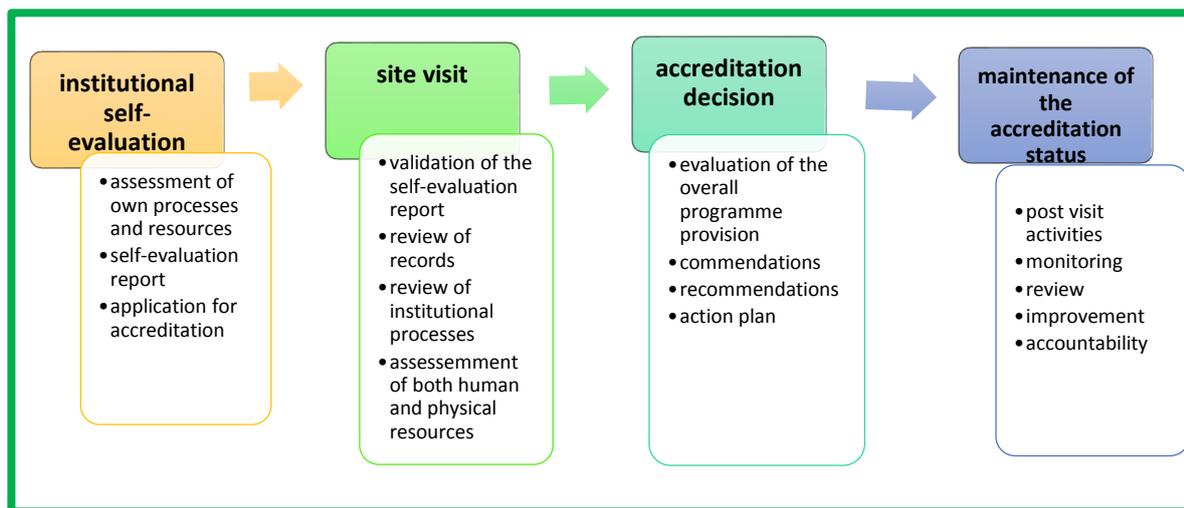


Figure 3.1: A concise model of the programme accreditation process *Source: (NAAC, 2012; NCHE, 2009; TEC, 2008).*

The self-evaluation process is seen as a research project per programme:

Educators understand the importance of having a structured process; rigorous and defensible data gathering methods; accurate data; looking at the data from different perspectives; having evidence to back up claims, drawing conclusions and planning future directions (Commonwealth of Learning, 2010, p.3).

The self-evaluation process “engages individuals at all levels in productive, supportive, and cooperative self-examination and dialogue that leads to meaningful change” (Shapiro, 2006, p.138), and generates discussions amongst faculty and institutional administration on both the strengths, weaknesses, opportunities, and challenges experienced within the programme. The self-evaluation report is expected to clearly indicate “institutional issues and themes for the self-evaluation and an elaborate plan for methods, data, timeline, responsibilities, and resources available” (Driscoll, 2006, p.23). A detailed list of the contents of the self–evaluation report is suggested by the [UK] Engineering Council (2013, p.5) as:

- a) the learning outcomes of the programme(s)
- b) the teaching and learning processes
- c) the assessment strategies employed
- d) the resources involved – including human, physical and material
- e) its internal regulations regarding compensation for underperformance
- f) quality assurance arrangements
- g) entry to the programme and how cohort entry extremes will be supported.

The production of a self-evaluation report requires a collective effort of mainly academics. The clarity and thoroughness of the self-evaluation report can be attributed to the choice of the team members responsible for its production. A self-evaluation report should provide the status of the programme stating strengths, weaknesses, achievements and plans to overcome the challenges. The quality of the programme review team is also vital for an effective review process. The importance of professionalising programme review teams in order to have credible programme review for the twenty-first century was stressed by Crow (2009), who in his contribution to the quality of the programme review team asserts that targeted training is necessary to respond to innovation, change, and involvement of knowledgeable experts instead of generalists. He contends that competency and integrity should be amongst the criteria to appoint programme reviewers.

Revelo and Hernández (2003) observed that institutions were not happy with programme reviewers because some disagreed over approaches that differed from their own epistemological interpretations, resulting in academics resenting the programme review approach. Programme review team members sometimes failed to reach consensus and their differing views were reflected in the report. Revelo and Hernández (2003) suggested that intensive training workshops for prospective programme reviewers were necessary and an introductory session before the start of each programme accreditation process might add

value to the quality of the programme review exercise. Dittrich (2003) summarised the composition of the programme review team as people who have authority, independence, and expertise, and developed this description further that these must be people having: disciplinary expertise; educational expertise; audit expertise; international expertise or knowledge of the international developments in the field; and professional expertise/expertise from the professional field.

Programme accreditation is a form of assessment. Driscoll (2006) states that academics used to resist assessment because they viewed it as increasing costs in terms of money, resources, faculty time, and its use to evaluate them and expose their lack of expertise. However, the involvement of accreditation agencies in assessment brought about changes and “changes in assessment have not only eased the resistance, they have moved assessment to a collective responsibility of faculty at many institutions” (Driscoll, 2006, p.4). Accreditation as an external audit of a programme “stimulates academics to be reflective on knowledge, key skills content and programme delivery” (Carrivick, p.496). The accreditation process culminates in a decision whether or not to accredit a programme (Eaton, 2006) and this comes with recommendations for improvement, unless in a worst case scenario where the programme is rejected. The accreditation recommendations lead to post-visit activities which contribute to continuous improvement of a programme.

Programme accreditation is not for the award of an accreditation status only, therefore the tertiary education system should explore different ways to establish a quality assurance system that will lead to the development of a long-time quality assurance and enhancement practice for the country (Anaam, Alhammedi, & Abdulwahab, 2009). It is necessary to have an effective programme accreditation system in order to assess the quality of provision for the programme in the form of input, process, and output to ensure that the nation receives quality education. Succinctly put, programme accreditation in tertiary education is done partly for improvement and partly for accountability. It is advisable that a national programme accreditation framework should seek internationally accepted viewpoints, to strive for common ground so as to create mutually acceptable views (Chaocheng, 2009) within the country and across countries. A national programme accreditation framework should be guided by the trend for internationalised higher education (Cheung & Tsui, 2010), because the quality assurance world is dynamic and incorporates such concepts as fitness for purpose (Brock, 2007; Woodhouse, 2004). The review and improvement activities are learning processes as illustrated by the Commonwealth of Learning (Commonwealth of Learning, 2010, p.3). Figure 3.2 (next page) shows how the production of a self-evaluation report reflects the learning and

research processes in an academic programme, thereby promoting a culture of continuous improvement.

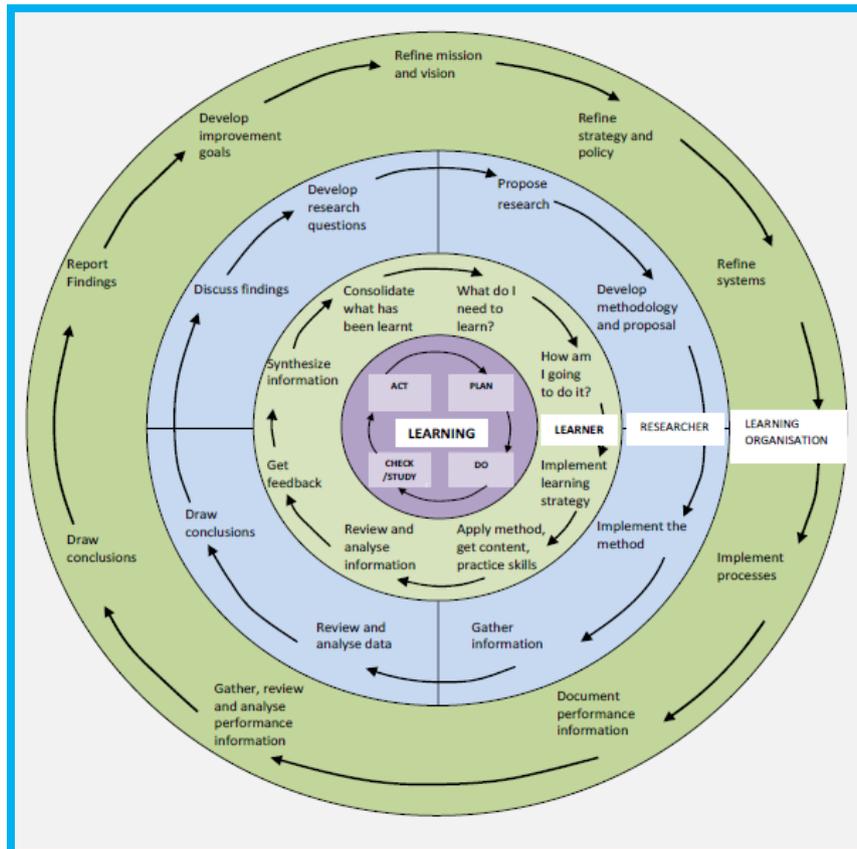


Figure 3.2: Review and improvement as learning processes *Source: Commonwealth of Learning, 2010, p.3*

Programme accreditation is a quality assurance mechanism used in TEIs, likened by Ramaley (2006) to design research as “...we all invented as we went, and the process got better and the product more useful as we moved from one phase of the accreditation process to the next” (p.xi). The accreditation process links assessment, reflection, and institutional improvement to the process of accreditation, in a way closing the gap between research and practice (Ramaley, 2006), because the programme accreditation process is functionally linked to the practical experiences and the needs of the education system. Thus, programme accreditation is both “a process and a status” (CHEA, 2010, p.1) and it contributes towards the provision of quality education.

3.3 Programme Accreditation and Policy

This section discusses how various governments have mandated the process of programme accreditation in tertiary education to accreditation agencies (Sub-section 3.3.1). The discourse

explains that the scope of programme accreditation differs from one accreditation agency to another (Sub-section 3.3.2).

3.3.1 Mandate to accredit programmes

In some countries, quality assurance agencies have been mandated to facilitate programme accreditation in tertiary education. For example, the Tertiary Education Council (TEC) of Botswana; Council on Higher Education (CHE) of South Africa; National Council for Higher Education (NCHE) of Namibia; the European Association for Quality Assurance in Higher Education (ENQA) of Europe; Quality Assurance Agency for Higher Education (QAA) in the United Kingdom; the Australian University Quality Agency (AUQA); the Oman Accreditation Council (OAC); the Malaysian Qualifications Agency (MQA); and the Barbados Accreditation Council (BAC) are amongst the many that follow this trend.

Quality assurance networks have also been established to facilitate internationalisation of quality assurance: African Quality Assurance Network (AfriQan) established in 2010; the Arab Network for Quality Assurance in Higher Education (ANQAHE) established in 2007; European Network for Quality Assurance in Higher Education (ENQA) established in 2000; International Quality Assurance Agency in Higher Education (INQAAHE) established in 1991; and others. This development shows that programme accreditation in tertiary education is becoming a global phenomenon.

Although programme accreditation is growing worldwide (Stensaker, 2011), in the World Bank working paper number 124, Materu (2007) highlights that because the majority of quality assurance agencies in most African countries were established within the previous ten years, structured quality assurance processes in higher education at the national level were very recent. Consequently, a number of programme accreditation systems are still at developmental stages, therefore it is not very easy to, in a firm way, “conclude what is functioning best in different countries” (Calloids & Bray, 2007, p.12). Although the ENQA exists as an umbrella network for quality assurance agencies in Europe, several accreditation agencies have created separate networks and the value addition of this arrangement was not easily recognisable. Stensaker (2011) corroborates observations made by Trends (2007) that many higher education systems are currently faced with “national quality assurance systems that are costly, offer no evidence of overall quality improvement, and stifle institutions’ capacity to respond creatively to the demands of evolving European knowledge society” (p. 59).

More specialised accreditation agencies co-ordinated by a national accreditation agency might be a possible future programme accreditation scenario, however, Stensaker (2011) cautions

that specialised accreditation agencies might create an accreditation jungle, reduce transparency and accountability and increase the amount of accreditation work. Wilen-Daugenti and McKee (2008) advise that institutions should try to understand the 21st century trends and technologies to assist students to be ready for the needs of the next generation. In the same vein, programme accreditation should ensure inclusion of assessment of such trends. This suggestion might see the budget for accreditation agencies increasing. To avert compromising quality due to increasing costs, Crow (2009) proposes that since accreditation agencies are expanding in terms of staff, responsibility, and technology, new means of financing operations to effectively respond to the growing demands for accreditation should be developed.

3.3.2 The scope of programme accreditation

The scope of programme accreditation differs between accreditation agencies. In some countries, the programme accreditation process is carried out in all institutions, both public and private, and for all programmes in all sites of delivery and all modes of delivery and provision (CHE, 2004a; NCHE, 2009). In other countries, the programme accreditation system applies to all tertiary education programmes in private TEIs only. This is seen in Austria, where the explanation is that public universities are established by law and have entered into an agreement on objectives and measures of quality assurance with the Ministry for Science and Research (Hanft & Kohler, 2007). In Botswana, an explanation as to why programme accreditation is carried out in private institutions only has not been found (Republic of Botswana, 1999).

Programmes that are offered outside the country of origin are referred to as 'offshore', while those brought into the country are 'franchised' (Harvey, 2004–14). Both are also included in the programme accreditation systems of some countries, since the former offered in local institutions must meet the same standards and requirements as programmes in the country of origin, and in addition, the standards for quality education of the receiving country must be complied with (CHE, 2004b; NCHE, 2009). The same objective applies to programme evaluation of the latter, even if subject to quality requirements in their countries of origin (CHE, 2004b; NCHE, 2009). The procedure of programme accreditation of both is common in Botswana (TEC, 2008), Namibia (NCHE, 2009), and South Africa (CHE, 2004a).

Programmes can be accredited before being offered or after running for a specified period. In Malaysia (MQA, 2013), Namibia (NCHE, 2009), and South Africa (CHE, 2004) programmes are accredited before being offered and accredited again while in progress. In Botswana, the regulation is that programmes should have been offered for at least one academic year before

the accreditation process is instituted (TEC, 2008). Some accreditation agencies stipulate that an accredited programme should establish itself before the institution can apply for accreditation of the next higher level of programmes in the same field or subject (NCHE, 2009). That is, an institution should demonstrate the success of a baccalaureate degree before applying for a master's programme in the same field or its success before applying for a PhD (NCHE, 2009). Other countries have different criteria, such as in India, where institutions should have a record of offering degree level programmes and at least two batches of students graduating from the programme before offering a next higher level qualification. Furthermore, the National Assessment and Accreditation Council (NAAC) of India does not cover distance education units of the HEIs (NAAC, 2012)

Concentration on the development and improvement of the human resource capital has resulted in a more pronounced campaign for lifelong learning in many countries around the world. Undoubtedly, the idea of lifelong learning has increased the demand for education and this increase has resulted in a diversity of providers delivering education through different means and even across borders. Knight (2007, p.137) classified the providers of education into two categories:

The traditional higher education institutions who are normally oriented to teaching, research and service/commitment to society, and the new or alternative providers who primarily focus on teaching and the delivery of education services, usually on a commercial basis.

The principle of lifelong learning is well embraced by mid-career professionals and mature students returning to the study table to pursue postgraduate and even degree programmes (Capogrossi, 2002; Republic of Botswana, 2009a). These kinds of learners cannot afford a traditional mode of delivery and should therefore be catered for under the non-traditional mode of delivery (Capogrossi, 2002). Issues such as flexible arrangements for class/study time, mode of delivery, duration of the programme, relevancy of the programme, residency arrangements, and financial implications arrangements that will not disturb their working life should be considered. In addition, there are students and prospective students living without access to modern technology, either due to the remoteness of the area or lack of equipment and all these learners need to be catered for in a way that will help them to complete their studies. From studying the assurance of academic excellence among non-traditional universities, Capogrossi (2002, p.482) concluded that:

The American system of accreditation has espoused a system of quality assurance based solidly upon traditional methodology. It has

acted to apply the existing systems and principles in a hybridized fashion in accrediting the new non-traditional institutions, coaching them to embrace more traditional models, goals and procedures.

However, professions protect their territories, for example, institutions that control the education of engineers, nurses, lawyers, and accountants are innately conservative, striving to produce work-ready professionals (Palmer & Hall, 2012). The face and background of students produced for such professions have changed from being a single stereotyped career option. Mature age lifelong learning opportunities provide avenues for professionals to upgrade their trade, technical or other qualifications, thereby opening different pathways to enter related professional spheres (Palmer & Hall, 2012). For example:

Internationally, engineering education accrediting bodies have moved toward outcomes-based assessment of graduate competency, but are still struggling to relinquish their historical attachment to the measurement of inputs...Institutional conservatism can lead to inflexibility in the face of social and societal change (Palmer & Hall, 2012 p.1).

Though the professions are struggling to let go and accept that the graduates can change career paths, it is evident that the programme accreditation process incorporates assessment of a broader approach to each programme, as opposed to the production of fixed sole career options. This trail of thought invokes the 21st century skills discussed in Chapter 2 (Table 2.4) which recommend that the graduates be taught skills that can make them more creative and innovative and able to work within the new century with its changing technologies and way of working.

In their study on *institutional and political challenges of accreditation at the international level*, van Ginkel and Dias (2007) argue that programme accreditation has become a major issue for higher education partly due to the development of new technologies, the growth in distance and virtual learning, and increase in the number and diversity of higher education providers. This dictates the need for trustworthy systems to ensure the quality and relevance of programmes delivered through different modes, whether online, or on-ground delivery, the quality of provision must be the same. Professional programmes in the UK, seeking or requiring professional accreditation, are typically subject to both institutional-level quality assurance and external professional accreditation (Frank, Kurth, & Mironowicz, 2012). Both processes focus on indicators of excellence, consistency, value-for-money, and transformational quality. Frank et al. (2012) advise that professional bodies and associations

should have formal input into the accreditation process and guidelines for accreditation because professionals seek greater emphasis on specific technical skills and knowledge of national policy. This is important because professional requirements change rapidly to meet the demands of a changing society.

In essence, the programme accreditation policies should consider the national and educational policies in which the programme is offered. With this in mind, programme accreditation in education is conducted for improvement, accountability and economic purposes (Pile & Teixeira, 1997; Harvey & Newton 2004; Brunnetto & Farr-Wharton, 2005; Martin, 2009; Singh, 2010).

3.4 Programme Accreditation for Improvement

As previously stated, literature suggests that programme accreditation is a major contributor to the improvement of the course of study. Programme accreditation should be viewed as a catalyst that gives institutional management a framework and opportunities to mobilise tools and resources for institutional (academic) improvement (Cret, 2011), and not to impose changes nor to standardise operations within institutions. During the programme accreditation process, institutions should reflect upon their institutional quality assurance frameworks and analyse whether they can be considered as dynamic drivers of change (Turnbull et al., 2008), or determine whether the frameworks are seen for compliance with the authorities while not contributing towards enhancement of the programme.

In their *assessment of the studies done on quality in higher education for the past fifteen years*, Harvey and Williams (2010) indicated that tension between improvement and accountability in the outcomes of programme accreditation has been observed. However, Attiyah and Khalifa (2009), with reference to Qatar University, advised that it is not possible to have a strict separation between programme accreditation for improvement and programme accreditation for accountability. The different purposes should be accommodated to avoid damage to the quality and integrity of higher education by leading to serious imbalances in power.

Observations made by several scholars from studies on quality assurance are that institutions opt for programme accreditation because it helps the institutions to improve. In their analysis of the effects of quality assurance and evaluation in *Denmark* (programme accreditation is a subset of quality assurance), Andersen et al. (2009) concluded that quality assurance and evaluation have played a major role in defining policy issues for the Danish Education system and it has thus contributed towards improvement in the provision of education.

Additional studies have been conducted by a number of researchers. For instance, Anaam et al. (2009), studied the status of quality assurance and accreditation systems within HEIs in the Republic of Yemen. Meanwhile, Attiyah and Khalifa's (2009) study was entitled 'small steps lead to quality assurance and enhancement' in Qatar University; and Grendel and Rosenbusch's (2010) contribution on system accreditation provided a novel way of assuring the quality of study programmes in Germany. The studies concluded that programme accreditation is beneficial to the institutions because it assists them in conducting self-evaluation, which results in identification of areas that need improvement. As stated in Section 3.2, implementation of evaluation studies exerts pressure on institutions and countries to provide the necessary resources to help improve their image (Serrano-Velarde, 2008), improve teaching and learning and hence provide quality education. Crow (2009, pp.94-96) advises that accrediting agencies must improvise techniques of being the voice for quality assurance in higher education. He suggested 'five keys to success' for the programme accreditation process:

- a) *Give constant attention to the relevance of accreditation processes.* Create simpler and more flexible standards suitable for each programme in order to achieve the goals of assuring quality and advancing it, and find ways to amend and refine standards as the situation dictates.
- b) *Show that accreditors have a reasonable sense of when good is good enough.* Programme reviewers should do some benchmarking to show some level of competence and be able to identify significant shortcomings in institutional performance and challenge institutions to address them.
- c) *Validate anew the legitimacy of peer review.* Greater transparency about the programme reviewers and their work contribute to greater public confidence in their work.
- d) *Test long-held conceptions about accreditation.* Institutional acceptance of public disclosure; the effectiveness of training institutional teams rather than individuals from the campus; the power of cross-institutional sharing in the training processes; the value of frequent, low-stakes interactions in making a relationship with the commission; and the ease of expanding agency capacity beyond the staff.
- e) *Experiment with partnering and collaborating.* Accrediting agencies need to explore ways of sharing initiatives and find more creative ways to share work and responsibilities.

The advice given by Crow has the potential of contributing towards increasing the value of programme accreditation. Programme accreditation should not just be a futile exercise but rather the benefits should be visible to all stakeholders. It is critical therefore to ensure that

the impact of programme accreditation is visible through improvement in the performance of the education system.

Harvey and Newton (2004), and Kis (2005), have observed that although the quality assurance practices in tertiary education vary among countries there are commonalities in mechanisms relating to the scope of quality review, key stakeholders involved in the process, methods and instruments, and the consequences of quality monitoring. However measuring the outcomes of quality in higher education has its own challenges. Lemaitre (2004) affirms the difficulty of measuring the impact of external quality assurance because improvement in programme output can be attributed to different factors. Lemaitre asserted that as of 2004, “there were no formal studies regarding the impact of external quality assurance schemes” (2004, p.94) except informal assessments that attribute the changes to the external quality assurance. In addition, it was not easy to access empirical evidence on the impact of programme accreditation.

Kristensen (2010), in his assessment of the impact of external quality assurance over 20 years of the quality revolution concluded that external quality assurance has contributed to improved quality in higher education. However, he asserted that it would be more profitable if external quality assurance and internal quality assurance are balanced, thus the institutions should not rely on external assessment. This thinking corroborates the claim that programme accreditation should breed a culture of continuous improvement within institutions.

Turnbull et al. (2008) argue that a paradigm shift in strategic planning, and repositioning, of institutional agendas is necessary to accommodate external quality assurance models. This strategy could help in readjusting quality models and processes in order to promote change in practice. The benefit of external quality assurance as suggested by Aminuzzaman (n.d.) in *Quality Issues of Higher Education in Bangladesh*, is that it improves students’ learning and, as a result, their positive experiences in higher education could be realised. Aminuzzaman (n.d., p.4) proposed that this perceived improvement could be achieved through a number of strategies:

- ❖ changing the method of teaching and learning as well as assessment methods
- ❖ renewing the curriculum continually
- ❖ updating and upgrading professional knowledge and skills
- ❖ improving the broader educational, administrative, and resource environments in which teaching and learning take place.

The process of programme accreditation involves assessment of teaching and learning, assessment of both human and physical resources, and the general environment in which the programme is offered culminating in an accreditation decision. Accreditation decisions have recommendations for post-accreditation activities which are likely to result in improvement of a programme, as stated in Section 3.2. On the other hand, programme accreditation is done for accountability purposes, as discussed in the following section.

3.5 Programme Accreditation for Accountability

Education as an integral part of the social structure and its contribution towards economic development ought to be accounted for. Educational accountability involves external evaluative evidence (Ewell, 2010; Popham, 1993) and implementing programme accreditation is one way of providing that evaluative evidence. Involvement of governments in the accreditation system promotes partnership with the academic world to ensure that both facets of education as a public good and as a private benefit are well taken care of (Mori, 2009; Peng & Wang, 2008). Quality judgements therefore include expectations that higher education will foster and encourage specific national goals (Frank et al., 2012).

Having detailed and complicated relationships with all levels of local, state, and federal government, institutions tend to have multiple sources of financial support, including public funds, student tuition, corporate funds, individual donations, endowments, and foundation support. In addition, they serve multiple constituents, such as students, corporations, government, and the general public, and all these stakeholders need institutions to account to them at different levels (Eaton, 2011). Complications in accountability can partly be a result of different stakeholders in education, including the political, legal, bureaucratic, professional, market, parental, student, fiscal, and public (Becker, Renehan, Wiestling & Glouner, 2008).

It has been observed that in Botswana and other countries the government is a major stakeholder in terms of funding tertiary education and consequently has the right to initiate the programme accreditation systems, the results of which can be partly used to account for the public funds (Burquel & van Vught, 2010). It is therefore fitting that governments demand institutional data to support policy, strategic developments, and, if necessary, the restructuring of higher education (Burquel & van Vught, 2010) which could be inevitable at some stage. Thus programme accreditation should help the institutions to account for the resources expended and also for the quality of the human resource joining the market.

Peng and Wang (2008) argue that education is regarded as a public good and educationists should account for their investments with more solid evidence of the impact of programme

accreditation. However, Comber and Walsh (2010) claim that the benefits of activities that were targeted towards improving education through the quality enhancement agenda do not correspond to the plentiful resources that were expended. Good governance dictates that taxpayers' money should be accounted for with tangible evidence, predominantly as education is an expensive venture (Teelken & Lomas, 2009).

Development of quality assurance has significantly contributed to improved documentation of quality assurance processes, conscious planning, and establishing and assessing academic goals (Frank et al., 2012). Serrano-Velarde and Stensaker (2010) agree with Ewell (2010) that the concepts of accountability and transparency have found their way into the notion of institutional autonomy, and they highlight the necessity of providing accounts for the performance and quality of publicly funded institutions. Mori (2009) and Frank et al. (2012) corroborate the above contribution that the need for accountability in higher education has increased. In order to promote their branding and perceptions about institutional effectiveness, Aqlan et al. (2010) argue that institutions should strive to perform far better than envisaged by stakeholders.

Perceptions about the effectiveness of institutions increase in importance compared to the actual performance (Aqlan et al., 2010). Stakeholders might reach some agreement on what counts as institutional effectiveness if the concept is sufficiently inclusive to serve both the institution and the stakeholder's separate and common interests (Aqlan et al., 2010). Hence, it would be a wise move to include industry representatives with relevant expertise during the programme accreditation process.

Confidentiality and secrecy should not be part of the operations of a quality assurance agency. Accreditors should develop a common public reporting template that provides a comprehensive summary of their findings (Crow, 2009). The periodic attacks on the accreditation system yield positive results by forcing HEIs and accrediting agencies to improve their operations in order to meet the emerging challenges (OECD, 2009). More transparency in the programme accreditation process can be achieved through an established programme accreditation process.

3.6 Specific Requirements and Criteria for Accreditation

Programme accreditation uses standards and criteria which are described as the level of requirements and conditions that must be met by programmes to be accredited (Danish Evaluation Institute, 2003; Hämäläinen, 2003; van Damme, 2004). These conditions involve expectations about quality, attainment, effectiveness, financial viability, outcomes, and

sustainability. Standards and criteria can also describe the expected outcomes of a programme, such as competencies, knowledge, skills and/or attitudes that are expected of the graduates (Hämäläinen, 2003; van Damme, 2004). Programme accreditation systems use the terms standards, criteria, specific requirements and criteria for accreditation to refer to the same threshold benchmarks that are used to assess attainment of quality within the tertiary education system. Vocabulary in quality assurance is not yet congealed because as Vlăsceanu, Grünberg, & Pârlea observed, “a linguistic baroque world exists in the field of quality assurance. There are many flowery ingredients, a very rich linguistic creativity without an ‘edifice’ to which they can be associated” (2004, p.11). Therefore the terms refer to the indicators that are used to assess the quality of a programme.

The standards and criteria help to ascertain the level of quality attained by institutions in offering a particular programme. Westeheiijden, Stensaker and Rosa (2007) assert that when governments regulate any aspect of tertiary education, some quality is attached and this involves standards, criteria, and regulations which should be met. They expound further that the process of identifying characteristics (qualities), defining standards (desired quality) for each, and monitoring of performance (actual quality) can be conceptualised as quality assurance. Burquel and van Vught, (2010) concur with Westeheiijden et al. that the quality of every characteristic of tertiary education is under the scrutiny of governments because they subsidise education.

Hayward (2006, p.21) studied programme accreditation standards in six African countries, Cameroon, Ghana, Mauritius, Nigeria, South Africa, and Tanzania, and offers the following observations:

1. The standards of the six accreditors are very similar.
2. Standards focusing on the nature of governance are included in only half of the countries, that is, Ghana, Tanzania and South Africa.
3. Integrity as a standard is used only by the same three countries.
4. South African universities are required to demonstrate that they are meeting the transformation goals set for higher education.
5. Mauritius and South Africa have standards that relate to expectations about university community service.
6. Ghana and Mauritius have standards that focus on business and industrial links and opportunities for work-based experience.

Specific requirements and criteria for accreditation are used to determine the status of programme accreditation, that is, to accredit or not to accredit. The accreditation status is granted for a stipulated time after an evaluation by subject matter experts and practitioners (programme reviewers) once they are satisfied that the programme meets the threshold standards of educational quality (Harvey, 2002; Rozsnyai, 2004; Woodhouse, 1999). The programme reviewers are an independent body (Harvey, 2002; Attiya & Khalifa, 2009) permitted to make a programme review for accreditation by the accreditation agency.

Standards, and specific requirements and criteria for accreditation from different accreditation agencies are presented in Table 3.1. The agencies were chosen because they had well-known functional programme accreditation systems and they provided information. The tick in each of the columns indicates that the particular standard is considered by the particular accreditation agency. An attempt was made to go outside Africa by including Malaysia, India, New Zealand, and Australia.

The accreditation systems of New Zealand and Austria proved to be similar to those of several countries, such as the Netherlands, Germany, Ireland, Norway, Spain and Switzerland. These countries made an effort to form a European consortium for accreditation in 2003 (Vroeijenstijn, 2003), hence their accreditation systems are considered comparable, with differences that depict the uniqueness of each country where necessary. Thus, though the comparison shows only a few countries, it is an attempt to present a number of national examples across a variety of contexts.

Table 3.1: Programme accreditation standards and criteria in different programme accreditation agencies

Accreditation standard/criterion		CHE	MQA	NAAC	NCHE	NZQA	TEC	TEQSA	totals
		South Africa	Malaysia	India	Namibia	New Zealand	Botswana	Australia	
1	Design and development of programmes	✓	✓	✓	✓	✓	✓	✓	7
2	Funding of programmes				✓	✓	✓	✓	4
3	Staffing of programmes	✓	✓	✓	✓	✓	✓	✓	7
4	Resourcing of programmes	✓	✓	✓		✓	✓	✓	6
5	Delivery and management of programmes	✓				✓	✓	✓	4
6	Assessment of learner attainment	✓	✓		✓	✓	✓	✓	6
7	Certification and reporting					✓	✓	✓	3
8	Reporting learner attainment and progression	✓	✓	✓	✓	✓	✓	✓	7
9	Impact of programmes			✓		✓	✓	✓	4
10	Degree level programmes	✓					✓	✓	3
11	Mission and objectives		✓		✓				2
12	Governance and administration		✓	✓					2
13	Quality enhancement	✓	✓		✓				3
14	Clearly stated academic policies			✓					1
15	Organisation and management of the institution			✓					1
16	Educational programmes offered			✓					1
17	Programme monitoring and review	✓							1
18	Programme administrative services	✓					✓		2
19	Postgraduate policies, regulations and procedures	✓					✓		2
20	Programme coordination	✓							1
21	Academic development for student success	✓				✓	✓	✓	4
22	Teaching and learning interactions	✓					✓		2
23	Coordination of work based learning	✓							1
24	Student retention and throughput rates	✓							1
25	Vision, mission, goals and outcomes	✓	✓						2

Source: CHE (2004a), MQA (2013), NAAC (2012), NCHE (2009), NZQA (2010b), TEC (2008), TEQSA (2011)

Examination of standards and criteria in different programme accreditation agencies indicates that the Botswana programme accreditation requirements and criteria compare well with those of other accreditation agencies. The criteria that do not seem to be popular in other accreditation agencies but are used in the Botswana programme accreditation system and could be crucial to the quality of programmes are discussed below with an intent to elucidate that these might actually be subsumed within other standards and criteria. The standards and criteria that are not given much attention, that is, programme monitoring and review (17), programme administrative services (18), and postgraduate policies, regulations and procedures (19) are implied in others. Clarification is given below with reference to the TEC regulations of 2008 (written in italics):

- a) *Funding of programmes* verifies that the programme has a budget set aside for its exclusive use. Funding falls under resources, therefore it is possible that other accreditation agencies consider funding of the programme during the accreditation process under resources.
- b) *Certification and reporting* verifies that a qualification awarded to successful graduates of a programme accurately describes outcomes of learning and standards of performance attained in a meaningful and informative manner. This standard therefore compares well with learner attainment and progression, which is considered by all the accreditation agencies listed.
- c) *Impact of programmes* verifies that learner retention and attainment rates represent successful teaching and management of learning. It can also be described as student retention and throughput rates. The standard compares well with quality enhancement which is considered by 50 percent of the accreditation agencies listed.

Hämäläinen (2003) observed that creating standards and indicators for such resources as staff, students and facilities, and also for the academic results is relatively easy, however, it is not as straightforward to create standards for teaching, tutoring, and practical training. Similarly, it is not easy to define good teaching, although there are many different theories and opinions (Ewell, 2008; Stensaker & Harvey, 2006). Ewell contends that the standards and criteria used in accreditation should be used together with descriptive data which evaluators could interpret in their own way.

Considering programme specific requirements and criteria for accreditation from another angle, Ewell (2008), Stensaker and Harvey (2006) conclude that both US and European external quality assurance activities were facing increasing criticism for failing to address

issues concerning student learning outcomes, consequently, there was no evidence that programme accreditation added value to student learning, nor that it stimulated institutional efforts to improve teaching and learning. In fact, “employers noticed little difference between graduates from a programme prior to, and post accreditation” (Carrivick, p. 496). However, Mori (2009) and Frank et al. (2012) recommend that accrediting organisations must make their standards and criteria of accreditation more outcome-based. In consequence, there is an urgent need to foster the adaptation of accreditation standards and norms that reflect social accountability and production of work-ready graduates. For example, institutions that offer health-related programmes should demonstrate their real capacity to meet the pressing healthcare needs of society (Boelen & Woollard, 2009) if they are to be considered as contributing to the human resource needs of the health sector. “Progressive accreditation by a professional body is promoted as a practical way to review and update skills, give added value to students and raise the profile of a programme” (Carrivick, p. 483).

Hämäläinen (2003) expands that in some countries, accreditation and quality assurance of programmes and institutions are sophisticated and unclear. On the other hand, van Damme (2004) argues that quality depends on its relationship to the internal, sovereign purposes of the programme or the external expectations of customers and stakeholders, therefore, in principle there should be no fixed standards. The two scholars made observations about standards which are considered useful as characteristics of an effective programme accreditation system. The observations are converted into recommendations:

1. There should be some form of weighting when evaluating a programme since standards and criteria are not equal.
2. Different standards and criteria should be made for different types of programme delivery, such as face-to-face, distance mode, part-time and online delivery.
3. The link between research and teaching should be analysed.
4. Some programmes, such as teacher training, health-related programmes, design and manufacturing and other practical work programmes need practical attachments and simulations. This aspect should be given greater attention during the accreditation process.
5. Internationalisation of programmes can enable students to fit into the global economy: therefore it should be reflected in the accreditation process.
6. There should be guidance on how to reach a final programme accreditation decision.

7. There should be regular evaluation of the review team. The inter-subjective judgement of review teams, even with the risk of collegial partiality by peers, is still the best alternative to superficial quantification.

As a concluding statement about the standards, requirements and criteria required for programme accreditation, Norcini and Banda (2011, p.85) state that the accreditation processes are based on “prescriptive standards which have broad areas of content, process, educational environment and outcome, while there is no research that speaks of their effectiveness”. On the other hand, Hämäläinen (2003) maintains that even if there are many critical points in the practice of evaluation and accreditation, transnational cooperation in creating standards and indicators is needed. Standards, indicators, and criteria are critical parts of the programme accreditation system. Taking this idea into account, the following section presents a contribution towards improvement of the approaches generally used in quality assurance by presenting a particular model.

3.7 The Commonwealth of Learning Review and Improvement Model

On recognising that ensuring quality of higher education is a high priority on national agendas globally, and that there are concerns about the high cost and uncertain benefits of programme accreditation, the Commonwealth of Learning (COL) developed a *Review and Improvement Model*, referred to as COL RIM Model (COL, 2010). It was designed to assist institutions with a tool for establishing their current reality, planning their desired future, and techniques that structure and motivate movement towards their goals. The proposed approach is likely to result in a paradigm shift in the context of overall strategic planning and repositioning of institutional frameworks, and thus realignment of a diverse range of quality models and processes to promote change in practice (Turnbull et al., 2008). The theory posits that once institutions take charge of their quality assurance mechanisms the thought of external monitoring will not disturb their arrangements, but rather they will look forward to having an external perspective to help them improve, thus programme accreditation will be a welcome move. Each feature of the COL RIM model, with a relevant explanation, is outlined in Table 3.2 (next page). An analysis of the COL RIM model indicates that it comprehensively summarises the characteristics of an effective programme accreditation system and that programme accreditation is a learning, development, and improvement process.

Table 3.2: Features of the COL RIM model

Feature	Explanation
Combines internal and external assurance	The COL RIM serves both improvement and accountability purposes, but the main focus is on improvement of internal systems. The COL RIM fosters an improvement orientation and a culture of quality. The information required for accountability purposes is derived as a by-product of the internally oriented evaluation.
Focuses on stakeholder needs and core processes	The COL RIM is guided by overarching evaluative questions which ask how well the institution is providing the services that its stakeholders need.
Approaches the performance of the whole system systematically	Quality is an outcome of systematic improvement of internal systems. The COL RIM focuses attention on the need for a clear sense of direction, coherence between systems and an enabling environment for improvement.
Emphasises the key role of human actors in the system	Achieving good quality is dependent on the institution's culture of quality. The COL RIM builds the capacity for and belief in quality with organisational learning approaches that encourage an institutional culture of quality.
Centralises self-review as the key to improvement	Self-review enhances ownership, builds capacity and provides a rich and informative picture of the performance of the institution. Authentic and dynamic self-review sets up a creative tension between where the institution is and where it wants to be, motivating people to improve.
Emphasises the authenticity of self-review	Credibility is enhanced when rigorous and defensible methods are used in the gathering and reporting of information and when outcomes are verifiable.
Is customised to optimise relevance to the institution	Customisation includes selecting indicators that are relevant for the local context, designing review processes to focus on what matters, involving all stakeholders and ensuring that reporting meets the institution's accountability requirements.
Emphasises transparency and providing information to stakeholders	The COL RIM method identifies information about the organisation, then processes and filters it through different groups of people. The COL RIM steps encourage openness and readiness for a structured, inclusive and constructive approach to examining and analysing information. Institutions implementing the COL RIM are expected to report to their stakeholders.
Offers credibility for enhanced stakeholder confidence	The reputation and credibility of the COL RIM relies both on the use of credible methods and on an external verification process. The external verifier also offers training and developmental advice to build the capacity of the institution.
Emphasises continuous review and an incremental improvement cycle	COL RIM can be implemented at any stage of the institution's development. It helps embed quality management and assurance practices in the institution. It is premised on the understanding that improving quality is a journey, not a destination. The COL RIM itself is subject to continuous improvement and review.

Source: Commonwealth of Learning, 2010, p.7

3.8 Scholarly Reviews on Programme Accreditation

The tertiary education system facilitates increase in graduates with required qualifications for employment. Educators, policymakers, and administrators should assess their own tertiary education systems and set suitable standards which reflect the unique history, needs, and expectations of their nation (Hayward, 2006). Since a qualified labour force is expected to provide knowledge, skills, and relevant expertise to the labour market, tertiary education can

then be counted amongst the pillars of the economy in a society (Mishra, 2007). “Effective programme accreditation should therefore impart critical information to tertiary institutions, employers, and the public, and be meaningful to the international higher education community and other international actors” (Hayward, 2006, p. 4), considering the effects of both the individual and organisational [institutional] behaviour resulting in what Kessels and Plomp (1999) call corporate education.

Accreditation began as a voluntary, nongovernmental peer review process internally managed by colleges and universities to determine if schools met threshold standards of academic quality and to facilitate institutional self-improvement (Hartle, 2012). Peer review is acknowledged throughout the world as the most appropriate and desirable approach to the evaluation of higher education (Sibolski, 2012). Programme accreditation has now become the primary mechanism for assuring policy makers and the public that institutions of higher education are academically sound and offer quality education. Accreditation agencies are mandated to assure quality, engender private-sector confidence, and, ease transfer of student credit among institutions (Eaton 2011). Programme accreditation is meant to promote improvement, accountability, and transparency of operations within the institution as directed to the delivery and management of a programme (Sections 3.5 and 3.6), however, higher education is not monolithic therefore various institutional sectors do not necessarily agree on what the process of peer review should entail such as assessment of student learning outcomes (Sibolski, 2012). In a way, “programme accreditation tends to bring anxiety within institutions and conflict of interest amongst them” (Yüksel, 2013, p.11).

Higher education institutions and accreditors are faced with growing demands for public accountability and transparency while maintaining essential academic practices (Sibolski, 2012). However, the divide between improvement, accountability and transparency has become marred. Accountability and transparency could end up forcing institutions to measure important learning outcomes for self-improvement, and compile more palatable data for public disclosure, fearing criticism and threat to institutional survival (Ewell, 2010). Institutions might choose measurements designed to produce data that are attractive to potential students and the general public, which would be different from data that could assist improvement (Ewell, 2010).

From experience, it could be stated that there is insignificant overlap between the kind of information needed by stakeholders (parents and students) and the accreditation findings. Revealing raw accreditation findings to the entire public might be adversarial. Programme accreditation is designed to be an honest and collegial process of evaluating the quality of education, which, in most cases, unearths unsightly issues that need immediate attention by

the institution. Revealing information that is favourable to the institution would be a welcome move, but revealing unpleasant evidence might be detrimental to the survival of the institution.

Informing the public about higher education has emerged “the most vexatious, complex, and controversial issue in the current re-organisation of the Higher Education Act” (Eaton, Fryshman, Hope, Scanlon & Crow, 2005, p.43). Higher education involves various stakeholders with varying degree of understanding of core academic issues that need specialists. “The vibrancy and value of accreditation must be protected” (Eaton et al., 2005, p. 44). Accreditation agencies should be careful on how disclosed information is used, for improvement or for punishment. Kuh (2007), Castiglia and Turi (2011), and Yüksel (2013) caution that standardised accountability requirements might disregard the uniqueness and complexity of the education provided in different institutions and impact negatively on the process of higher education by providing uniform reporting templates which might be more problematic than beneficial because they could be used to rank institutions. Thus, inappropriate and intrusive accountability practices (Hartle, 2012) can bring more harm than good to the education system. A consumer friendly information database that provides relevant information such as programmes offered, duration, admission requirements, cost implications, and maybe the success rate of the programme would benefit students and the public (Kuh ,2007; Castiglia &Turi, 2011) rather than ratings and rankings which may possibly be destructive to the institutions or the programme under scrutiny.

Various systems have experienced a lack of coherence between programme accreditation and other quality assurance initiatives. In Denmark, for example, programme accreditation is said to ignore the structural and conceptual development of the university as a whole. It was reported that accreditation agencies failed to cope with the large number of programmes and there was evidence of lack of consistency in the programme accreditation decisions made by the agencies (Andersen, Dahler-Larsen & Pedersen, 2009). In Saudi Arabia, programme accreditation was seen as time-consuming, expensive, and inconsistent due to the size, level of experience, and whether institution is private or public (Attiya & Khalifa, 2009; Darandari, Al-Qahtani, Allen, Al-Yafi, Sudairi & Catapang, 2009). Despite everything, accreditors remain key driving forces behind improvement to learning and are positioned to truly engage with faculty to create a mutually beneficial process that places the quality of the degree and the education it represents at the center of higher education operations (Rhodes, 2012). Thus “effective programme accreditation should impart critical information to tertiary institutions, employers, and the public, and be meaningful to the international higher education community and other international actors” (Hayward, 2006, p. 4).

In a study on programme accreditation in Hungary, Szanto (2004) and Rozsnyai (2004) observed some weaknesses, such as conducting programme accreditation using institutional accreditation tools, non-uniformity or imperfections in following the guidelines, and using different panels to accredit the same programmes. The same researchers recommended that the first cycle of programme accreditation system be reviewed before embarking on the second. A study on the impact of accreditation on study programmes in Germany revealed that structural reform of educational programmes involved three levels of authority: control by political system; external assessment and control by the accreditation system; and implementation and quality assurance by the management of the HEIs (Suchanek, Pietzonka, Künzel & Futterer, 2012).

Consideration should be given to other professions that use profession-relevant systems, for example, the engineering profession, which uses an outcomes-based system of accreditation (Shearman & Seddon, 2010). A generic programme accreditation model might not satisfy the requirements of such programmes, as process issues such as delivery mode are indicators rather than absolute criteria, and the system allows for different approaches by universities (Shearman & Seddon, 2010). The major criterion for accrediting an engineering programme is that it delivers the required learning outcomes at the appropriate level with an effort to ensure production of a work ready employee.

Accreditation systems should take into consideration the global trends and emerging issues as they develop. Since the education system is guided by policies (refer to Chapter 1, Section 1.2), by inference, programme accreditation should be guided by educational policies. However, some policy directives might inhibit innovation by being conservative, inflexibility and employing rigid evaluation criteria. The programme accreditation process is carried out in an education setting, in which the academic staff are in charge of the teaching and learning of a programme, the administrators manage the institution and the students learn. These are some of the key stakeholders within institutions, however, the responsibility for effective delivery of a programme largely depends on the academic staff.

Academics and programme accreditation

A judicious approach to the academics' views on programme accreditation would be that academics are not against the idea of external quality management but rather the manner in which it is carried out. In his reflection on the past and future of quality assurance practices in higher education, Singh (2010), of the Centre for Higher Education and Research in the United Kingdom (Open University), concluded that the quality assurance community is interested in

the impact of external evaluations while academics see quality assurance movement as assaults on academic freedom and institutional autonomy.

In his contribution to the debate on challenges and tensions faced by academics in the area of quality assurance, Cheng (2009), basing his contribution on a study of some academics in one university in England, reasoned that quality assurance mechanisms interfere with academic professionalism. Weir (2001), on the other hand, with particular reference to New Zealand, concluded that the introduction of external quality assurance has been evolutionary but controversial in that it has increased the administration workload of academics and compliance costs of providers.

Markward (1999) asserted that the standard that assesses curriculum infringes on academic freedom and might deter the academics from using the most relevant textbooks while Drolen and Markward (1999) discoursed that although the standards might not explicitly prohibit or deter innovation, the perception among several social work educators is that they do. Hall (2012) proclaimed that accreditation maintains status quo and impedes innovation while Hartle (2012) contended that although some policy makers believe that accreditation should protect students and taxpayers, higher education policy is often based on diminutive evidence, consequently, institutions found the simplistic and policy makers' view not appropriate, and policy makers interpreted the academics' reaction as resistance to reasonable public accountability.

In their study on the way academics observe, feel restrained by, and cope with the quality management systems that have been implemented in the Netherlands, Teelken and Lomas (2009) deduced that academics perceived the process of external quality management, by implication programme accreditation, as window dressing in the sense that institutions had to prepare for the accreditation visit. The preparation invariably caused increased workload that did not necessarily translate into much attention being given to the real quality, hence resulting in little recognisable improvement in the education system. They discovered that the Dutch quality assurance system directed at improvement was replaced by a more rigid accreditation system based on 'pass or fail'.

In contrast, in the United Kingdom (UK) there was an emphasis on quality assurance systems with some concern for the enhancement of teaching. The researchers labelled their study 'How to strike the right balance between quality assurance and quality control in the perceptions of individual academics: a comparison of UK and Dutch higher education institutions', and perceptions are worth considering to decipher different opinions. Teelken and Lomas (2009) concluded that if the programme accreditation processes contributed to visible

and recognisable academic improvement then the academic community would not view the process as imposing change; instead, they were likely to welcome it. If it appeared to be just increasing their workload, without any positive impact on the quality of the programme, then there was a likelihood of resistance. Norcini and Banda (2011) concurred with Teelken and Lomas (2009), further challenging that some of the programme accreditation processes were prescriptive and consequently could be a barrier to improvement and offered no evidence of effectiveness. "Highlighting efficiency and effectiveness and emphasizing results and outcomes are the basic characteristics of accountability in higher education." (Kai, 2009, p.39).

Accountability, improvement, and transparency of the operations of a programme are related to the quality of the academics who deliver the programme, and the quality of the learner: the inputs. The programme accreditation systems studied did not have evidence for requirements of evaluation of the inputs, yet the programmes were aimed at producing quality, marketable, and employable graduates. Evidence of continuous professional development of the academics should be a requirement under staffing or resources, to ensure that as programme requirements change, such as due to market needs, the academics are also developed. The pre-service academics should also be prepared through internship to ensure that they have the practical experience before being absorbed into the system. However institutions are "currently challenged in allocating resources towards academics, in both continuing and contracted positions, who aim to work with pre-service teachers in schools during professional experience placements" (Bloomfield, 2009, p.42).

Although it might be costly and a different process, the authenticity and ethical considerations of the academics should be ascertained to ensure that they are well equipped to deliver the programme. The traditional mode of accreditation whereby lecturers are interviewed and documents analysed, "provides little certainty that graduates from the programme actually have the knowledge and can apply it in real working contexts" (Ingvarson, Beavis, & Kleinhenz, 2007, p.377). Programme accreditation agencies should design the institutional frameworks that recognise academics' expertise and encourages their involvement in direct evidence of student-demonstrated learning rather than in the perseverance of students in obtaining a certain number of credits and grades (Rhodes, 2012).

Accreditation standards

A qualified labour force is expected to provide knowledge, skills, and relevant expertise to the labour market, therefore tertiary education can be counted amongst the pillars of the economy (Mishra, 2007) as it is charged with educating the society partly for economic advancement. Educators, policymakers, and faculty members should assess their own tertiary education

systems and set suitable standards which reflect the unique history, needs, and expectations of their nation (Hayward, 2006). Standards are minimal levels of expectations and do not guarantee excellence or innovation. However, standards are prescribed and this makes accreditation a standing or official order rather than a spontaneous act that can be employed as and when necessary (Hall, 2012). Consequently academics might prepare for accreditation and forget about the outcomes once over, which may possibly defeat the purpose of programme accreditation by turning it into a compliance practice, and as opined by Ewell (2010), compliance does not assist improvement.

In most instances, the accreditation agency develops the accreditation standards and uses them. Conversely, the current practice in some countries is that standards should be developed by a different body from the one that accredits (Yüksel, 2013). Generally, the standards lacked evidence of 'service learning' whereby classroom instruction is integrated with community service. Service learning could prepare learners because it "ensures continuity of experience; the principle of interaction; process of inquiry that leads to further knowledge through participation; reflective activity that leads to learning; citizenship promoting conscious awareness of values; and democracy through conflict resolution and inclusion" (Carrington & Iyer, 2011, p.2). Furthermore, service learning can "allow the student multiple understandings of academic knowledge (Carrington & Iyer, 2011, p.14) although the standards tend to be "narrowly focussed and ambiguous in terms of meaning" Yüksel (2013, p.11) and there were no quantifiable standards.

Accountability and improvement

In their assessment of the studies done on quality in higher education for the past fifteen years, Harvey and Williams (2010) indicated that tension between improvement and accountability in the outcomes of programme accreditation has been observed. However, Attiyah and Khalifa (2009), with reference to Qatar University, advised that it is not possible to have a strict separation between programme accreditation for improvement and programme accreditation for accountability. The different purposes should be accommodated to avoid damage to the quality and integrity of higher education by leading to serious imbalances in power. Institutions are expected to be accountable for all the actions that happen within and should accept responsibility for their actions.

Quality assurances processes are mostly output oriented as opposed to being process and input oriented, translating into minimal efforts to improve on the process. The processes are focussed within national boundaries yet the current focus is on globalisation (Shukla & Trivedi, 2008). Observations made by several scholars from studies on quality assurance are that

institutions opt for programme accreditation because it helps the institutions to improve. In their analysis of the effects of quality assurance and evaluation in Denmark (programme accreditation is a subset of quality assurance), Andersen et al. (2009) concluded that quality assurance and evaluation have played a major role in defining policy issues for the Danish Education system and it has thus contributed towards improvement in the provision of education.

Additional studies have been conducted by a number of researchers. For instance, Anaam et al. (2009), studied the status of quality assurance and accreditation systems within HEIs in the Republic of Yemen; Attiyah and Khalifa's (2009) study was entitled 'small steps lead to quality assurance and enhancement in Qatar University'; and Grendel and Rosenbusch's (2010) contribution on system accreditation was an innovative approach to assure and develop the quality of study programmes in Germany. The studies concluded that programme accreditation is beneficial to the institutions because it assists them in conducting self-evaluation, which results in identification of areas that need improvement.

Approaching accountability from another angle, Kells (1999, p.209) submits that:

Organised national evaluation systems, in their most progressive examples, are useful, but they are not, by far, the most important aspect in a well-developed culture of university self-regulation. They are, too often, examples of somewhat patronising, expensive, and often quite political, activity in the name of accountability.

Stensaker (2011) concurs with Kells (1999) by declaring that programme accreditation focuses only on minimal standards while overlooking the challenge of quality improvement. It tends to be self-serving or self-protective instead of serving the public good. It is neither cost-effective nor value-adding, uses criteria that overlook the educational context and, as such, fails to ensure societal accountability.

Great emphasis on accountability, assessment, and accreditation in higher education is fuelled by the decline in public funding, growing needs for new streams of revenue, increasing competition among education providers, and expanding public scepticism about higher education as a public good (Sandmann, Williams, & Abrams, 2009). While accreditation agencies act as gate keepers in determining who can be funded, because only accredited programmes are funded, "accreditation reviews are kept private, those that are made public still focus on process reviews more than bottom-line results for learning or costs" (Hall, 2012, p.233). It is advisable that "accountability data be used only to compare specific universities

with their own past performances and with the performance of comparable universities" (McPherson & Shellenburger, 2006, p. 3).

Kemenade and Hardjono (2010, p.266) suggest that academics "...are careful in writing down the truth, expressing their weaknesses and showing their vulnerability" in an accreditation system that is compulsory and has serious consequences although this "vulnerability is an essential dimension in education". Separating control from improvement will result in a "two way system of intelligent accountability" (Kemenade & Hardjono, 2010, p.266).

The African proverb, 'it takes a whole community to raise a child' can be applied to the education system that it takes the whole institution to educate a student; the entire human and physical resources contribute to the delivery of a programme, therefore it is paramount that a cross-section of the components of a programme should be assessed to determine its quality. Accreditation has the potential to elevate and advance an institution's commitment to greater community engagement, such as faculty members integrating service-learning into their curricula or creating learning communities and creating community outreach and partnerships that link research with local, regional, national, or global needs (Sandmann, Williams, & Abrams, 2009). The arrangement might yield positive results such as improving the institution's competitiveness and developing partnerships. The impact of accreditation should be visible within the education system. Accrediting agencies should take stern measures for poor performers and protect public funds. However, some critics claimed that accreditation agencies appear to be complacent, they do not show response to changes in the educational circles, while the agencies state otherwise, that they are open to suggestions (Sibolski, 2012).

3.9 Benefits, Challenges and Recommendations for Programme Accreditation

In this section, the benefits, challenges, and recommendations for programme accreditation are summarised. The vision of an integrated, peaceful, and prosperous Africa driven by its own people to take its rightful place in the global community and the knowledge economy can be realised through the provision of quality education (African Union, 2007). The provision of quality education requires that there should be mechanisms for assuring quality in the various institutions to enable them to make a critical self-analysis of their programmes and institutional capacity, and to make significant contributions to the global educational enterprise and the world of work (Association of African Universities, 2012).

The Global University Network for Innovation (GUNI) is an international network created in 1999 by UNESCO, the United Nations University (UNU) and the UPC Barcelona Tech (*Universitat Politècnica de Catalunya – BarcelonaTech*), after UNESCO's World Conference

on Higher Education in 1998, to give continuity to and facilitate the implementation of its main decisions (International Association of Universities, n.d.). The GUNI Secretariat (2007) carried out a study to gather the opinions of experts on programme accreditation, covering all regions (Africa, Latin America and the Caribbean, Asia and the Pacific, the Arab States, Europe, and North America) and discussing issues of international relevance from a global perspective. The aim was not to reach unique conclusions but rather to identify current and future trends that had not yet been described and provide information for decision-making, indicating possible lines of action for future study. A consolidated view of the findings are presented in the boxes below.

Box 3.1: Benefits of programme accreditation

- a) Can be a tool for institutions to recruit excellent students and excellent staff.
- b) Creates a quality culture in tertiary education worldwide and enhances the educational system as a whole.
- c) Facilitates the exercise of continuous improvement of quality and the introduction of a quality culture.
- d) Provides, to a certain extent, protection against low quality education and fraud.
- e) Grants legitimacy and public recognition to an institution.
- f) Gives confidence to employers as regards the quality of the education received by graduates.
- g) Facilitates the international recognition of national and cross boarder degrees.
- h) Enhances transparency, provides information, and makes institutions accountable to society and stakeholders.
- i) Increases public confidence in the education system.
- j) A tool for decision making in institutional strategic planning as it identifies strengths and weaknesses.
- k) Facilitates the quality assessment /auditing of new universities.
- l) Facilitates comparability and equivalence between local, regional and international higher education programmes.
- m) Facilitates cooperation, the sharing of good practices and benchmarking.

In addition to benefits, the study identified problems which arise with programme accreditation, presented in Box 3.2.

Box 3.2: Problems experienced in programme accreditation

- a) Accreditation process is costly therefore there is need for financial support.
- b) Connection between accreditation and the financing of institutions might discriminate against institutions that are growing and institutions in developing countries.
- c) The process is highly time consuming and may be bureaucratic and complex.
- d) Faces incomprehension and resistance from accreditors.
- e) Can be seen to interfere with university autonomy.
- f) Provides heavy workloads for participating institutions in preparing documentation and databases.
- g) There is a lack of understanding in society of accreditation's strengths and weaknesses.
- h) There is a risk that accreditation might become an aim in itself.
- i) It is difficult to develop acceptable and pertinent performance indicators.
- j) Assessment might not always be impartial, independent or objective.
- k) There are few studies of the impact of accreditation on the quality of institutions and programmes.
- l) Institutions do not always have the proper database or the systematized database needed.
- m) Institutions are not always transparent when they provide the necessary information.
- n) The concept of accreditation is not clear enough, as it is understood in different ways in different national and regional settings.
- o) Quality is not understood in the same way by agencies.
- p) Accreditation agencies themselves are not subject to assessment.
- q) There is a shortage of qualified personnel to undertake accreditation.

In addition to problems or challenges arising from the conduct of programme accreditation, recommendations for improvement have emerged from the same study conducted by the secretariat, GUNI (2007, p.323-325) (see Box 3.3).

Box 3.3: Recommendations for improvement of programme accreditation

- a) Accreditation agencies should be periodically assessed by external auditors.
- b) Public funding for institutions should be increased to manage the programme accreditation process.
- c) Public and social needs should be reflected in the programme accreditation process.
- d) Cooperation between accrediting bodies, tertiary education institutions and society should be strengthened.
- e) Accreditation bodies should follow good practices.
- f) Benefits of accreditation should be communicated to all stakeholders.
- g) Outcomes of the accreditation process should be made transparent and information accessible to society.
- h) There should be continuous quality improvement as a result of the accreditation process.
- i) Accreditation process should be periodically reviewed.
- j) Indicators and standards should be clear and measurable.
- k) Standards and indicators should be discussed and agreed upon by the universities that are to be accredited and the accrediting organisation.
- l) Accreditation should focus on creating stimuli for areas and specialists who achieve good results.
- m) Institutions should be informed of the nature and content of academic programmes taught elsewhere (both nationally and internationally).
- n) Indicators and standards should be clear and measurable.
- o) Programmes should not be dictated by market demand.
- p) The programme accreditation agency should maintain an accessible database of accreditation monitoring and implementation processes for institutions.
- q) The autonomy of accrediting agencies from governmental and universities' influences should be maintained.
- r) Qualified personnel who are knowledgeable in the fields to be assessed should be trained to undertake accreditation.

All these issues, such as benefits, problems and recommendations as presented and discussed in the literature review informed the design and development of a conceptual framework which underpins this study.

3.10 The Conceptual Framework

In this section, the conceptual framework that underpins this research is presented (see Figure 3.4 later on). To recapitulate, the framework was developed to provide a structure that guides the study entitled: *Development of an effective programme accreditation system to address quality in tertiary education institutions in Botswana*. The main research question seeks to identify the characteristics of an effective programme accreditation system. The concepts that evolve from the main research question and the topic of the enquiry are development,

education system, programme accreditation system, and quality education. Development, as stated in Chapter 1, refers to improvement of the present programme accreditation system.

Programme accreditation is a quality assurance legal obligation for private TEIs in Botswana (Republic of Botswana, 1999) and in other countries (Section 3.3). As a quality assurance mechanism used in tertiary education, programme accreditation is used for improvement, accountability, and economic purposes (Sections 3.2, 3.5, and 3.6). The concepts of improvement and accountability are common in quality management systems for which the systems theory approach is employed. Sallies (2002) suggests that an organisation needs to be considered as a system in order to yield maximum results for all stakeholders. Since programme accreditation is a quality management system and is employed to ensure that the stakeholders yield maximum results from the programme, systems theory is applicable.

The *Collins English Dictionary* (2012) defines systems theory as an approach which likens the enterprise to an organism with an orderly combination or arrangement of parts according to some rational principle and methodological arrangements of parts, each with its own specific function and interrelated responsibilities. The systems theory approach acknowledges that the various components of a system interact and impact on each other in order to develop an effective system (Johnson, 1998; Patton, 1997). In this light, the hard systems approach is used to maximise the efficiency (Laszlo & Krippner, 1998) of a programme accreditation system by providing technical solutions that optimise the system. The organismic systems approach emphasises the importance of every component of the programme accreditation system (Rapoport, 1986). Thus, there should be interaction between the various components of the programme accreditation system, such as the TEC, the TEI and the programme review team, to ensure information flow between the different areas in the development of the self-evaluation report and the programme accreditation report.

Systems theory focuses on a system in terms of the relationships between the parts rather than concentrating on individual parts, as in the maxim 'the whole is more than the sum of the parts'. A system which adapts to the environment is inclusive and is based on diversity (Colbin, 2003). A programme accreditation system includes all aspects of a programme, for instance, both human and physical resources, and treats individual programmes as unique cases because the purpose is not to standardise programmes but rather to strengthen and sustain their quality and integrity, thereby encouraging diversity (Sections 1.3 and 2.2). Mizikaci (2006, p.39) suggests that "the underlying philosophy, values, and norms reflected in quality systems are appropriate to higher education", and these include putting emphasis on service with the anticipation of meeting the needs and expectations of the constituents, through solving

problems based on systematic identification of facts. In the same vein, the aim of programme accreditation is to give the stakeholders quality education.

The programme accreditation system comprises various parts, which can be classified under *input*, *process* and *output*. A system's *input* can be defined as the movement of information from the environment into the system, while a system's *output* can be defined as movement of information from the system to the environment (Walonick, 1993). Information in this stance includes also the resources that are expended in the accreditation process. The movement of information should supply the stakeholder with evidence that the provision of education (input, process, and outcomes) satisfies expectations or measures up to minimum requirements (refer Section 3.2).

The model used in this study (refer Figure 3.4) is the input-process-output (IPO) form. "The IPO model offers an efficient way to both analyse and document the critical aspects of a transformation process" (Schembri, 2012, p.1) and is, amongst others, used as a framework to analyse complex systems by technology education teachers. Halvorsen's (2010) IPO model was found suitable as an example to be employed in the investigation of the effectiveness of a programme accreditation system.

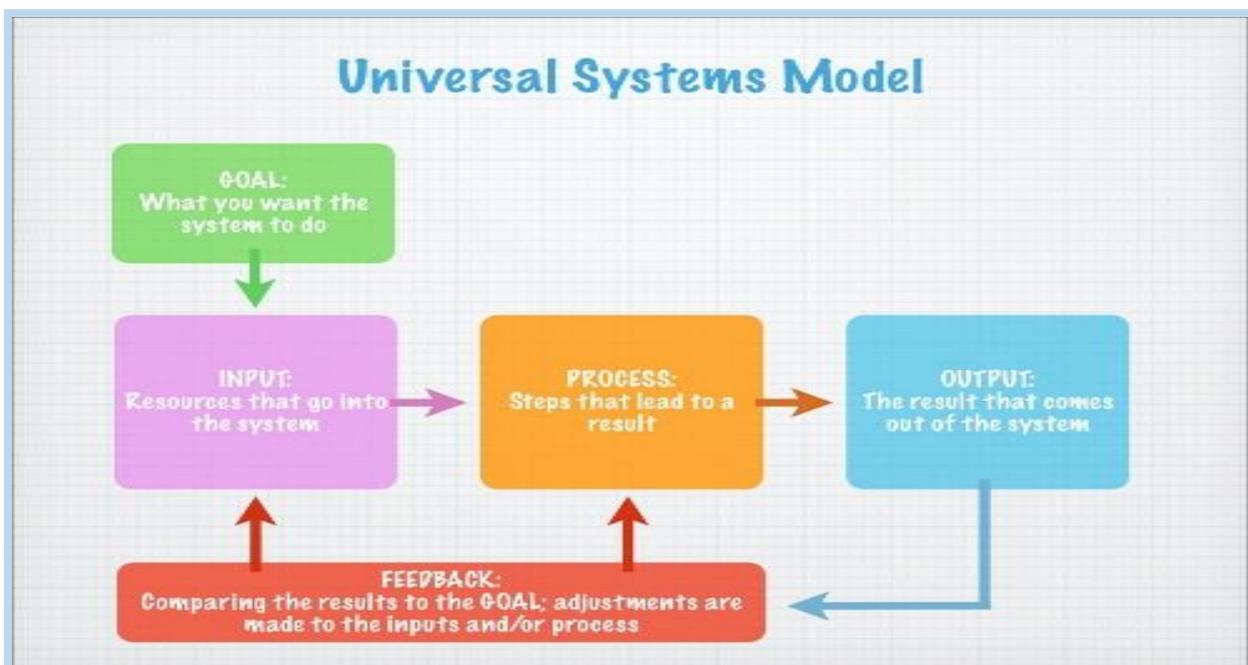


Figure 3.3: Universal systems model Source: Halvorsen (2010)

The feedback loop follows the principle of design research in the employment of the quality criteria to ensure that the output has met the criteria of practical effectiveness. Further on, the

effectiveness of the programme accreditation system should yield results that could be fed back into the education system (IPO) to contribute towards quality education.

Through the programme accreditation process, interactions between the educational community, educational processes, and educational physical resources are enhanced in that all the factors that contribute towards the delivery of a programme are assessed in relation to the programme. In school effectiveness research, school characteristics are linked to output data. The effectiveness criteria as used in the organisational effectiveness models are productivity, adaptability, involvement, continuity, and responsiveness to external stakeholders (Scheerens, 1999). All these factors are applicable in considering the characteristics of an effective programme accreditation system, with instructional or educational leadership as the foundations for an effective educational system.

The conceptual framework for the programme education process that underpins the study is presented in Figure 3.4. The framework is made up of input, process and output, with output divided into immediate output and distal output. The green row at the base emphasises the products of an effective programme accreditation system. As the institution is encouraged to uphold the culture of continuous monitoring and improvement, effort towards excellence will result, thereby contributing to national development and global competitiveness. The conceptual framework for the study is presented in Figure 3.4 (next page) followed by a discussion of the aspects that comprise the conceptual framework of an effective programme accreditation system.

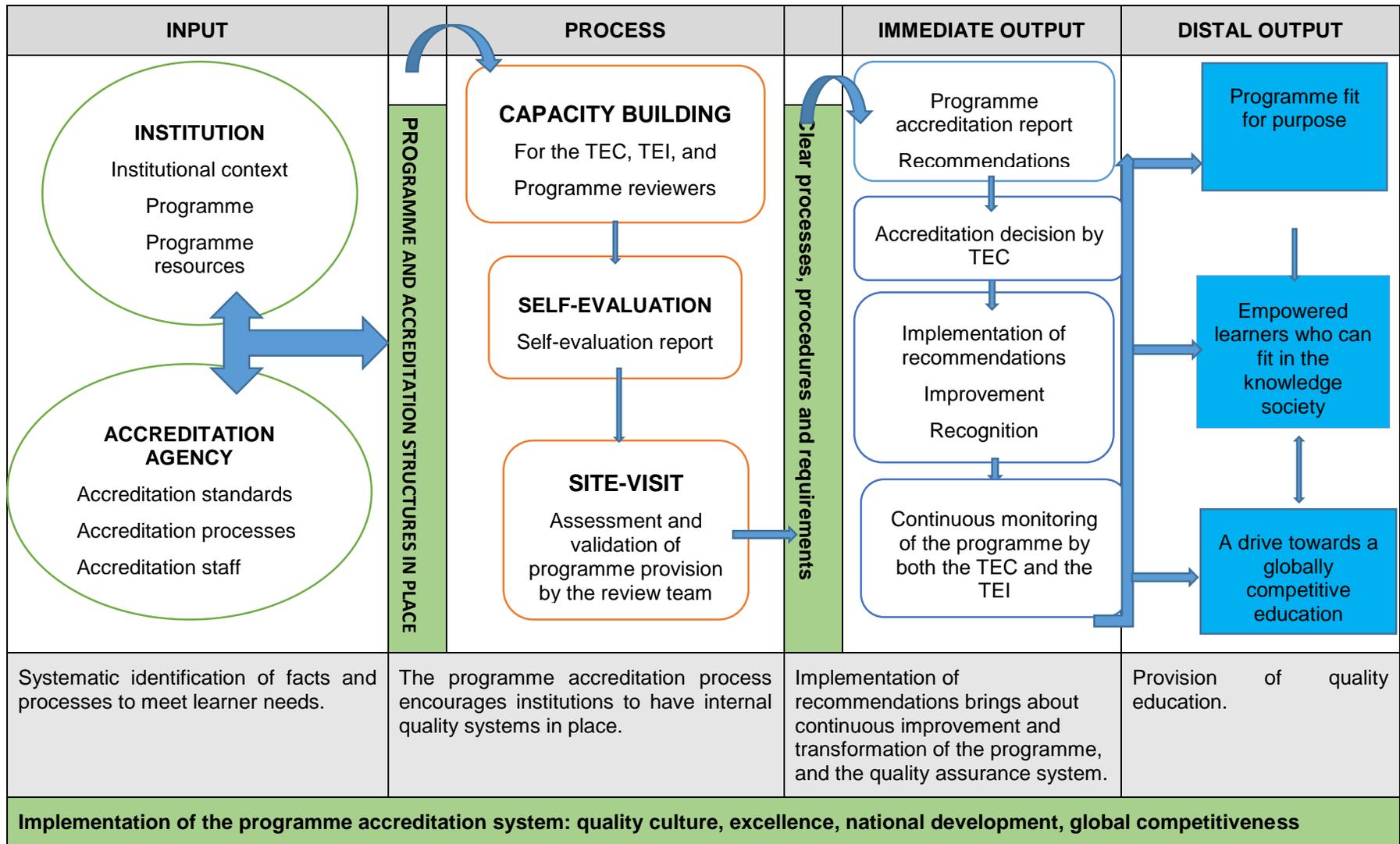


Figure 3.4: A conceptual framework for the programme accreditation system

The discussion starts with the input factors to the programme accreditation system, going on to the process of programme accreditation, then discusses immediate output and distal output, ending with the summary to the conceptual framework.

The input

As stated throughout this chapter, the existence of a strong quality culture would ensure that learning and teaching, innovation, and quality processes lock in together. In the end, “quality culture is about adopting a self-critical reflexive approach as a community: a community of students and staff” (Harvey, 2007, p.84). *Input* refers to all the factors that are required to start off a programme accreditation system. A distinction has been made between TEI and the accreditation agency.

The institution provides the environment within which the programme is offered. A conducive programme environment would include appropriate human and physical resources for the programme. The changes seen in higher education in recent years, as reflected in Chapter 2, are:

Growth and diversity; changes in size and nature of higher education; declining unit of resource; shift from ‘elite’ system to a ‘mass’ system; changes in funding methodologies; pressures for efficiency gains; and the challenges, still unresolved, of a changing student profile. This was accompanied by growing state interest in quality, demands for accountability, and the establishment of national quality agencies (Newton, 2007, p.14).

Market forces also influence public policy, resulting in the *three Es* for the management of the public sector: **E**conomy in the acquisition of resources; **E**fficiency in the use of resources; and **E**ffectiveness in the achievement of objectives (Amaral, 2007). The three Es relate well with the gist of the main research aim, *the development of an effective programme accreditation system*, which forms the objective of the study. The same market forces can be used to attract the student population, thereby strengthening competition for students, for funds, and for research money between TEIs (Amaral, 2007). Competition for the scarce resources could, in some way, force institutions to revisit their provision for the programme and strive for an environment conducive to its maintenance and sustenance.

The accreditation agency (the TEC) also provides input to the system (Figure 3.4). Since the process of programme accreditation is facilitated by the TEC, it is responsible for the provision of proper systems and structures such as the accreditation standards and guidelines to steer the accreditation process (refer Figure 3.1). The TEC brings in the aspect of external quality monitoring and the level of expertise provided by the TEC and, by implication the programme reviewers, can either ‘make or break’ the system. The quality of preparations for the accreditation process has impact on the output of the accreditation process, which should guard against the critique made by Houston and Paewai (2013, p.278) in their contribution towards *shaping quality assurance in higher education*, that quality assurance (by inference, programme accreditation) is unable “to enhance teaching, learning, and research (the fundamental productive functions of the university) for the benefit of multiple clients”. The TEC should ensure that proper structures for the assessment of the programme (such as standards and processes) are in place to address both accountability and improvement. Since the learner is at the centre of every learning process, systematic identification of facts and processes to meet learner needs is one of the keys to the success of a programme accreditation system.

Process

As indicated under ‘input’, the process of programme accreditation requires that proper structures are in place. An important conclusion from the literature is that TEIs should conduct self-evaluation resulting in a report. This requires that the institution carry out mini-research to evaluate its processes, as demonstrated in Figure 3.2. The institution is expected to study the programme and present an honest view that shows successes, challenges, and plans for improvement. An informative self-evaluation report is expected to have all the information collected against the accreditation standards that are stipulated in the programme accreditation guidelines (Section 3.8 and Table 3.1 for the accreditation standards). The self-evaluation report should be based on information that can be substantiated. An authentic and informative self-evaluation report contributes to improvement of the programme and accountability to stakeholders (Figure 3.2). The process of programme accreditation encourages institutions to put in place proper quality assurance processes to manage the quality within the programmes and across the institution.

The programme reviewers assess the areas of the programme provision and resources against the same accreditation standards and criteria that the institution used in preparing the self-

evaluation report. Several methods are used to collect data, such as interviews of representatives of all stakeholders and analysis of documents underlying the self-evaluation report.

The production of the self-evaluation report and the accreditation site visit are critical to the success of the programme accreditation process. Those involved should undergo training in order to carry out their responsibilities diligently, hence capacity building forms an important first component of the accreditation process. Members of the accreditation agency should be well trained to facilitate the programme accreditation process, such as the production of a quality self-evaluation report by the institution and proper assessment for the purposes of accreditation by the programme reviewers. Capacity building from the accreditation agency should filter down to the institution and programme reviewers. Thus, both the programme reviewers and the institution have to be confident about the process as they will be accountable for all the decisions made. Transparency, effectiveness and quest for excellence will be part of the process, creating room for global recognition of the programme accreditation process.

Immediate output

As demonstrated in Figure 3.1, the programme accreditation process involves production of a self-evaluation report by the institution and a site visit by a team of programme reviewers. The immediate output of the site visit is an accreditation report. The programme reviewers validate the claims made in the self-evaluation report and make observations regarding the quality of provision for the programme, culminating in the production of a programme accreditation report which contains the accreditation recommendations. These are then sanctioned by the accreditation agency through the appropriate structures to make an accreditation decision. Both the programme reviewers and the institution produce the reports against the same standards and criteria (Appendix G and H). As demonstrated in Figure 3.4, regular monitoring and reporting will then follow to ensure continuous improvement to the programme.

Distal output

As stated throughout this chapter, the main purpose of programme accreditation is to ensure that quality tertiary education is provided to the students. A programme that is fit for purpose will provide learners with education that, if properly offered and well assimilated, will result in graduates who can fit in the competitive global economy, hence contribute towards making Botswana a knowledge society. In order to be internationally competitive, Botswana must prioritise the development of relevant skills and qualifications to coincide with new and emerging

technologies, materials, systems, and the work place environment. The programme accreditation strategies can lead to significant improvements in productivity, efficiency, and cost effectiveness, which in turn can improve a country's wellbeing. The distal output of the programme accreditation process is a step towards an informed and an educated nation (Section 1.1), fulfilling one of the pillars of development in Botswana.

Summary

In this study, a programme in a TEI is likened to a living organism, it needs to be 'fed', that is, regularly nurtured. The cultivation comes through ensuring proper and relevant resources which evolve as the world changes. For example, continuous learning by academics could arouse use of different approaches to the subject matter (capacity building). In the same vein, the curriculum, books, and other instructional resources should be regularly reviewed and upgraded to make them relevant (programme resources).

The educational process places emphasis on the learner, the resources and the programme (Sections 3.5 and 3.6). The Plan-Do-Check-Act- cycle (PDCA) (Figure 3.2) can be applied to the programme accreditation system as: based on the curriculum (Plan); study programmes are taught (Do); their quality is systematically evaluated through programme accreditation centred on the evidence gathered (Check); and the recommendations should be acted upon (Act) (self-evaluation report and programme accreditation report). The process requires that both the internal and external consistencies of the programme curriculum are considered, whereby, applying Kessels and Plomp's (1999) concept, internal consistency relates to the changes that are necessary in the learning environment to ensure improvement in performance, while external consistency refers to the perceptions of stakeholders regarding changes that are needed to enact improvement.

The systems theory is thus applicable, with emphasis on quality systems: quality as excellence; fitness for purpose; transformation; and accountability and improvement (culminating in a programme fit for purpose). Botswana is committed to providing tertiary education that will graduate well-educated prospective employees to meet the demands of the 21st century (Chapter 2, Table 2.4 for the 21st century skills). Programme accreditation is one way of ensuring the provision of quality tertiary education, hence, all the factors in the conceptual framework are relevant to the programme accreditation system and all will be considered in the study.

3.11 Conclusion

In this chapter, programme accreditation has been discussed as a quality assurance mechanism used in TEIs. It is one of the measures that encourages institutions to ensure that proper quality assurance structures are in place and that these contribute towards the delivery of quality education. When key quality assurance structures are in place within the institution, the process of the programme accreditation takes shape, because it involves assessing the quality of educational provision. In the process of assessing the 'fitness of the programme for purpose' improvement and accountability takes shape. Systems theory using the Input-Process-Output model was hence found applicable to the study. A conceptual framework for an effective programme accreditation system was developed. In the framework, it is indicated that the accreditation recommendations and decisions are the immediate output of the programme accreditation process, the final output being a quality programme. Although literature reviewed indicates that there are varying views about the benefits of programme accreditation, and that it might breed an antagonistic environment during the programme accreditation process, a change in the programme due to programme accreditation is likely to result in a change in the instructional approaches and instruction, and vice versa, hence improvement and accountability to the programme.

The next chapter presents the research method for the study.



Chapter 4

Research Design and Methodology

4.1 Introduction

In this chapter, the research design and method are presented. The research design employed was educational design research positioned in the pragmatic paradigm (Section 4.2). Reference is made to debates about the use of quantitative or qualitative data, and a stance is taken on the preferred method that will yield the best results for the enquiry. Reasons for choosing design research are elucidated by referring to the literature. The cyclic, iterative, and evaluative natures of design research are discussed.

The ontological and epistemological considerations of the study (Section 4.3) are followed by a discussion of the research design (Section 4.4), an overview of the design research as applied in this study (Section 4.5), and the evaluation methods applied to reach product quality (Section 4.6). The design research methodology is illuminated by consulting various sources, and reference is made to design research models (4.7). The role of the researcher in the study is explicated (4.8). Ethical considerations for the study (4.9) precedes the conclusion to the chapter (4.10).

The chapter begins with the presentation of the research paradigm. Discussion will be based on the topic, namely, *Development of a programme accreditation system to address quality in tertiary education institutions in Botswana* and the primary research question: *What are the characteristics of an effective programme accreditation system for the tertiary education institutions in Botswana?*

4.2 Research Paradigm

A research paradigm provides an intellectual foundation and a template to be followed in conducting a research enquiry. It is a lens that is composed of certain philosophical assumptions that guide the researcher's way of looking at the world (Mertens, 2005) and it suggests a network of coherent and logical ideas about the nature of the research in question. Cohen, Manion and

Morrison (2000, p.9) describe a research paradigm as “a basis for comprehension and for interpreting social reality”. Thus the researcher’s thinking and research actions are guided by the research paradigm that underpins the research.

In everyday life, different people have different ways of interpreting reality, subsequently, there are different research paradigms applied in research. The major ones are “positivism, constructivist, transformative and pragmatic” (Mertens, 2005, p.8), all with different belief systems, hence different ways of interpreting reality. Several issues influence the researcher’s paradigm stance, the match between the problem and the approach, the experiences of the researcher, and the audience of the research (Creswell 2003).

Pragmatists use both quantitative and qualitative data and apply mixed methods at different levels of their research. Although there are paradigm conflicts in research regarding the use of both quantitative and qualitative data, this enquiry bought Reichard and Cook’s contribution to the paradigm discourse that paradigm attributes are logically independent and can be mixed to find the most appropriate methods and choices for the given research enquiry (1979). In corroboration of this assertion, Johnson and Onwuegbuzie (2004) state that research methods should be mixed in ways that provide the best opportunities for addressing the research questions.

According to Miles and Huberman (1994), the quantitative-qualitative argument is unproductive, and the question should be how the two sorts of data and methods can be used and why they should be linked. The approach taken in this enquiry is to enhance the inquirer’s flexibility and adaptability by employing the complementary strengths of both quantitative and qualitative research at any given point, a decision based on what paradigm works best for the research problem at any given time (Greene, Caracelli & Graham, 1989). This study is situated in the pragmatist paradigm, described by Tashakkori and Teddlie (2003) as having an intuitive appeal by giving the researcher permission to study areas of interest. In a way, embracing appropriate methods to the study and using findings in a positive manner in harmony with the value system held by the researcher (Creswell 2003).

Given that research is evidence-based, scholars use data to support their arguments in interpreting reality. Positivists primarily use quantitative data and are referred to as quantitative purists; constructivists (interpretivism) typically use qualitative data and are referred to as qualitative purists; transformative theorists use both qualitative and quantitative data; while the pragmatists match methods to specific questions and purposes of research (Mertens, 2005). The

pragmatists therefore generally use both quantitative and qualitative data either simultaneously or at different stages of the research process, being guided by the data that is applicable at that particular stage.

Qualitative studies focus on providing understanding of an activity from the perspective of the research participants guided by some principles, such as: sources of data are real life situations; data is descriptive; data emphasises a holistic approach focussing on processes as well as final outcomes; data is analysed inductively; and the researcher seeks to describe the meaning of the findings from the perspective of the research participants (Gay & Airasian, 2000). The quantitative researcher, on the other hand, seeks to deduce cause and effect relationships to predict patterns of behaviour. The research purpose therefore is likely to be causal or predictive rather than exploratory by developing theory and using it to explore the world. The theory would be used to identify key variables, their relationships, and associations, thereby allowing clarity of the initial design (Williams, 1998). Both researchers (quantitative and qualitative) use empirical observations to address research questions (Johnson & Onwuegbuzie, 2004). The research methods complement each other. This research employed both quantitative and qualitative data collection methods, situating the research in the pragmatist paradigm.

The main components of a research paradigm are ontology, epistemology and methodology. The ontological and epistemological considerations for this study will be discussed in the next section (Section 4.3) while the methodological considerations are briefly outlined. Further discussion on methodology will be presented in Section 4.6 of this chapter.

4.3. Ontological and Epistemological Considerations

The reality in research is that the selection of research methods cannot be detached from the researcher's belief system. The research paradigm presents the basic belief system or world view of the researcher; ontology explains the form and nature of reality while epistemology explains the relationship between the researcher and the practitioner (Goulding, 2002). This explanation seems to be philosophical, however, Creswell (2003) confirms that the researcher is an instrument that filters data through their own paradigms.

It was important that I identified my belief system before embarking on this research. The ontological assumption for this research was that the realities are constructed by real life situations. Programme accreditation is a real life situation that is conducted in active tertiary education institutions in real life, therefore the research findings were constructed from real life

situations. The epistemological assumption was that the researcher interacts with the objective of the research in order to gain knowledge and be able to interpret what needed to be known in the process of programme accreditation. The methodological assumption was that the meanings of the social actors are discovered through close interaction between the researcher and participants. These assumptions augured well with my belief system. The knowledge assisted me in avoiding subjectivity while at the same time, made me conscious of a fit between the research design and my belief system with regard to the research paradigm and ontological and epistemological considerations. Mertens (2005) presents the basic underlying beliefs that are associated with paradigms and clarified the pragmatic stance. The following table (Table 4.1) further clarifies the ontological and epistemological considerations by indicating how they were applied in this study.

Table 4.1: Basic beliefs associated with the major paradigms

Basic Belief	Explanation	Pragmatics	Application to this study
Ontology	Nature of reality upon which a theory is based. It is the starting point of research after which the epistemological and method-logical positions follow. What needs to be known?	What is useful determines what is true; participants perform reality checks by determining increased clarity of understanding.	What needed to be known was the best way of designing a programme accreditation system; what factors need to be considered so as to make the programme accreditation system more effective.
Epistemology	Nature of knowledge; relationship between knower and would be known. Theory of knowledge. It is not static, therefore when reflecting on theories and concepts, the researcher should reflect on the assumptions on which they are based and their origin. What and how can it be known?	Relationships in research are determined by what the researcher deems as appropriate to that particular study.	The characteristics were known after involving key stakeholders in the programme accreditation process and also referring to literature on the subject matter.
Methodology	Approach is systematic enquiry. It is the general principles or guidelines that need to be followed in investigating the social world and demonstrating that the knowledge generated is valid. What procedures can be followed to acquire the knowledge?	Match methods to specific questions and purposes of research; mixed methods can be used.	The research methods employed were matched to different research sub-questions.

Source: adapted from Mertens (2005, p.9)

The research was conducted within the social and educational environment that was consistent with the experiences of the participants, who were followed at institutions and at workplaces to try and keep disturbances to their daily schedules at a minimum.

4.4 Research Design

As is argued in Chapter 1, Section 1.6, the research design used in this study is educational design research. It was found suitable for this study because, as explained by Plomp (2010, 2013), one of the aims of educational design research is to develop an intervention to address an educational matter, in this instance, a programme accreditation system, for which no or few guiding principles, ready-made solutions, or guidelines have been found, or where there are no 'how to do' guidelines or heuristics readily available.

Different authors use various names to describe design research. For example, Reeves, Herrington, and Oliver (2005) use 'design research', van den Akker (1999) calls it 'development research', Kelly (2004) and the Design Based Research Collective (2003) refer to it as 'design based research', while 'design studies' is used by Shavelson, Phillips, Towne, and Feuer (2003), and 'design science' by Collins et al. (2004). Regardless of the terminology used, the authors refer to the same family of the research design (Plomp, 2010, 2013). This study therefore uses the term 'design research' as a short form for educational design research.

In design research, the goal is not only testing whether or not the theory works (van den Akker, 1999) but rather both design and theory are developed through the research process. Researchers use design research to enact and refine theories continuously (Edelson, 2002) by being interactive, iterative, and flexible (Bannan-Ritland, 2003; Design-Based Research Collective, 2003; Wang & Hannafin, 2005), so that the theories "do real work" in practice (Cobb et al., 2003, p.10) and eventually lead to substantial change in educational practice (van den Akker, 1999). Design research is grounded in both theory and the real-world context (Wang & Hannafin, 2005). Joseph (2004) asserts that design research supports researchers in deeply appreciating problems of practice and it aids the practitioners in understanding the purpose, goals and implications of the research by focusing on key questions.

The purpose of design research, as the name suggests, is to blend design and research. Educational design research is conducted to understand the issues of application, not only theory (McKenney, 2001; Reeves et al., 2005) in order to address educational problems in practice. The research process involves interactions with participants through sharing experiences and ideas (Collins, 1992). In addition, appropriate methods are applied at different stages of the research to approximate the results of the intervention for the purposes of refinement (Cobb et al., 2003; Wang & Hannafin, 2005) and to bridge the gap between theoretical research and educational

practice by providing principles that can be used in different settings (Design Based Research Collective, 2003). The research process involves:

- ❖ *preliminary research*: needs and context analysis, review of literature, development of a conceptual or theoretical framework for the study.
- ❖ *development or prototyping phase*: iterative design phase consisting of iterations, each being a micro-cycle of research with formative evaluation as the most important research activity aimed at improving and refining the intervention.
- ❖ *evaluation phase*: (semi-) summative evaluation to conclude whether the solution or intervention meets the pre-determined specifications. (Plomp, 2013, p.19).

The above process is demonstrated by Wademan (in Plomp & Nieveen, 2010, p.16; Plomp, 2013, p.21) by designing a generic design research model (Figure 4.1) to graphically explain the process of design research. The model gives the problem in context, preliminary investigation and refinement of design theory. It illustrates the involvement of various participants at different stages, namely, researchers, practitioners, and experts. Literature review to assess the contribution of other researchers and relate it to the findings is carried throughout the research process. The approaches employed to address the problem and the refinement of problem until the product of the research is attained are elucidated. The iterative nature of the process accentuates the fact that the quality of the research output even at the initial stages of developing the prototypes is paramount as per the evaluation phase explained by Plomp (2013). The generic design research model is presented in the following figure (Figure 4.1).

Generic Design Research Model

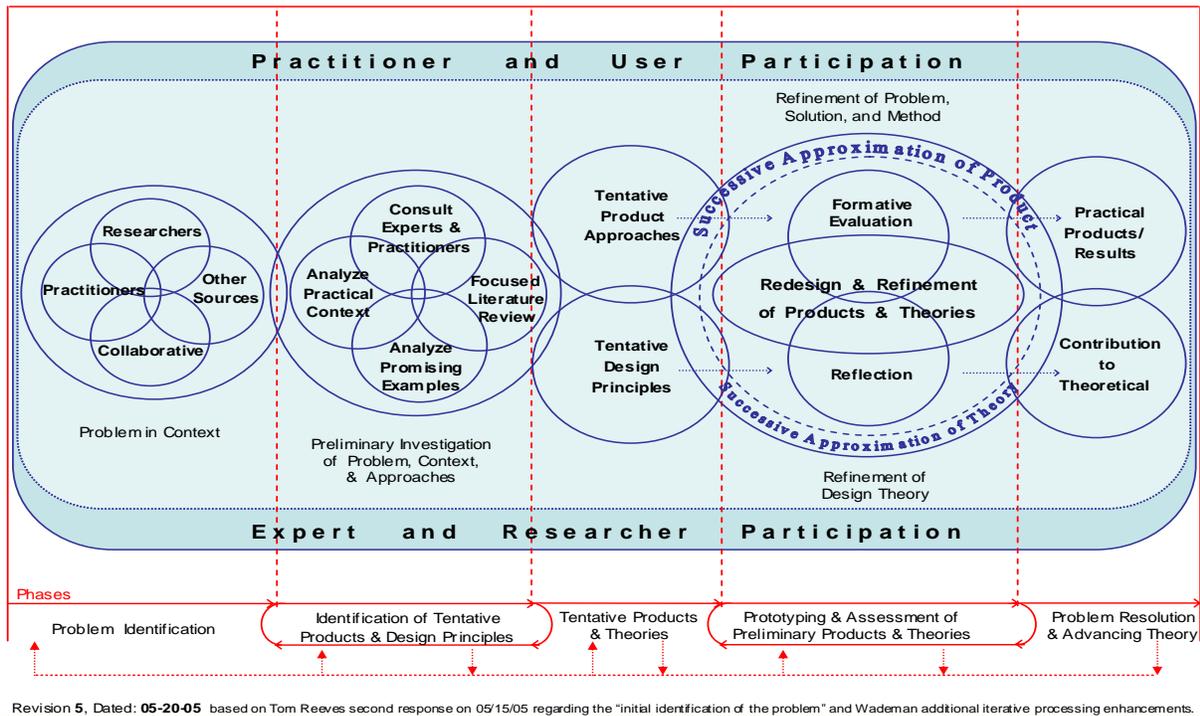


Figure 4.1: Generic design research model Source: Wademan in Plomp 2009, p.16, 2013, p.21

Sharma and McShane (2008) explain that the use of design research could ensure that the interests of stakeholders and professionals are considered while learning takes place in authentic settings. Shavelson et al. (2003, p. 25) expounded that:

Such research, based strongly on prior research and theory and carried out in educational settings, seeks to trace the evolution of learning in complex messy classrooms and schools, test and build theories of teaching and learning, and produce instructional tools that survive the challenges of everyday practice.

The stand taken by Shavelson et al. (2003) suggests that in design research, research is tied to practice and several iterations and prototyping, based on prior knowledge assists in perfecting the intervention in real-life situations.

Several scholars reiterated and enhanced the characteristics that make design research suitable for this study by explaining them. These are summarised by Wang and Hannafin (2005, p.6) into five basic characteristics:

1. *pragmatic* - in that the principles of theory should inform and improve practice
2. *grounded research methodology* - it is based in real world settings with social interactions rather than laboratory settings
3. *interactive, iterative, and flexible* - theory is developed and improved through the phases of design
4. *integrative* - various methods are used to gather data and the results of research contextualised
5. *contextualised* - the whole process and the context under which the results were arrived at is documented so that other researchers can understand the research output and the context under which the research was carried out.

Another important factor of the research design is that design research documents the research process at each stage, which assists not only in record-keeping of each process but also in communicating and coordinating the design process during and after the research process (Cobb et al., 2003). The records become useful even after the study because they might inform both the researcher and the practitioners of the processes that were undertaken to unravel the research question. Application of design research as the research design applied in this study is briefly outlined in the next section (Section 4.5).

4.5 Overview of the Research Design as Applied in this Study

The research design that was found suitable for this study was educational design research. As demonstrated in Figure 4.1, design research is a research design that is aimed at improving educational practice through iterative and systematic review, analysis, design, development, and implementation of an intervention. The intention of this process is to find a solution to a problem, based upon collaboration among researchers and practitioners in real-life settings, leading to design principles or theories (Wang & Hannafin, 2005). In design research, the intent is to design a product or a system, in this case a programme accreditation system. The process involved acquiring data from the users and the potential users. As stated in the introduction, the aim of the research was to improve on an educational practice, namely, programme accreditation. The

research process was carried out in real-life situations, that is, in a tertiary education setting with real-life participants. Relevant documents from real-life activities such as programme accreditation reports were analysed, hence design research fits the enquiry.

The current practice that was considered in this study in order to address the academic puzzle and inform future modes of operation in designing the programme accreditation system was unpacked by answering the research question: *What are the characteristics of an effective programme accreditation system for the Tertiary Education Institutions in Botswana?* Characteristics of an effective programme accreditation system are the current and operational qualities of the system. It is prudent that as the programme accreditation system evolves it is also modern so as to fit in the transforming knowledge economy and thus be adaptable to global society.

The generic design research model (Figure 4.1) was applicable to this study. The problem in context involved practitioners (academics, students, TEC, programme reviewers), the researcher (myself), information obtained from other sources (documentation), and there was collaboration which resulted in a central idea being born, represented by the intersection of the Venn diagrams. The same was applicable for the preliminary investigation, as programme accreditation experts and practitioners were consulted, analysis of other programme accreditation systems conducted and a try-out of the designed prototype gave the practical aspect. The iterative phases of design and analysis using established theoretical constructs (Bannan-Ritland, 2003; Plomp, 2010) refined the problem to approach product quality. The research design is cyclical because the design, analysis, evaluation, and revision of activities are repeated until a satisfying balance between the intended and the product has been achieved (Plomp, 2013).

As a pragmatic paradigm, design research links practice with theory by researching the current practice in order to improve on future practices. Design research is pragmatic because its goals are solving current real-world problems by designing and enacting interventions as well as extending theories and refining design principles (Design-Based Research Collective, 2003; van den Akker 2010). The current real-life problems that prompted this research were the challenges that were experienced during the programme accreditation process of 2009 to 2010 in private TEIs in Botswana as listed in Section 1.3. A shortened version of the challenges as elaborated in Chapter 1 is presented below:

- a) A decision to accredit or not to accredit some programmes that underwent programme review for the purposes of programme accreditation took more than 12 months to be finalised.
- b) Students continued in the programmes that were found not to meet threshold standards.
- c) The institutions were burdened by answering the same type of questions from different teams of programme reviewers.
- d) There was considerable confusion about the distinction between programme accreditation and institutional accreditation during the accreditation process.
- e) There were several variations in the programme accreditation reports produced.
- f) Some self-evaluation reports were not informative.

The above concerns were addressed by answering the research sub-questions, as will be seen in Chapters 5 to 7 of this thesis. The research question and research sub-questions were addressed at different phases, as demonstrated in Figure 4.3.

Various pieces of research (Barab & Squire, 2004; Woodhouse, 2004; Design-based Research Collective, 2003; Shavelson et al., 2003) describe design research as behaving in a way that was found suitable for this study, because it is:

- ❖ *Interventionist* - it involved designing an intervention. The intervention that was designed in this research was a programme accreditation system.
- ❖ *Iterative* - research took place through repeated phases of design, implementation, evaluation, and revision to ensure that the characteristics of a programme accreditation system were identified and developed.
- ❖ *Process-focused* - both the programme accreditation system and its behaviour were understood during implementation.
- ❖ *Utility-oriented* - it aimed to produce usable knowledge for designing the programme accreditation system.
- ❖ *Theory-driven* - theoretical assumptions, which guided the design of the intervention in developing the programme accreditation system, were tested during the process with the intention of developing educational theory through the cyclic design-implementation-evaluation-redesign of the intervention (McKenney, Nieveen, & van den Akker, 2006).

Each research cycle in the development phase had a series of activities, as follows:

1. *Design and development* – Planning and design of each stage was informed by data from the previous cycle. Data was evaluated before application to the next prototype.
2. *Implementation* – the developed prototype was tested by applying the characteristics in a life programme accreditation process. Different experts evaluated the characteristics. Prototype 1 was evaluated by trial testing in the field through application of the characteristics. Users and experts evaluated Prototype 2.
3. *Evaluation* – evaluation included judgement by experts and users so as to assess the quality of the developed prototype.

The need to address the above challenges was prompted by the realisation that, for the programme accreditation system to contribute effectively towards improvement of the quality of education provided to the nation, it had to be improved (developed). The investigation resulted in an output that might benefit nations because application of the characteristics, whether in designing the system or carrying out further research could impact on the quality of the education system.

As stated in Chapter 1, graduates of today are operating in a borderless job market economy. It is important that the country, Botswana, ensures that the education system provided to the learners is internationally competitive. The students would benefit from this research because graduates are no longer prepared for the local markets only, but should also fit in the global society through the spirit of internationalisation. In addition, the product of the study might motivate other researchers to originate studies so as to come up with characteristics of a more effective programme accreditation system in an effort to improve both existing systems and systems yet to be born. This stance is demonstrated in Phase 3 of the design research model as per the principles of design research (Figure 4.3). The characteristics can also be applied in developing or improving different programme accreditation systems. To ensure that the research output is beneficial to practice, prototypes are produced and evaluated to assist in determining the product quality.

4.6 Product Evaluation

Prototyping is seen as a suitable approach in order to reach product quality. The high degree of iteration with formative evaluation of each prototype assisted in identifying inadequacies that

needed to be filled at the end of each research phase in order to improve the final product and address the three quality aspects of validity, practicality and effectiveness (Nieveen, 1999). Results from the evaluations fed into the next prototype until the research output was satisfactory. Summative evaluation was carried out at the end of the research process to determine the quality of the product.

In developing the intervention, focus was maintained using Nieveen's criteria for high quality interventions (2010). This framework assisted in ensuring that the system was logically designed. The practicality element contributed towards guaranteeing usability in the context for which a programme accreditation system was designed, that is, in the tertiary education sector setting. Once designed, the programme accreditation system was evaluated by experts for expected practicality to ascertain usability in the context of the tertiary education sector. The experts were from different fields to ensure that relevant aspects, for example, being inclusive and generic to cater for all learners and all programmes were considered. Details about the experts are presented in Chapter 6 and Chapter 7 of this thesis.

The final quality criterion is effectiveness which again has an expected and an actual aspect. Only the expected effectiveness was determined in this research because the final characteristics were not tested in the field (refer Figure 4.3). These criteria were used throughout the study to ascertain the quality of the product. Although each research phase focussed on at most two quality criteria (Figure 4.3), all criteria were relevant and were assessed to some considerable degree. The quality criteria are discussed in Table 4.2.

Table 4.2: Quality criteria for the programme accreditation system

Criterion	Descriptors
Relevance (content validity)	<p>The design principles or the characteristics of an effective programme accreditation system are necessary and relevant in that they will be used to develop a more effective programme accreditation system which fits in with the contemporary educational developments.</p> <p>The design of the characteristics is based on state-of-the-art (scientific) knowledge in that a research process was followed.</p>
Consistency (construct validity)	The system is 'logically' well-designed.
Practicality	<p>Expected: The design principles or the characteristics of an effective programme accreditation system are expected to be usable in the settings for which they have been designed, that is, in the tertiary education institutions in Botswana.</p> <hr/> <p>Actual: The design principles or the characteristics of an effective programme accreditation system are usable in the settings for which it has been designed, that is, in the tertiary education institutions in Botswana.</p>
Effectiveness	<p>Expected: Using the intervention or the design principles for an effective programme accreditation system is expected to result in desired outcomes.</p> <p>Actual: Using the intervention or the design principles for an effective programme accreditation system will result in desired outcomes, that is, in a more effective programme accreditation system</p>

(Adapted from Nieveen, 2010, p. 94)

Each research phase went through formative evaluation. The different methods of evaluation are as demonstrated in Figure 4.2. The character of each phase with its layers of evaluation are represented in the diagram below (Figure 4.2).

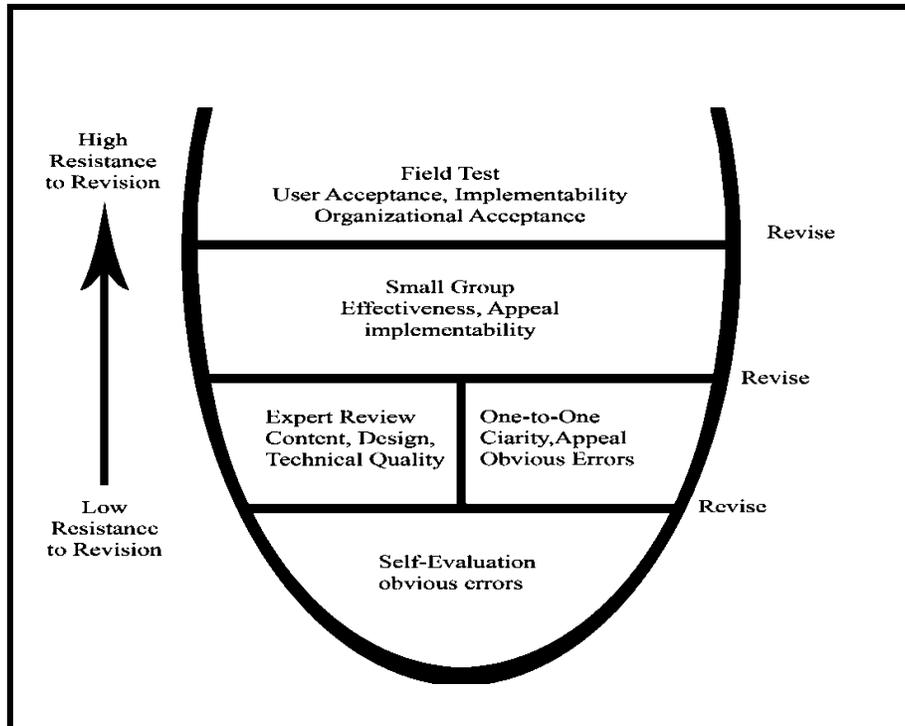


Figure 4.2: Layers of formative evaluation (Tessmer in Plomp 2010, p.28)

The layers of formative evaluation indicate that at the beginning of the research process there was low resistance and as the research progressed resistance increased. Application of the layers of formative evaluation during the study and observations are summarised:

Self-evaluation to eliminate obvious errors - this stage was done on each of the three research phases. Obvious errors were eliminated by going through the data collection instruments and ensuring that there were no errors. Prototypes were checked for errors at each stage. Self-evaluation was part of the research process throughout.

One to-one clarity, appeal, content design and technical quality

- ❖ Critical friends were engaged to ascertain the clarity of the design principles and the prototypes. The programme accreditation system together with guidelines on what to assess were given to these people to check the recommendations against the ideal, also applying their own expertise on what an ideal programme accreditation system would entail. Their recommendations were considered on merit. The critical friends were an institutional administrator, a lecturer, and an accreditation officer. The design principles

were evaluated by two critical friends before being presented; an academic and an accreditation officer mainly to check clarity and technical quality. All the critical friends added value to the research instruments.

- ❖ The output of each cycle was shared with three critical friends to advice mainly on the clarity of the content and the technical quality. At this stage, the critical friends assisted and constructive feedback was obtained.
- ❖ The design principles for the intervention were given to institutional administrators, programme reviewers, TEC employees, and BOTA employees. The objective at this juncture was for the critical friends to check and advice on content design and technical quality.

Small group effectiveness appeal

A group of programme accreditation experts were consulted to evaluate the modified programme accreditation system

The research method as applied in this study is presented in the following section.

4.7 Research Methods

A research design can be likened to an architectural blueprint, a plan for assembling, organising, and interpreting information to its end product. The research was carried out in a tertiary education setting and in this section a diagrammatic representation of the research process as followed in this study is presented (Figure 4.3). The process that was followed to select the research sites (Sub-section 4.7.1) and the sampling approach used for choosing participants for each cycle then follows (Sub-section 4.7.2). The data collection and analysis strategies are outlined (Sub-section 4.7.3).

As stated in Section 4.5, design research was used to solve the intellectual puzzle addressed in this study. The methodology that was followed is briefly presented in this section. The detailed activities that were carried out will be presented in chapters 5 to 7.

The literature review was considered critical throughout the study because it informed the enquiry of contemporary issues that are in the tertiary education sector. The current trends that might either bring challenges or improvements in tertiary education were considered when designing the programme accreditation system. Some of the top trends as listed in the “21st century trends

for higher education: 2008-2009” that should be considered in higher education are globalisation, technical and information literacy, evolution of teaching and learning, diversification, and internationalisation/ student mobility (Wilen-Daugenti & Mckee, 2008, p.1). These current issues underscore the need to have an effective programme accreditation system in Botswana. The understanding is that an effective programme accreditation system will help institutions to have consideration of the current trends in education in order to ensure that the graduates fit in the global economy.

The research output is the heuristic principles, the characteristics of an effective programme accreditation system meant to support designers in developing programme accreditation systems. However, success in implementing the characteristics to design a programme accreditation system is not guaranteed, the principles are a guide that provides substantive knowledge (Plomp, 2010) in developing programme accreditation systems.

Following (Figure 4.3) is a diagrammatic representation of the research process.

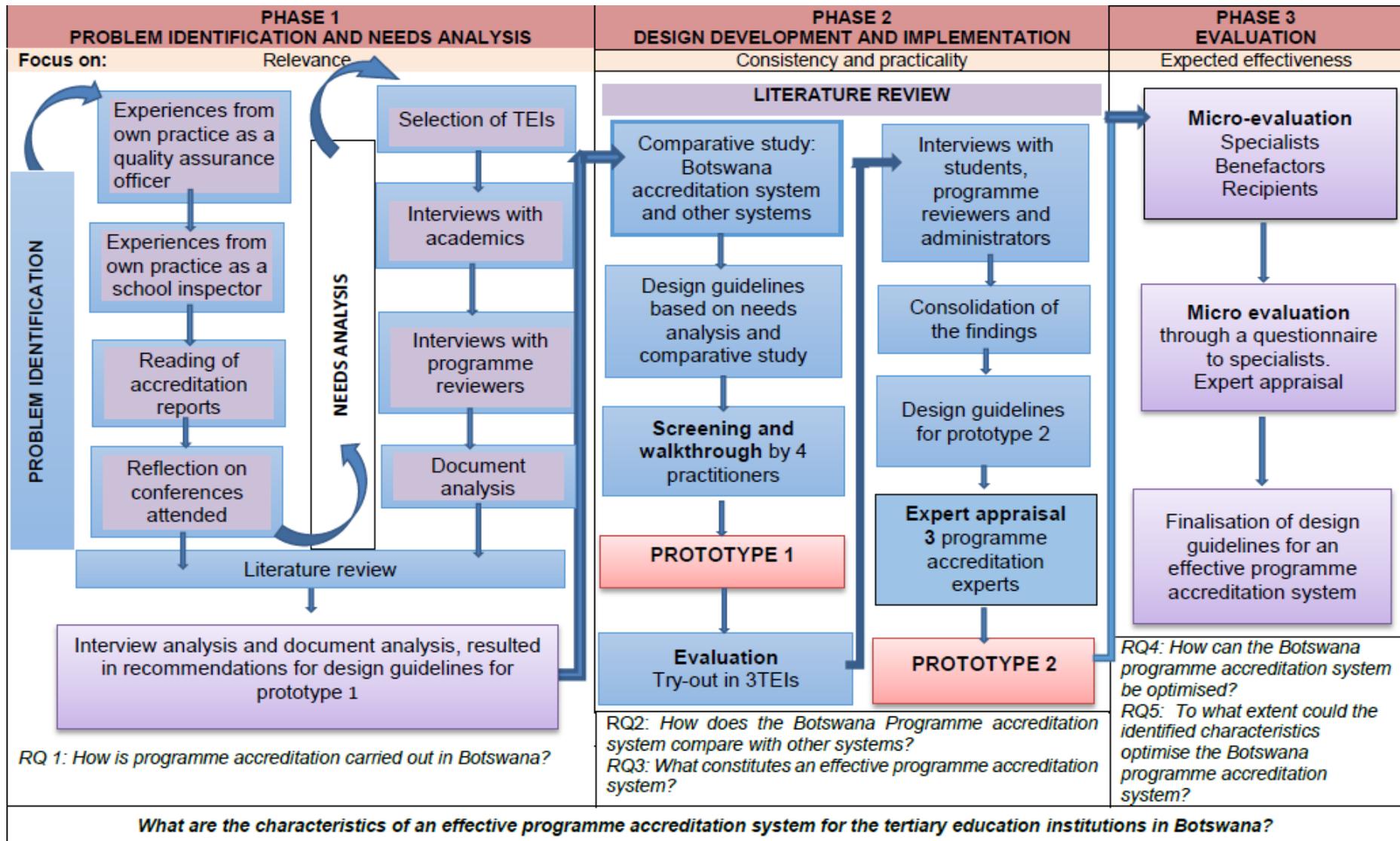


Figure 4.3: Design research model for the development of a programme accreditation system Adapted from Dowse (in Plomp & Nieveen, 2013, p. 41)

In the following sub-sections, a presentation is made about how sites for data collection were selected (Sub-section 4.7.1) and participants sampled (Sub-section 4.7.2). The section (Section 4.7) ends with data collection and analysis strategies, indicating that data was collected from various sources (Sub-section 4.7.3).

4.7.1 Selection of sites

The study was conducted in three phases, namely: problem identification and needs analysis, design development, and implementation, followed by evaluation (Figure 4.3). Participants for the study were selected for each phase based on the following parameters:

Table 4.3: Selection of sites

Parameters	Possible Sources/Opportunities	Phase
Settings	Tertiary Education Institutions Tertiary Education Council Industry	1-3
Actors	Academics Administrators Programme Reviewers Students TEC and BOTA Staff	1-3
Events	Meetings	1-3
Methods	Interviews Document Analysis Questionnaires	1-3

The sites were selected as tertiary education setting guided by the objective of the research because the context of the study was the tertiary education sector. Industry people were programme reviewers who had carried out programme accreditation for the TEC. The guiding objective was to have people who participated in the tertiary education programme accreditation activity in Botswana, following the TEC criteria and guidelines for programme accreditation. Thus, purposive sampling was employed. The research sites were all within reach and all activities on programme accreditation carried out on the main campuses, even where the institutions had satellite campuses.

4.7.2 Sample of participants

The study analysed the programme accreditation system in tertiary education therefore participants were associated with the tertiary education sector. Some participants were chosen because of their direct involvement in the teaching and learning in TEIs. These included academics and institutional administrators. Other participants were chosen because of their participation in the programme accreditation process, either as educationist or as people active in industry in the same area of study. Involvement in the study gave participants a chance to reflect on the programme accreditation process and suggest ways of improving it.

Since design research is conducted in phases, participants were selected for each phase using purposive sampling to ensure they had the necessary experience in programme accreditation and were thus in a position to provide relevant information (Bless, Higson-Smith & Kagee, 2006; Creswell & Plano Clark, 2007). The plan was to have students' interviews for the first cycle but this was not possible because the 2009/10 cohort had all graduated during the data collection period of 2012, and efforts to locate them proved futile. Students' interviews were hence held in the second phase. The programme accreditation experts were also purposively selected to ensure that the contacted prospective participants had experienced the programme accreditation process, either in the Botswana setting or at a different location. Efforts were made to include experts who participated in different settings to try and add international first-hand experience to the study.

In sampling the participants care was taken to ensure that all the aspects of quality in tertiary education were considered. In their study on quality assurance and accreditation in higher education in Sub-Saharan Africa, Obekula and Shabani (2007) advise that in a tertiary education setting the input, process, and output should be considered when talking about quality. A closer look at Obekula and Shabani's contribution (Table 4.4) indicates that a programme accreditation system engages with all the areas listed in the table. The input is actually the basis of an education sector; the students, the human, and physical resources all form the basis for a TEI. The elements under process inform the structure of the programme accreditation system and therefore could not be ignored. The output gives the graduate profile and the purpose of doing research. Considering input, process, and output are said to result in equity, efficiency, effectiveness, and relevance of the education process, in this case, of the programme accreditation system.

Table 4.4: Dimensions of quality in higher education

INPUT	PROCESS	OUTPUT
<ul style="list-style-type: none"> • Students • Teachers • Managers • curricular facilities • finance • instructional materials • other resources 	<ul style="list-style-type: none"> • teaching and learning processes • research • resource utilisation • administration • leadership • community participation • management 	<ul style="list-style-type: none"> • skilled and employable graduates • responsible citizens • economic and social development • production of new knowledge.
Equity, efficiency, effectiveness and relevance		

Source: Obekula and Shabani (2007, p. 190)

The dimensions of quality in higher education as listed in Table 4.4 indicate the input and the process in the education system, and all these are considered during the programme accreditation process. The output indicates the benefits of graduating students from accredited programmes. The suggestion (Table 4.4) resonates well with the conceptual framework of the study (Figure 3.4).

4.7.3 Data collection and analysis strategies

Data were collected from various sources using different instruments (Cobb et al., 2003; Shavelson et al., 2003; Design Based Research Collective, 2003) to ensure improvement on the validity and reliability of the research output (Wang & Hannafin, 2005). In this instance, different data collection instruments were prepared for different informants. The instruments included questionnaires and oral interview protocols (Creswell et al., 2007). Table 4.5 presents a summary of the research questions and accompanying research instruments as employed in this study.

Table 4.5: Research questions and instruments

	Research Question	Phase	Instruments
1	<i>Overall research question</i> What are the characteristics of an effective programme accreditation system for the TEIs in Botswana?	1,2,3,	Literature review, document analysis, interviews
A	RQ1: How is programme accreditation carried out in Botswana?	1	Literature review, document analysis, and interviews
B	RQ 2: How does the Botswana Programme accreditation system compare with other systems? RQ 3: What constitutes an effective programme accreditation system?	2	Literature review, interviews
C	RQ 4: How can the Botswana programme accreditation system be optimised? RQ5: To what extent could the identified characteristics optimise the Botswana programme accreditation system?	2,3	Literature review, mini workshops, questionnaires, expert review.

Design research uses both quantitative and qualitative data (Collins et al., 2004). Miles and Huberman (1994) explain that both numbers and words are needed if we are to understand the world. Quantitative and qualitative data strengthen each other by providing richer details, confirmation or corroboration of each other and providing fresh insights into problems.

Qualitative data adopted the approach suggested by Miles and Huberman (1994) of data reduction, data display, and conclusion or drawing verification. The *ATLAS.ti* software followed the principles suggested by Miles and Huberman (1994) as follows:

- a) Code field notes drawn from observations, interviews or document reviews.
- b) Note personal reflections or other comments in the margin.
- c) Sort and sift through to identify similar phrases, relationships between variables, patterns, themes, distinct differences between subgroups, and common sequences.
- d) Identify patterns and processes, commonalities and differences, and take them out to the field in the next wave of data collection.
- e) Elaborate the generalisations that cover the consistencies discerned from the database.

- f) Examine generalisations in light of a formalised body of knowledge in the form of constructs or theories.
- g) Continue the process of data collection and analysis until the regularities emerge.

The computer was used to perform all of the above steps and an interpretation made per cycle, as reported in chapters 5 to 7.

4.8 The Role of the Researcher

As a researcher, my mind was kept active throughout the research enquiry, especially during any discussion on programme accreditation or during the programme accreditation process, whether it was a formal data collection period or not. I was therefore very conscious of the need to be objective in order to sieve the relevant constructs and avoid conflicts within the same study. My role in this stance was to understand the multiple social constructions of meaning and knowledge within different settings.

As a full-time employee of the TEC, with hands-on experience in the programme accreditation process, I had reasonable access to the TEIs and was also able to schedule the programme accreditation process and gather data. In addition, I had attended several quality assurance conferences at which the programme accreditation process was discussed, hence a reflection on the discussions and what was happening in the area of programme accreditation became a continuing process. As per the principles of design research, I had multiple roles of a researcher, designer, evaluator, and implementer (Plomp, 2010), which could have both positive and negative implications for the research. The implications needed to be managed and guarded to avoid pollution of the enquiry.

Some of the advantages of being researcher, designer, and evaluator were that I was able to reflect on the practice. The major disadvantage was that obvious mistakes happened even during the research process, while there was no window for immediate remedial action. To avoid conflict of interest and bias, the guiding principles for scientific research suggested by Shavelson and Towne (2002) were applied. These are as follows:

Pose significant questions that can be investigated - the main research question, posited as: *What are the characteristics of an effective programme accreditation system for the Tertiary Education Institutions in Botswana?* followed the structure of the design research questions as suggested by Plomp (2010, p.11). The sub-questions that helped to answer the research question were also relevant and each referred to one or more of the quality criteria for good interventions (see Table 4.2).

Link research to relevant theory - literature review was conducted and the principles of systems theory were applied by focusing on the whole and the interrelationships amongst the parts of the constituents. Both algorithmic and non-algorithmic (heuristic) procedures proved to be powerful in obtaining results. The systems theory method models complex entities created by multiple interaction of components, abstracting from certain details of structure and component, and concentrating on the dynamics that define the characteristic functions, properties, and relationships that are external or internal to the system (Laszlo & Krippner, 1998). The areas of commitment that were evident in this research were:

- ❖ *Critical awareness* - the assumptions, the strengths, and the weaknesses of the output were analysed.
- ❖ *Social awareness* - great care was taken to be aware of the institutional, organisational, and individual climate at any given time.
- ❖ *Complementarism at methodology level* - both quantitative and qualitative data were employed during the research enquiry and the triangulation approach was used to reach conclusion at each cycle.
- ❖ *Complementarism at theory level* - different theories were given respect and those that were relevant for the enquiry were applied in a complementary manner.
- ❖ *Human emancipation* - all the people involved in the research were treated with high esteem (Laszlo & Krippner, 1998, p.16).

Use methods that permit direct investigation of the question - the questionnaire approach and the interview approach, as well as document analysis allowed direct investigation of the research problem.

Provide a coherent and explicit chain of reasoning - each part of the research design was given equal importance as would be seen in Chapters 5 to 7 (Kratwohl, 1998).

Replicate and generalise across studies - several studies were consulted through literature review.

Disclose research to encourage professional scrutiny and critique - practitioners, experts and other researchers were used as critical friends throughout the process.

Validity and reliability of data and instruments - were taken into account using the evaluation criteria (refer Figure 4.2)

There was an interactive process of discussion throughout the data collection phase with different viewpoints emerging. In this case, the concept of objectivity and confirmability were

considered (Guba & Lincoln, 1989). The concept of objectivity means that the research output is based on scientific fact and proof, rather than the researcher's perception of the results. Confirmability proves that the research outcome is purely based on facts, and is unbiased. The results of the discussion were confirmed by referring to other sources of information and applying the triangulation approach. An assumption was made that data, interpretations, and outcomes are rooted in contexts and research participants did not manufacture information, but that data can be tracked to its sources and the logic used to assemble the interpretations can be made explicit in the narrative (Mertens, 1998).

It is critical to point out that real-life settings had both advantages and disadvantages to the research process. The real-world settings brought about real-world complications and experiences that needed to be addressed (Plomp, 2010). Through visiting institutions on a different role as a researcher, professionalism and managing relationships as well as objectivity were dominant throughout the proceedings.

The above situation was handled by using the advice given by some experienced scholars that the researcher should be adaptable and prepared to take different roles like designer, advisor, and facilitator, without losing sight of their primary role as researcher, be tolerant, and allow the study to be influenced, in part, by the needs and wishes of the partners (McKenney, Nieveen, & van den Akker, 2006). The adaptability mind-set required understanding of the research process and capability of organising the research, communicating, and articulating views and requirements (Guba & Lincoln, 1989). All the characteristics enunciated above were comfortably covered, therefore the research output was not affected.

The following reflections came to mind during the whole research process:

As a former mathematics teacher (once a teacher always a teacher), I have always considered myself a quantitative researcher, here I am, indulging in interviews. This is so exciting because I can see people's emotions, reactions and expressions and I am able to ask for explanations to get a deeper understanding, yes, I am learning something. I realised I made errors, and this made me uneasy but had to immediately remember that I was a researcher. Some mistakes were embarrassing, and people kept the information to themselves! Mh, research. What an eye opener. (Research reflection).

The above reflection attests to the fact that some professional development resulted from the research, which should be the case. In addition, collaboration between the researcher and

practitioners increased the chance that the intervention would become practical and relevant for the educational context, which also increased the probability of a successful implementation and adaptation of the research output (Plomp, 2010).

4.9 Ethical Considerations

In accordance with international best practice, research should be conducted to the highest professional and ethical standards from conception of the research to interpretation of data and presentation of the findings. The University of Pretoria has thus stipulated strict value statements for research ethics and integrity that should be followed in conducting research from beginning to end. Clearance to conduct this study was therefore received from the Ethics Committee of the Faculty of Education at the University (Ethical clearance: SM 12/01/04, Appendix A).

Because this research was conducted in Botswana, the research clearance at the South African University gave way for an application of a research permit in Botswana in line with the national research policy. Though Botswana has adopted an open research policy and encourages it, all research is subject to careful evaluation with priority given to that which will benefit the nation being cognisant of the qualifications, references, institutional, and financial support of the researcher as well as the soundness of the research proposal (Republic of Botswana, 2011b). A research permit was therefore granted by the Ministry of Education and Skills Development in Botswana (Appendix B).

Permission to gather data and use the programme accreditation guidelines and literature within the TEC and within institutions was obtained from the executive secretary of the tertiary education council as the custodian of the tertiary education programme accreditation guidelines and the supervisor of the tertiary education institutions. Thereafter, permission was granted by the managements of the TEIs purposively sampled to approach different possible research participants.

In order to adhere to the obligation of respect for participants' rights and integrity, each was given a briefing letter about the research, outlining the focus of the study as well as its expected outcomes. Those who agreed to participate were asked to sign a consent form. Any further clarification about the research was provided at the time of administering the questionnaire or at the start of the interview session. Oral interview participants were requested to give permission for recording their voices using a digital voice recorder during the interview session. For transparency purposes, the oral interview participants were given a transcribed copy of the interview to ascertain correctness of the captured information. Some

participants however indicated their trust of the researcher and therefore gave permission to continue without reading the transcribed interviews due to their tight schedules.

All the participants were made aware of their right to withdraw from the study at any stage if they did not wish to participate. Their names were protected and instead pseudonyms were assigned. Great care was taken to follow the research ethic's guidelines to ensure credibility of the research.

4.10 Conclusion

In this chapter, the research design for the study was introduced. Specific emphasis was on the design research methodology reasoning out the choice of the research design as educational design research. The choice of the research design was based on the intention of the study, that is, to develop an educational intervention to a problem, where there are no or only a few validated principles available to structure and support the design and development activities. Detailed presentation of the methodology will be done in Chapters 5 to 7 following the principles of educational design research. The next chapter, Chapter 5, presents the preliminary phase of the study.



Chapter 5

Preliminary Phase: Problem Identification and Needs Analysis

5.1 Introduction

This chapter presents the results of the first phase of the study which Plomp (2010, 2013) refers to as the preliminary phase. The study has three design research phases, preliminary, prototyping, and assessment. The preliminary phase presents the *problem identification and needs analysis*, the latter examining the current situation by finding out “perceptions of stakeholders on the current situation - what works well, what should be changed - and the features of a more desirable situation” (Nieveen & Folmer, 2013, p.154). The research focus for this phase is to address research sub-question 1: “*How is programme accreditation carried out in Botswana?*” To address this question data was collected through structured interviews and document analysis. In addition, reference was made to the results of a parallel study that was carried out to inform the internal operations of the Tertiary Education Council (TEC).

The design phase that informed Chapter 5 is as represented in the design research model for this study (Figure 4.3). In this chapter, the research design and methods that were followed for the first phase of the research are presented (Section 5.2) followed by the findings that resulted from data collection and analysis reported under 9 subheadings (Section 5.3). The identified shortcomings are reported in Section 5.4. A conclusion to the chapter follows in Section 5.5.

5.2 Research Design and Methods for the Preliminary Phase

The intent of the research sub-question: *How is programme accreditation carried out in Botswana?* was to determine the status of the programme accreditation system used in Tertiary Education Institutions (TEIs) in Botswana in order to identify shortcomings that ought to be removed. The study concentrated on the programme accreditation process from 2008 to 2012. The period marked the first two cycles of the programme accreditation process in private TEIs. The year 2008 was a preparatory year for the accreditation process whereby the TEIs, the programme reviewers, and the TEC staff went through capacity building to prepare for the programme accreditation process. As stated in the introduction to the study (Chapter

1), the programme accreditation system was introduced in 2008 but as of January 2011, the year of inception of this study, no revision of the programme accreditation process had been done.

The status of the existing Botswana programme accreditation system was established through the research that is reported in this chapter. The answers to the first research sub-question opened “doors to benchmarking [by providing the basis for comparing the Botswana programme accreditation system with other systems] thereby learning how they achieved excellence and then setting out to match or even surpass it” (Omachunu & Ross, 2004, p. 141). Thus, Botswana would learn how other systems gained excellence in the programme accreditation system to avoid repetition of the mistakes that had already occurred. A hybrid of the Botswana programme accreditation system and other systems would supposedly improve on the current practices, resulting in a more effective one. The anticipation is that an improved programme accreditation system would contribute towards improvement in the quality of education provided to the nation.

This section (Section 5.2), presents the research design and methods for the preliminary phase under 5 sub-headings: the research design (Sub-section 5.2.1), sampling (Sub-section 5.2.2), quality criteria (Sub-section 5.2.3), data collection and instruments (Sub-section 5.2.4), and data analysis (Sub-section 5.2.5).

5.2.1 Research design

To address the research sub-question, data was collected through interviews and document analysis as expounded in Chapter 4 Section 4.7. For this phase of the study, the research population were people who had been involved in the programme accreditation process of TEC between 2009 and 2010. Interviews were conducted on academics and programme reviewers. Another data source was programme accreditation documents from the TEC’s archives. The data collection instruments were interview schedule for academics (Appendix C), interview schedule for programme reviewers (Appendix D), and programme accreditation reports checklist (Appendix E).

In addition, reference was made to a parallel study conducted to inform the programme accreditation practice in 2012. Data for this parallel study was collected through a needs analysis questionnaire administered to lecturers who participated in the programme accreditation process of 2009/2010. The results of the study were used to improve on the programme accreditation process and were considered relevant to this study as the purpose of this research is to improve on the current programme accreditation practice. Instead of

duplicating the research, applicable data was triangulated with data from this study as reported later on.

As demonstrated in Figure 4.3 (Chapter 4) the problem under research was identified mainly through experiences in the Botswana programme accreditation process signalled by shortcomings that were evident (Chapter 1, Section 1.3), also drawing on from the international conferences attended and the literature review. Research sub-question 1, 'How is programme accreditation carried out in Botswana?' was meant to get views of people directly involved in the accreditation process. The expectation was that the research informants would report on both the strengths and the weaknesses of the accreditation process. Data to corroborate or contradict the assertion that there were challenges in the accreditation process was collected from the academics and programme reviewers who participated in the first cycle of the Botswana programme accreditation process, thereby establishing the relevance of the enquiry. Analysis of the documents; the self-evaluation reports, the programme accreditation reports, and the programme accreditation regulations provided data for this phase of the research. In addition, the report of the parallel study, 'Report on the academics' views on the first cycle of programme accreditation' provided relevant information.

The sampling process that was applied to get appropriate respondents is presented in the following sub-section.

5.2.2 Sampling

As stated in the overview to Section 5.2, data was collected from various sources; different samples were drawn from the academics and administrators in the appropriate Tertiary Education Institutions (TEIs), programme reviewers, and a collection of documents related to programme accreditation. To maximise the research output, purposive sampling was used to obtain the respondents. Mertens (2005) states that such a method could be defended on the grounds that the cases selected were not based on the recommendations from the respondents (in this case, from the institutions) for the purposes of putting them (the institution) in a good light, but rather to supply the much-needed information.

Institutions

The Botswana tertiary education system consists of public institutions and private institutions (Chapter 2, Section 2.3). Programme accreditation was carried out in private TEIs following the dictates of the law governing the operation of the TEC as stated in the Tertiary Education Act of 1999 (Republic of Botswana). Consequently, the informants being academics and

students could only be obtained from the private institutions. As of 2009/2010 there were seven registered private TEIs in Botswana (refer Chapter 2, Table 2.2). Out of the seven institutions, six underwent the programme accreditation process for at least one programme on offer. The seventh institution could not submit any programme for accreditation because it had registered late in the year, therefore the programmes on offer had not reached a maturity time of at least one year before being taken through the programme accreditation process (Section 2.6). The sixth institution is a one-programme offering institution and none of the academics on site participated in the programme accreditation process, therefore it was not possible to get respondents from this particular institution. As a result, only five institutions were eligible to participate in the first phase of the study.

Academics

Group interviews for academics who spearheaded the accreditation process were conducted in two institutions. It was not possible to select interviewees from the other three institutions, however, regardless of the seemingly disappointing scenario, the responses from the two institutions yielded similar results. In addition, more interviews were conducted in the subsequent phases to unearth any information that could have been left out during this data collection phase. The institutions were of different sizes in terms of the diversity of programmes offered and the students' population. Table 5.1 shows the group interview participants.

Table 5.1: Interview participants from institutions for Phase 1

Institution	Number of participants	Description
1 (18/06/2012)	7	The institution specialised in information technology programmes, therefore the academics were information technology lectures at different levels and different specialisations. There were two heads of department, one quality assurance manager and other participants managed different sections at lower levels. Though there were seven participants, one participant was quiet throughout the interview.
2 (22/06/2012)	11	The institution specialised in creative technology. Heads of department were in charge of the programme accreditation process therefore informants were from different programmes and different offices: business, information technology, creative technology, human resource, finance manager, quality assurance manager, and academic manager.

Programme reviewers

The TEC had developed a database for trained programme reviewers. Purposive sampling was used to make sure that the subjects for the interviews were those people who had participated in the 2009/10 programme accreditation process. The practice was that the programme review team should be made up of people from academia and industry. The arrangement of making a programme review team with members from academia and members from industry was to ensure that relevant people assessed whether the programme had taken care of both the academic requirements and the labour market needs. The industry wing was included to take care of the market needs and the contemporary issues surrounding a particular programme. It was critical that the needs of the job market were considered during the programme accreditation process to ensure that graduates could fit within the employment system and optimistically be able to produce as per the market needs.

Programme reviewers who reviewed different programmes were purposively sampled to try and cover all the fields of study that went through programme accreditation. A group interview was conducted with programme reviewers who reviewed different programmes. The reviewers were sampled because they reviewed more than three programmes each during the

programme review cycle of 2009/10. They were considered to be experienced programme reviewers. The programme reviews by the programme reviewers were on the following fields of study: information technology, business administration, marketing management, real estate management, safety management, and visual and performing arts. The academic qualifications of the programme reviewers for this cycle ranged from first degree to PhD, with varying specialisations.

One of the key requirements to qualify as a programme reviewer was that the candidate should have a qualification higher than the programme they were contracted to review. However, some exceptions were made whereby the TEC could not get people with requisite qualifications. In such instances, the TEC made exemptions to allow people with the same level of qualification as the programme under review, to review it. Prudence was exercised to make sure that the programme reviewers had some practical experience in the programme. A minimum of five years' work experience in addition to other requirements was considered adequate for such applicants to be engaged.

Documents

The programme accreditation reports that were studied were sampled from the 2009/10 batch. The reports were purposively sampled applying the criteria that the reports should be from different institutions for different programmes authored by different programme reviewers. Altogether 20 reports were sampled. Table 5.2 shows the reports that were analysed. The number in brackets indicates the number available for the period 2009/10. The table column *reviewer's credentials* shows the level of education of the programme reviewers.

Table 5.2: Programme accreditation reports analysed

Institution	Area of study	Number of programmes	Date of the visit	Reviewers' credentials
A	Theology	1(1)	Report dated 22/01/2010	University professors and 1 PhD
B	Creative Technology	4(12)	23-25/11/2009	MSc, BA, MA, PhD
C	Computing	9(9)	5-9/11/2009	PhD, MSc, BA,
D	Human Resource	2(5)	18-20/01/2010	MA, MA, BA, MBA
E	Real Estate	2(4)	16-18/02/10	PhD, MBA, BA, MA
F	Electronics	2(3)	18-20/01/2010	PhD, PhD, MTech, MSc
Total		20(34)		

Legend: MTech- Master of Technology

The percentage of reports analysed ranged from 33% to 100%. Institution A had only one report, institution B had 12 reports out of which only four were analysed. The four reports sampled were authored by four different teams. The decision to concentrate on only four reports was driven by the fact that pre-analysis revealed that the reports communicated almost the same message. All the nine reports for institution C were reviewed because initial analysis indicated that the reports were a duplication of each other, therefore the reason behind had to be ascertained. The contents of the reports signified three programmes. One programme had exit points labelled 'associate diploma', 'honours diploma', 'advanced diploma', 'professional diploma', and 'professional diploma honours'. The nomenclature represents one professional diploma programme with five exit points, although the programmes were treated as five different programmes. Another programme was a 'first degree programme' while the remaining three programmes followed the above nomenclature up to 'honours diploma', therefore ending up with three programmes. The remaining sample programmes for institutions D, E, and F were considered sufficiently representative for the sample of accreditation reports under review.

5.2.3 Quality criteria

The quality criteria for this research are as presented in Table 4.2. However, the preliminary phase focussed on relevance (*content validity*) to ensure that the system and its design is based on state-of-the-art (scientific) knowledge which was achieved through interviews and document analysis. The answers to the research question were arrived at following a scientific process of data collection and analysis using real life situations as data sources. In this way, the programme accreditation system would be clearly connected, in form and purpose, to the programmes offered in TEIs.

Academics and programme reviewers who were interviewed had been directly involved in the programme accreditation process. The purpose of the interview was explained to them, that it was to improve on the existing programme accreditation system. As professionals, their responses were aimed at providing relevant information for accreditation system to Botswana. Document analysis also ensured that relevant data was collected. The data mentioned were needed to identify a first set of characteristics of the programme accreditation system which is necessary for developing a more effective programme accreditation system for Botswana. The structure of the data collection instruments (Appendices C, D, and E) and literature review (Chapter 3) ensured that the collected data would be relevant to improvement of the programme accreditation system.

5.2.4 Data collection instruments

In this sub-section, the instruments that were used for data collection to inform the preliminary phase are presented. Interview schedules and document analysis guidelines were used to collect data.

Interviews for academics

The schedule for interviewing *academics* (see Appendix C for full schedule) included questions aimed at finding out:

- 1) The degree of the academic's participation in the programme accreditation process right from the preparation stage.
- 2) The experience gained by academics during the production of the self-evaluation report.
- 3) The quality and relevance of the specific requirements and criteria for programme accreditation.
- 4) The value of the evidence that the institution had to prepare.
- 5) The experience during the programme accreditation visit by the programme reviewers.
- 6) The professionalism of the programme review team.
- 7) The expertise of the programme review team.

Interviews for the programme review team

Schedule for the *programme review team* interview (see Appendix D for full schedule) included examining:

- 1) The impact of the pre-accreditation workshop versus the assignment of programme accreditation.
- 2) What was done best and what needs to be done to make improvements.
- 3) The quality of the self-evaluation report.
- 4) The programme accreditation specific requirements and criteria for programme accreditation.
- 5) The programme accreditation process.
- 6) The composition of the programme review team.
- 7) The ethos at the institution during the programme accreditation process.

Document analysis

Document analysis followed a schedule (see Appendix E) to gather data from both the self-evaluation reports and the programme accreditation reports (from reviewers). The self-evaluation reports followed the structure of the programme accreditation standards (Appendix G) while the programme accreditation reports followed the structure recommended by TEC (Appendix H). The following norms provided a guide for the analysis:

- 1) The table of contents to get the structure of the report.
- 2) Contents of the executive summary of the report.
- 3) The contents of the report per specific requirement and criteria for programme accreditation.
- 4) The recommendations made by the programme reviewers to check whether they flowed from the body of the report.
- 5) The general quality and presentation of the report.

The reports were analysed and any special features noted.

The questionnaire

The questionnaire for the parallel study *Academics' views on the first cycle of programme accreditation* was divided into six sections. The questionnaire section headings, section descriptors and number of items per section are presented in Table 5.3.

Table 5.3: Questionnaire for the academic views on the first cycle of programme accreditation

Section	Descriptor	Number of Items
The Programme Accreditation System	The instruments and the procedures that were employed during the process of programme accreditation.	21
Programme Accreditation and Policy	The way the whole programme accreditation system should be implemented following guidelines set by the authorities.	18
The Self-Evaluation Report	A report that is produced by the institution prior to the accreditation visit. It forms the basis for accreditation.	10
The Programme Review Team	The team that carries out the actual accreditation process by evaluating the claims made in the self-evaluation report and seeking evidence to ascertain the correctness of the claims in addition to assessing the quality assurance measures employed to deliver the programme	11
School Readiness	To ascertain the preparedness of the institution for the accreditation process.	4
Accreditation Results	Accreditation results refer to the outcome of the accreditation process. The programme review team base their recommendation on the number and weight of the evaluation criteria accomplished.	7

5.2.5 Data analysis

In this sub-section, a brief overview about the data analysis approach, the findings, and conclusions from Phase 1 are presented. The interviews were digitally recorded and transcribed in preparation for analysis through ATLAS.ti. Documents were analysed using the data analysis structure of data reduction, data display and conclusion, drawing and verification (Miles & Huberman, 1994). The procedures that were followed are as presented in Chapter 4, Section 4.4 of this study.

The interviews were analysed using the grounded theory method, which Saldana (2009) terms 'pragmatic eclecticism'. This realistic and practical diversity allowed the researcher to be open during the initial data collection stage to determine the most appropriate methods of coding. The qualitative data analysis tool *ATLAS.ti* was used to analyse the data by using the initial coding under the first phase coding, the initial coding also being referred to as 'open coding'. The open coding approach involves marking the key points with a series of codes then grouping them into concepts in order to generate themes. As an acronym, Friese (2012, p.228) calls this "the method of computer assisted NCT analysis: **N**oticing things, **C**ollecting things and **T**hinking about things", a process which proved to be cyclic, engaging both descriptive level analysis and conceptual level analysis. One hermeneutic⁷ unit was created for data analysis in this phase.

The parallel study, 'Academics' views on the first cycle of programme accreditation' was carried out through a questionnaire. The questionnaire was made up of six sections (Table 5.3) each with a 5-point Likert scale response options. The options ranged from strongly agree (SA) to strongly disagree (SD). Data was analysed using the IBM SPSS Statistics (formerly known as Statistical Package for Social Scientists) version 19. Factor analysis was carried out to collapse a large number of variables (71 items) conducted on a purposive sampling of lecturers (n=107) into a few factors. Given that the number of factors that resulted from the analysis were not determined beforehand, neither were the variables associated with each factor pre- defined, data crunching was done using Exploratory Factor Analysis (Kremelberg, 2011). Principal Component Analysis method was found suitable for factor extraction (because exploratory factor analysis was used). To improve on the differentiation of the factor loadings by making the small factor loadings smaller and the large factor loadings larger, orthogonal rotation namely Varimax rotation with Kaiser Normalisation was applied. The

⁷ An intelligent container that keeps track of all the data, a project file (Friese, 2012)

Cronbach's Alpha coefficient based on standardised items yielded .83, suggesting that the items had relatively high internal consistency because a reliability coefficient of .70 or higher is considered 'acceptable' in most social science research situations (Field, 2005). Extreme multicollinearity and singularities were therefore ruled out (Meyers, Gamst & Guarino, 2006). Following are the findings from the interviews, document analysis, and background study that used questionnaires.

5.3 Findings from the Preliminary Phase

Following is a discussion of the findings with the headings based on Table 5.4. Each narrative ends with a summary of the shortcomings presented in the form of proposals for improvement to the programme accreditation system. Data were considered simultaneously by applying the triangulation principle to assist in establishing trustworthiness of the findings. The findings encompassed themes from interviews, themes arising from document analysis, and factors derived from the questionnaire. The themes and factors were rationalised as presented Table 5.4.

Table 5.4: Themes and factors of the programme accreditation system

Themes from document analysis	Themes from interview analysis	Factors from questionnaire analysis
Programme accreditation reports	Programme accreditation or institutional accreditation	Accreditation and policy.
Accreditation criteria	Capacity building	
Accreditation recommendations		
Accreditation visit		
Self-evaluation report	Self-evaluation report	Self-evaluation report
Programme review team	Reviewers' expertise	

The discussion is presented under 8 subheadings: programme accreditation and policy (Sub-section 5.3.1), programme accreditation requirements and criteria (Sub-section 5.3.2), self-evaluation report (Sub-section 5.3.3), programme accreditation site-visit (Sub-section 5.3.4), programme accreditation report (Sub-section 5.3.5), programme accreditation recommendations (Sub-section 5.3.6), programme review team (Sub-section 5.3.7), and capacity building (Sub-section 5.3.8).

5.3.1 Programme accreditation and policy

The theme, programme accreditation and policy covers the factors that emerged from questionnaire analysis.

Findings

Botswana aspires to compete in the globalised economy of the 21st century. In this light, the national vision, Vision 2016 (Republic of Botswana, 1997), the Tertiary Education Act (Republic of Botswana, 1999), the National Human Resource Development Strategy, 2009-2022 (Republic of Botswana, 2009), and the Tertiary Education Policy (Republic of Botswana, 2008), are some of the major policy documents that were developed to guide the education landscape and education quality in Botswana. All these policy documents emphasise the need to monitor and evaluate the quality of education provided to the nation. Issues of curriculum relevance and the imperative to develop programmes that respond to the current market needs are at the forefront.

One of the policy documents used during programme accreditation relates to accreditation regulations, however, a discrepancy was noticed during document analysis. The regulations were entitled 'accreditation of Private Tertiary Institutions regulations', therefore at a glance the title implies institutional accreditation. The foreword of the regulations talks about institutional accreditation then programme accreditation. Possibly, the seemingly confusing title and foreword are meant to stress that the guidelines are for accrediting programmes within the institutions, however, the title is not communicating appropriately.

The first pages of the booklet are accreditation regulations after which are four schedules. The first schedule presents application forms for programme accreditation and guidance notes for the applicant. The application forms are clearly for programme accreditation, beginning with institutional data for the purposes of identification then a list of programmes that the institution need accredited. Schedule 2 is a breakdown of the fees payable for programme accreditation; Schedule 3 presents the specific requirements and criteria for accreditation; while Schedule 4 gives the indicative requirements for qualifications to be eligible for specific titles. Within the guidelines, there is mention of institutional accreditation and programme accreditation, and reference to an 'accredited institution' (TEC, 2008, p.C663). However, the quality requirements and criteria are crafted for programme accreditation.

Programme accreditation is meant to concentrate on the delivery and management of the programme. The naming in the accreditation regulations already creates inadequacy in the accreditation system by making room for confusion as to whether the regulations are for

programme accreditation or institutional accreditation. There were reported instances when it was not clear whether the programme reviewers were doing programme accreditation or institutional accreditation, as one reviewer put it, “*there was a problem, I am thinking hard to make a distinction, and was it institutional accreditation or programme accreditation?*” (P4, 4: 2, 12:12).

Another reviewer said:

We were commenting on issues concerned with the institution and also the programme so we need to be clear on whether we accredit the institution or the programme, and also if one is to make a proper assessment, one needs to be clear of what they are assessing (P4, 4:14,14:14), in fact even the institution prefers programme accreditation separate from institutional accreditation If you mix the two, the institution does not know what information to give you (P4, 4:4, 24:24).

That the programme reviewers were not clear on whether they were doing programme accreditation or institutional accreditation poses questions as to the credibility of some of the accreditation commendations and recommendations, whether they were based on factual information about the programme or it was just a generic occurrence in the institution that did not necessarily apply to the particular programme under review. Although the programme and the institution are not mutually exclusive, programme accreditation goes deep, vertically into the programme, while institutional accreditation considers the general provision for quality education across the programmes. The mix-up between programme accreditation and institutional accreditation was also evident in the accreditation reports and during the interview sessions. Programme accreditation is carried out only in private TEIs, leaving out programmes offered in public TEIs. The law that guides this practice reads:

The Council shall be responsible for the promotion and coordination of tertiary education and for the determination and maintenance of standards of teaching, examination and research in tertiary institutions. The Council shall: (2i) review and approve programmes of study in respect of private tertiary institutions, (2j) accredit private tertiary institutions, (2k) ensure that quality assurance procedures are in place in all tertiary institutions and (2l) ensure the audit of physical facilities and the assessment of their adequacy in tertiary institutions (Republic of Botswana, 1999, pp.4-5).

The law is interpreted as saying accreditation of programmes will be made in private TEIs. Item (2i) above can be interpreted as initial accreditation carried out before an institution offers a programme, therefore programmes offered in private TEIs are quality assured before being introduced (refer Section 2.7). The public institutions develop programmes and inform the TEC that they have new ones (Section 2.6). The TEC record the new programmes in the register without any assessment or approval procedures, after which the programmes are considered endorsed for offer.

The rationale behind crafting and following such a regulation is not clear. The practice can be misconstrued as a sign of selective application of principles of accreditation. On the other hand, the public institutions might feel neglected or, worse, still fall into a complacency mode, convinced that the regulatory body trusts the quality of their product. Whichever way, this practice might rebound on the entire education system by improving the quality of education within private institutions, while the quality of education provision within the public institutions declines. The market forces might then come into play whereby students opt for private institutions and leave public institutions with very little intake.

The delivery of quality education to the nation sets the basis for sound economic development through the development of graduates with requisite skills for the world of work and for continuing personal development under the notion of lifelong learning. It is important that the policy that guides the programme accreditation process takes cognisance of such and ensures that the programmes that are on offer are guided by policies that encompass all areas of a programme and will ensure delivery of quality education to the nation. Both private institutions and public institutions should be given equal treatment. Because private institutions are partly for profit, the government, companies, and individuals who sponsor the tertiary education students might end up paying more in private institutions than public institutions while in a bid to chase the quality of the programmes. The adage 'quality is expensive' should not be encouraged in this situation. As reported in Chapter 2, most students are sponsored by the Botswana government using tax payers' money, therefore some shrewdness should be exercised in guiding the education system to help in accountability for the public funds. Therefore:

- a) The programme accreditation guidelines should be clearly labelled as guidelines for programme accreditation, to avoid any confusion on whether they are for such or for institutional accreditation.
- b) There should be no confusion as to what the programme reviewers are contracted to do. This scenario can be misconstrued that the TEC does not understand its

mandate, which then could imply the credibility of the programme accreditation results is questionable.

- c) All programmes within the tertiary education sector should go through the programme accreditation process, whether in private institutions or public institutions.

5.3.2 Programme accreditation requirements and criteria

The Botswana programme accreditation ‘standards’ are classified into *the accreditation standard*, and then broken down into *programme accreditation requirements and criteria* which are referred to as standards in some publications on quality assurance. However, this thesis uses accreditation requirements and criteria or just criteria when referring to the Botswana situation, and then the term standards is used when discussing accreditation criteria of other agencies together with those of Botswana, because they refer to the same accreditation criteria.

To recapitulate, the specific requirements and criteria for accreditation are some of the cornerstones for programme accreditation, are generic in nature, and are not subject or discipline-specific. Institutions are guided by the specific requirements and criteria for accreditation when they produce the self-evaluation reports. The programme reviewers evaluate the self-evaluation report and institutional performance against them. The programme reviewers are expected to apply their professional knowledge to individual programmes against specific requirements and criteria for accreditation. In addition, the criteria are not graded therefore the reviewers are also expected to apply their knowhow in deciding whether to accredit or not to accredit a programme.

The criteria need to be interpreted by programme or discipline experts on the programme review panels within the context of the programme that is being evaluated. For example, sufficient infrastructure in the engineering programme would refer to a well-equipped laboratory with contemporary machinery while the same criterion in a language programme would refer to sufficient learning and teaching space within a lecture room. Both interpretations are valid within the context of the respective programmes. Following is an explanation of the programme accreditation standard from the TEC regulations:

The Accreditation Standard

Accreditation shall be granted to institutions for named programmes where, in addition to ongoing compliance with the requirements for the Registration of Private Tertiary Institutions:

1. Design and development processes are applied that have actively utilised stakeholder input to create relevant programmes comparable to those offered by similar institutions authorised to operate in Botswana.
2. Funding of programmes is of sufficient assured and sustained levels to ensure the ongoing and enhanced quality of the programmes as designed.
3. Staffing of programmes is provided for, managed and developed to ensure the ongoing and enhanced quality of the programmes as planned.
4. Physical premises, facilities and equipment are provided for, managed and developed to ensure the ongoing and enhanced quality of the programmes as planned.
5. Programmes are delivered in accordance with internally and externally approved proposals and processes and are subject to ongoing evaluation and review utilising and incorporating the views of learners and relevant stakeholders and interested parties.
6. Internal and external assessment arrangements are structured and integrated with learning, utilise judgements of performance against transparent criteria, and are verified as being fair, valid, reliable and consistent through internal and, where available, external moderation of assessment processes.
7. Certification of attainment through the award of a qualification describes the outcomes of learning and standards of attainment reached in a meaningful manner and are of a comparable and equivalent merit to similar qualifications offered in and by public tertiary institutions.
8. Programmes result in their planned impact for learner achievement and relevance to stated educational, technological, economic and/or socio-cultural needs of Botswana and Batswana.
9. Degree-level and post-graduate programmes, where applicable to the application for accreditation, reflect, develop, utilise and encourage the skills of advanced study and ethical research that advance learning and/or the global well-being of the Botswana economy.
10. All deposits, fees, costs and additional charges relevant to the consideration and processing of the application for accreditation have been paid.

Source: Tertiary Education Council (2008, p.C674)

To give further guidance to the users, the specific requirements and criteria for the components of the accreditation standard are expounded. An example of such is given on Table 5.5 by using the specific requirement 'design and development of programmes'.

Table 5.5: Sample- requirements and criteria for accreditation

Design and development of programmes	
Criterion statement	This section seeks to verify that the institution utilises its own policies and procedures to design and develop programmes that are relevant to identified outcomes of learning required in and for Botswana's economy and society. Where curriculum and or learner resources are accessed through franchise or licencing arrangements, the Council wishes to be assured that these have been appropriately and legally localised to reflect needs in Botswana.
Guiding notes	<p>a) Provide proof that each programme resulted from a robust conceptualisation and design process and is an integral part of the institution's mission and planning:</p> <ul style="list-style-type: none"> i) Programme design and/or adaptation /adoption procedures demonstrate a clear and effective synergy between the provider and potential future 'employers' of any graduates, and were inclusive of stakeholder input and consultation. ii) There is evidence that stakeholder views and other external benchmark documents (where relevant) were incorporated into the programmes designed.

Source: Tertiary Education Council (2008, p.C675)

The above requirement and criteria for accreditation (Table 5.5) addresses the first point cited under 'the accreditation standard' (above). It identifies the conditions that are necessary for an objective evaluation of the extent to which a programme meets each criterion. The guiding notes define the attributes of a programme and can be referred to as an example of evidence because it goes vertically to demand in depth tangible evidence that demonstrate that the criteria has been achieved. The evidence provided will differ from programme to programme because the dictates and demands of programmes are different.

Findings

Generally, the interviews from academics and programme reviewers, literature review, and document analysis indicated that the specific requirements and criteria for accreditation were clear. There was however evidence of non-application of some requirements and criteria in a few reports without any explanation of why they were not considered. One of the accreditation requirements and criteria has to do with funding of programmes. It was revealed during interviews with academics that institutions were not comfortable revealing funding issues to programme reviewers but were comfortable in revealing information on funding to the TEC,

mainly because some of the programme reviewers were competitors. One programme reviewer said:

Some institutions say it is not necessary to stress on cost centres for programmes, what is important is for us to check whether the objectives are met, whether the programme is well provided for. Private institutions are private and do not want to disclose their financial status just like that (P3, 3:27, 67:67).

To try and go around providing the funding information, some institutions stated that they would prefer that TEC addressed funding issues (P3, 3:28, 69:69) (P2, 2:46, 202:202). The uneasiness of the institutions in revealing funding information might be that the programme reviewers did not concentrate on funding for the programme, but rather for the institution. As the activity was programme review, one would expect transparency in checking how well resourced the programme was. It was revealed that:

- d) The TEC requirements and criteria for accreditation communicate well and are internationally comparable.
- e) It is important to make sure that the programme reviewers understand the requirements and criteria and apply them accordingly so as to produce informative reports.
- f) The criteria for evaluation of requirements and criteria should include some form of gradation to indicate the extent to which a particular programme met threshold programme accreditation requirements and criteria.

The institutions produce the self-evaluation reports against the accreditation requirements and criteria.

5.3.3 Self-evaluation report

The theme on the self-evaluation report emerged from interviews, document analysis, and the background study. The main point of discussion was the quality of the self-evaluation report. The self-evaluation report forms the basis of the programme accreditation process for an existing programme. The presumption is that a good self-evaluation report is one that covers all the requirements and criteria as set out by the programme accreditation regulations and guidelines. It is a report that tells the story about the institution as it was at the time of the accreditation visit, a report that has facts and evidence to substantiate the declarations contained within. Therefore, characteristics of an effective programme accreditation system should make mention of a self-evaluation report. The format of the self-evaluation reports (Appendix G) followed the criteria as stipulated in the accreditation guidelines.

Findings

An examination of selected self-evaluation reports revealed that some institutions did not have the capacity to produce informative self-evaluation reports, which were supposed to be produced against the specific requirements and criteria for accreditation. Several reviewers reported that they were not happy with various self-evaluation reports, which resulted in some reviewers uttering lamentations that could be read as people who were disillusioned by the quality of the report. One such reviewer said '*Accreditation only happens once proper documentation is available at the institution*' (P3, 3:20, 56:56). Institutions that took the production of the self-evaluation report very seriously found it '*...involving but worth it*' (P2, 2:44, 60:60) (P2, 2:45, 30:30). The self-evaluation report assisted them to do an introspection of their processes and '*...design remedial action for themselves*'. It is unfortunate that '*...some of the institutions produced very nominal information that did not help*' (P3, 3:12, 44:44).

Further sentiments were expressed about the production of the self-evaluation report. The reviewers stressed that proper training was necessary (P2, 2:28, 179:179) (P3, 3:33, 26:26) and TEC should not assume that institutions knew what was expected of them (P2, 2:28, 179:179). The training advocated for was to be undertaken by the TEC because '*...the regulator must always make sure that what they hand over to the assessor is a good document...*' (P3, 3:12, 44:44). In some instances, it was as if the institutions wrote one report and reproduced it for all the programmes, making minor adjustments in places. The approach could only be beneficial if properly applied.

Curriculum design and delivery contribute towards the core of an educational programme therefore any self-evaluation report should reflect such. In order to make the programme relevant to the needs of the country, the curriculum development process should effectively translate national educational objectives into programmes. It is in this context that the initial programme assessment structure of the TEC (see Section 2.7) has an evaluation point of the relevance of the programme to the human resource needs of Botswana. The programme reviewers should therefore acquaint themselves with the curriculum and curriculum design and delivery in the course of assessing the quality of the programmes. Curriculum design and delivery came out clearly as a factor in questionnaire analysis. Any periodic review of a programme should encompass assessment of the curriculum and in the process ascertain whether the institution is following the stipulated curricular guidelines.

In this light, an uninformative self-evaluation report is likely to leave key features of the programme unreported and contribute to the programme not being accredited. On the other hand, an informative self-evaluation report could provide a basis for encyclopaedic guidance

from the programme review team to the institution because necessary information would be available to assess the achievements and the challenges that the institution might be experiencing. It is important that the institution does not under-report or over-report its activities because programme accreditation is evidence-based. Programme accreditation is meant to help the institution improve on the quality of delivery and resource provision for the programme. Continuing from above, and in this light:

- g) The institution should be trained on the production of the self-evaluation report.
- h) The TEC should carry out a desk evaluation of the self-evaluation report to ensure that all the critical elements have been covered. The report should only be passed on to the programme review team when the TEC had assured themselves that the report has all the necessary information.
- i) The programme review team must acquaint themselves with the self-evaluation report before going to the institution.

Once the self-evaluation report is ready and presented to the TEC, the institutional site visit follows.

5.3.4 Programme accreditation site-visit

The theme programme accreditation site-visit resulted from document analysis and it came out as an important aspect of the programme accreditation system or programme accreditation process. The institutional visit was budgeted for three days per programme. Data collected revealed that, generally, both the programme reviewers and the institutions were comfortable with the duration of the site visit. There were a few instances where the team had to take more than three days in an institution because it was assigned to assess two or more programmes. Assigning the team more than one programme happened especially where the TEC realised, in their evaluation of the self-evaluation report, that there seemed not to be much difference in the content coverage of the two programmes. In some instances, the programme review team ended up recommending a merger of the two programmes. In one worst situation, the team recommended a merger of four programmes because the difference was one module per programme. One recommendation of such a scenario read like:

In coming up with this curriculum, the institution did not attempt to indicate the need for such a programme. In addition, this same institution is currently running an Associate Degree which is equivalent to Advanced Diploma and hence is expected to clearly indicate the need for the Diploma level programme by indicating the

type of skills in demand that cannot be met by the Associate Degree Programme (TEC archives, February 2010 accreditation report).

This was a disturbing situation that needed immediate redress. The major contributory factor to finding incidents of programmes differing with minimal programme content might be that the institutions initially, before the start of augmentation of programme accreditation (refer to Section 2.7), offered programmes without an assessment to determine their worth. There were contributory factors to such episodes, as would be conveyed through the findings.

Findings

An observation was made that while some institutions operate on more than one site, offering the same programmes, there was no evidence of visits to the satellite campuses. The difficulty might be that the guidelines do not emphasise visiting all sites of delivery. The relevant guideline reads: “*verification of an applicant’s details shall involve, among other things, visits to the main campus and such satellite campuses and tuition centres as considered necessary by the Executive Secretary*” (TEC, 2008 p.C662 (7)). The onus is upon the TEC to arrange for a visit to the satellite campuses. Failure to do so, ending in assessment of the programme on the main campus only, is not guaranteed to give a fair representation of the quality of the programme throughout the institution. Thus, an accreditation status offered to the main campus applied even to the satellite campuses. During the accreditation visit, assessment was carried out in phases as described below.

Phase 1: Document review – The management of the institution made important documents ready for the team to review. The documents included the curriculum, core textbooks, minutes of meetings, policies, promotional materials, learner assessment tools, budget expenditure, and teaching and learning resources. The programme review team analysed the documents guided by the TEC’s requirements and criteria for accreditation. In case more documentation was necessary, the programme reviewers asked for whatever information they required.

Nonetheless, there were reported instances where the institutions felt the programme accreditation teams did not go through the documentation exhaustively enough to give them an understanding of what happens within the programme. Some academics stated that the teams did not go through their files after all the hard work that they had put into preparing for the programme accreditation team to review. The academics were dissatisfied because the team either asked them for information that was already available in the files or wrote negative reports while material was made available.

The lack of thorough scrutiny of availed documentation in some instances contributed to the institution refusing the accuracy of the report pointing to factual errors which could have been avoided. There were occurrences when the team and the institution failed to reach an agreement. The team's assignment was to report on the situation as it was at the time of the visit, and if they were convinced that they had objectively reported they responded that their observations and recommendations stood. The alertness of the TEC officer during the visit and the weighting of the recommendations would then help the TEC to make an informed recommendation.

Phase 2: Interviews and group discussions - The programme review teams held interviews and group discussions with people related to the programme, such as academics, heads of department, students, support services, and any other relevant personnel. The procedure was for the programme review team to determine the extent to which standards were met, consequently, based on what they believed needed to be verified by an interview, the programme review team requested for the relevant people to interview.

The TEC accreditation guidelines do not dictate who should be interviewed but during the training session for the reviewers the TEC stated that some students should be interviewed. There were however reported cases where no students were interviewed. Most of the reports analysed had no evidence of the students' voices, but rather those of the librarian and accountant.

Phase 3: On-site observation – During the site visit, the programme accreditation team was expected to have an idea of what happens in the environment of the programme. The team's main onsite observation reported was the institutional tour and a detailed report about facilities even those facilities not related to the programme under review.

Phase 4: Exit discussion with faculty - The programme review team provided the faculty with the summary findings of the site visit. The faculty was given an opportunity to verify and modify the findings. This phase assisted the faculty to estimate how they were performing in terms of the accreditation status considering that the formal accreditation feedback took long to be delivered to the institution. The programme review team did not divulge their accreditation recommendation because, as stated in Chapter 2, the team only makes recommendations to the TEC, which can either accept or reject the recommendations. Conclusions drawn from the foregoing included:

- j) A site visit is an important component of the programme accreditation process. The programme review team carries out a comprehensive study of the programme activity during the site visit.
- k) The perception of students about the quality of education provided is vital. The students should be interviewed during the site visit.

The accreditation visit culminated in a programme accreditation report.

5.3.5 Programme accreditation report

Just as the value of the self-evaluation report need not be overemphasised, so is the programme accreditation report. The analysis of the programme curriculum, resources, and delivery are central to the contents of the report. The reports documented assessment results and made commendations and recommendations about the programme provision and delivery. The attestations made in the report should be verifiable and defensible.

Generally, the report structure was uniform, validating that the programme reviewers were given a reporting structure. The table of contents for the programme accreditation report format was common throughout the reports, attesting to the existence of a guideline for the production of the report (refer Appendix H).

Findings

The reports contained commendations and recommendations. The purpose of emphasising on the programme reviewers giving credit where it was due and advising where necessary was to encourage them to assess the programme as it was, not just to find faults but to motivate the institution where necessary. The reports varied in length, from 17 pages to 48 pages. In addition, the reports varied in quality. Some reports had substantial information indicative of the situation as found, even the commendations and recommendations correlated with what was in the body of the report. Such reports were beneficial to the institution in that the suggestions for improvement (recommendations) contained therein communicated well and added value to improvement of the programme.

There were also mediocre reports that furnished information and data in a style of answering the guiding statements and not expounding on the information so that the reader could get a clearer picture of the status of the programme. Other reports provided scanty information that ended up being returned to the authors several times for improvement. Most of the reports did not have quantitative data, such as student enrolment in the programme, number of academics, and summary of students' progress. Quantitative data provides information at a glance, therefore it is very necessary.

An example of a sign of a not-so-good report would be where a recommendation was just thrown in without evidence of where it emanated. Making informed decisions on such reports seemed to be a challenge by looking at the minutes of meetings where such were discussed. There were times when the TEC staff had to re-write some of the reports to make them acceptable because the reviewers failed to produce quality reports. This reflected on the quality of the review team. Some team members were removed from the database of reviewers due to their lack of expertise or commitment, whilst others were not so perfect with the assignment.

As stated in Section 2.6, the report was sent to the institution mainly to check factual errors. It was critical that TEC checked the report before passing it on to the institution. An effective programme accreditation system will partly rely on the quality of the programme accreditation report produced. As such:

- l) All programme delivery sites should be visited during the programme accreditation process so as to get a life experience about the programme wherever it is offered.
- m) The TEC should develop an evaluator's guide whereby the programme review team is guided on the significant activities that should be carried out during the accreditation visit, such as students' voice and there should be evidence of the students' interviews in the report.
- n) Even though the length of the report did not communicate the quality of the content of the report, some of the 17-page reports did not have vital information. From the TEC's experience with the first round of accreditation, reports should have a length of at least 25 pages. It would also be prudent to give the reviewers an idea of the key topics that should be included in the report to ensure that salient points are reported on.
- o) Professionals differ in their expertise and level of professionalism. The quality of the report reflects on the quality of the review team. It would be advisable to carry out an assessment, formal or informal, of the review team and make information available to all those responsible for programme accreditation and any other quality assurance activity so that the individuals who do not perform reasonably well are not re-engaged, otherwise mediocre reports would continue surfacing.

The climax of each accreditation report was the accreditation recommendations.

5.3.6 Programme accreditation recommendations

The theme programme accreditation recommendations resulted from document analysis. The recommendations are indispensable when developing the programme accreditation system. At the end of the accreditation exercise, the programme review team makes recommendations

on whether to accredit, provisionally accredit, defer or reject accreditation (Section 2.6). The accreditation criteria are interpreted within the context of the programmes that are evaluated. Some accreditation agencies use an assessment scale to allow transparency on how the judgments on the quality of the themes were arrived at. The comprehensiveness could help both the institution and any other interested party to understand the final decision.

Although the Minister of Education and Skills Development did not change any programme accreditation recommendation made by the TEC governing Council, the law explicitly states that the accreditation decision should be made by the Minister through the government gazette.

Findings

Botswana's programme accreditation system does not use an assessment scale and the weakness was pointed out during the interviews with both the programme reviewers and the academics, one of whom stated that *'there was no transparency in the grading'* (P2, 2:24:146:146) (P3, 3:11, 146:146) and that the institution *'...did not know how well...'* (P2, 2:24:146:146) they had attained the requirements and criteria. The TEC accreditation recommendation is based on the weight of the recommendations and, as such, sometimes the recommendations are open to debate and are changed during the decision-making process (Section 2.6), which opens the accreditation recommendations to subjectivity rather than objectivity. The programme review team makes recommendations which are confidential to the institution because they might be changed during the decision-making process. Table 5.6 shows a classification of the accreditation recommendations as made during the decision-making process of recommendations by the reviewers, then by the Directorate of Quality Assurance and Regulation (DQAR), followed by TEC management and the Academic Planning and Development Committee (APDC).

Table 5.6: Accreditation recommendations to Council November 2010

TEI	Reviewers	DQAR	Management	APDC	Comments
A1	Provisional	Provisional	Provisional	Provisional	
B1	Provisional	Accredit	Accredit	Accredit	(For B1 to C4)
C1	Deferred	Accredit	Accredit	Accredit	Some required
C2	Provisional	Accredit	Accredit	Accredit	recommendations were moved
C3	Provisional	Accredit	Accredit	Accredit	to advisable because they could
C4	Provisional	Accredit	Accredit	Accredit	not adversely impact the teaching of the programme
C5	Provisional	Provisional	Provisional	Provisional	
C6	Provisional	Provisional	Provisional	Accredit	The reviewers stated that 92.8% of the content between BIS and BIT is the same and inclined towards BIT. The Institution has differentiated the two programmes in year 3.
C7	Unable to decide	Provisional	Provisional	Provisional	
C8	Accredit	Accredit	Accredit	Accredit	
C9	Defer	Defer	Defer	Defer	A replica of another programme
C10	Provisional	Provisional	Provisional	Defer	A replica of another programme
C11	Accredit	Accredit	Accredit	Accredit	
C12	Defer	Provisional	Provisional	Provisional	Reviewers made general statements about other programmes not specific to the programme under review.

Source: TEC archives, Minutes of APDC, November 2010

A closer look at the accreditation recommendations reveals that there was not much change between the management's recommendation and those of the APDC. Records indicate that the TEC Governing Council did not change the APDC's recommendation, probably because they had entrusted it with issues of programme quality and expected members to be diligent in their decisions. It was however important for the TEC to go through the recommendations and satisfy themselves that they were properly placed.

Some recommendations and commendations did not focus on the programme. For example, the commendation that is cited below deals with staffing in the faculty. The structure of the report is such that commendations and recommendations are written at the end of each standard. The following commendation comes from one of the reports. It reads:

The institution is commended for maintaining a good pool of academics (74 in the faculty of business and globalisation, 44 of which are expatriates) and support staff with diverse qualification from PhD to the first degree. We noted that the academic staff were

from different countries with diverse experience and qualifications which enrich the programme delivery and enhances the student experience in the programme (Standard 6, February 2010 programme accreditation report).

The commendation is not directed to the programme, but rather refers to the faculty. The commendation can be misconstrued as implying that there is enough staffing, while it might be otherwise in the programme under review. It is however worth noting that there were relevant recommendations and commendations, for example, one recommendation from a visit carried out in March 2010 reads ‘the institution is required to ensure that the required software and licenses for the delivery of the programme are available at the commencement of each semester (Standard 7)’, which is in line with the programme requirements.

The programme reviewers are given requirements and criteria to follow and make judgements that can be substantiated. They are professionals and therefore are engaged to give professional judgements. The programme review team is made up of experienced and supposedly knowledgeable people, the assumption being that three brains will give a more objective judgement than one or two. The TEC engaging professionals and changing their recommendation could be regarded as academic disregard, therefore the professional advice would be like a procedural activity, and as such unacceptable.

A more transparent way of coming up with an accreditation decision would be for the TEC to have a decision-making sheet that any professional of relevant calibre could use to assess the accreditation report against and come up with a recommendation closer to that of the programme review team. This arrangement might force the programme reviewers to be more prudent when making their recommendations. They might have to explain how they reached their conclusion, however, it would not be wise for them to disclose their recommendation to the institution immediately because it has to be quality assured. This approach will be more beneficial to both the institution and the TEC because programme accreditation is not meant to be punitive but rather a development and improvement educational activity designed to improve the quality of education provided to the nation.

Despite the long process in deciding the programme accreditation decision (refer to Chapter 2, Section 2.6) there was still evidence of deficiencies and anomalies that should have been identified by the accreditation process. One institution submitted the following qualifications of one programme and these were treated as six different programmes:

1. Associate Diploma
2. Professional Diploma
3. Professional Diploma (Honours)
4. Honours Diploma
5. Advanced Diploma
6. BSc

What differentiated the above programmes was not clear, neither was the meaning of each qualification. The Diploma as given above has five levels, therefore the qualifications might actually be exit points. Analysis of the reports showed a difference only in the nomenclature or the names of the programmes. The BSc programme was differentiated from the rest by one module. In another institution the nomenclature included 'associate degree', meaning advanced diploma, which was misleading to the stakeholders, considering that no explanation was given against the qualifications to inform stakeholders. The programme reviewers and TEC let these go because, as of 2012, the programmes still carried the same nomenclature, without guidance to the stakeholders. The reports were written by one team of programme reviewers.

The accreditation guidelines state that the names of programmes should not mislead and the qualifications awarded should be comparable and of equivalent merit to similar qualifications awarded in respect of programmes offered in and by public institutions in Botswana (TEC, 2008 p.C682). This is an example of where the guidelines are not followed, the probable implication being that because the programme review team accepted the nomenclature as listed above it is internationally comparable. However, programme nomenclature, though key to qualifications, is not the focus of this study. Hopefully, programme nomenclature will be addressed with the advent of the Botswana National Credit and Qualifications Framework, likely to be implemented in 2014/2015 by the Botswana Qualifications Authority (refer Chapter 1, Section 1.2).

After all the deliberations and accumulation of the accreditation recommendations, the TEC executive secretary had to request the Minister of Education and Skills Development to pronounce the accreditation status. The TEC Council made recommendations on the accreditation status, then the TEC wrote the first letter on 15 December 2010 inviting the Minister of Education and Skills Development to confer accreditation status on programmes. The letter started as follows:

At its meetings of 8th July, 5th October, and 14th December 2010 the Council deliberated on accreditation reports resulting from the

accreditation exercise by subject matter experts from the six registered private institutions. The reports had gone through the stipulated Council structures. In accordance with the Tertiary Education Act, Part VI sections 25-29 (Accreditation of Private Tertiary Education Institutions) the Council therefore presents to you the following programmes and their recommendations for your consideration.

The letter had a list of 31 programmes, 22 recommended for accreditation and nine for provisional accreditation. The deferred programmes were not mentioned in the letter. Table 5.7 shows the accreditation recommendations for 46 programmes:

Table 5.7: Accreditation recommendations to the Minister

Institution	Accredit	Provisional	Defer	Totals
1	5	4	8	17
2	2	2	3	7
3	1	0	0	1
4	1	2	4	7
5	4	1	0	5
6	9	0	0	9
Totals	22	9	15	46

The Minister responded to the letter by stating that only accredited programmes should be sent to her for conferment of the accreditation status. Thus, the programmes were not given the accreditation status, even those awarded accreditation. The letter contained programmes on *accredit* and *provisionally accredit* status. This was in December 2010, for programmes that were taken through the accreditation process in November 2009 but still the accreditation status could not be conferred. The remaining programmes were processed in 2011 and another letter was written in December 2011, resulting in programmes that were reviewed in January 2010 being told their accreditation results in December 2011. Observably, benchmarking would be beneficial in addressing the pronouncement of the programme accreditation decision. The bureaucracy for the accreditation recommendation is too long, resulting in institutions being in a suspense mode about the accreditation status of their programmes. Analysis of the process however indicates that the final recommendation is rarely changed.

It is normal to have a difference in expert opinion, therefore it would be more prudent for the TEC to consider cutting the long decision-making process by having only two steps to quality assure the programme accreditation recommendations. The TEC management and DQAR can meet at the same time, pass their recommendation to APDC who can then send information to the TEC Council. Shortening the process might help to give institutions feedback within four months of the process, as opposed to over a year.

It was not clear why the Minister should pronounce the accreditation status of programmes. A search through the records did not yield any letter from the Minister of Education conferring the accreditation status. This assertion is corroborated by perusal through the institutional files which did not reveal any letter informing the institutions that their programmes were accredited. Informing the institutions in writing was outside the realm of the TEC because the TEC Act clearly stated that the pronouncement of the accreditation status was to be made by the Minister of Education and Skills Development, therefore both the TEC and the TEIs were at the mercy of the Minister. It would be prudent if:

- p) The programme accreditation decision making process were shortened.
- q) Institutions were given feedback about the accreditation status of their programmes within a reasonable time, perhaps four months.
- r) Weightings of accreditation recommendations should be applied to guide the level of attainment of accreditation status and the pronouncements of the programme accreditation results.

Although the institutions were not told the final accreditation recommendation immediately, they were expected, by inference, to act on the recommendations immediately after receiving the draft reports.

The programme accreditation process is facilitated by the programme review team.

5.3.7 Programme review team

Programme review for programme accreditation is done by a team of professionals drawn from academia and industry. The TEC sent out an advertisement asking for people with relevant expertise to express their interest to participate in the accreditation process. A number of people responded and 'appropriate' people were selected. The programme reviewers were to have the following personal attributes:

Be objective, fair, and appreciative of educational practices, good interviewer and listener, and be able to:

- i) Balance the role of professional colleague and programme-reviewer.
- ii) Fulfil responsibilities in a professional manner and exercise best judgement in assessing a programme using pieces of evidence to prove attainment of set criteria/standard.
- iii) Discharge responsibilities diligently and confidently even in the face of conflicting personal feelings and preferences.
- iv) Strike a balance between individual views and judgement, and those held by fellow reviewers.
- v) Hold in confidence all the information obtained from the self-evaluation report and site visits.

A database of the programme reviewers was built from the applicants who qualified, and when it was time to put up a team relevant people were chosen from it, taking care of the mix to ensure that academics were mixed with people from industry. The programme review team was also referred to as experts in the field of study due to their expected high level of expertise in the relevant field. As in any team, the programme accreditation team was advised to choose a team leader whom the TEC liaised with and was held responsible for the particular programme accreditation process until the end, which sometimes resulted in a second visit to ascertain some facts or evaluate progress on the recommendations made.

The major assignment of the programme review team was to evaluate the institution's self-evaluation report against individual requirements and criteria as stipulated in the programme accreditation guidelines and verify the assertions with available evidence. The programme review team engaged different methods of data collection, such as interviews, observations, and data analysis (Section 5.3), resulting in the programme accreditation report. Information collected during data collection suggested that the quality of the programme reviewers had a significant impact on the quality of the programme review. The academics emphasised that the reviewers designated to a programme should *have a good command of the programme content* (P2, 2:7, 63:63) (P2, 2:8, 66:66) and *should be aware of the current developments within the field of the programme* (P2, 2:10, 74:74) (P3, 3:3, 26:26). They stressed that when both the institution, represented by the programme instructor, and the reviewers were conversant with the programme content, the two could understand each other more easily (P2, 2:8, 66:66) (P2, 2:39, 236:236) (P2, 2:44, 89:89) (P3, 3:25, 62:62) and avoid making what Revelo and Hernández (2003) describe as a superficial review, disregarding or ignoring features that an in-depth examination could identify whilst pretending to be knowledgeable

and revealing through their dialogue a low level of expertise and lack of confidence in their decisions. This could be a result of inadequate expertise in the subject matter or a sign of lack of professionalism which could be manifested through various forms such as failure to peruse the provided documentation.

Data collected from interviews revealed that the programme reviewers should have relevant expertise, competency and a positive attitude towards the programme review process. The three data collection methods revealed that the quality of the programme review team ought to be carefully ascertained. The questionnaire analysis (parallel study) indicated high factor loadings, the code names from the interview analysis had four descriptors about the programme reviewers, mainly referring to the competency of the programme reviewers.

Though the names of the programme reviewers were sent to institutions for clearance in order to try and minimise conflicts between the review team and the institution, there was contention that some reviewers went to institutions as competitors (P2, 2:15, 92:92) (P2, 48: 94,94) (P3, 3:28, 69:69). The particular reviewers were observed to have had pre-conceived ideas (P2, 2:15, 92:92) about the said institution and therefore went to the institution to ‘...pull them down...’ (P3, 3:6, 34:34). One academic suggested that ‘*the healthy realisation is important. One of the training aspects going forward should be the ethical aspect, to assess the institution against the standards, nothing personal, not to go there and pull down an institution...*’ (P3, 3:6, 34:34).

The above reflections suggest that the training for the programme review team resulted in different levels of competence (P2, 2:13, 88:88) (P3, 3:3, 26:26) (P3, 3:5, 32:32). One academic said ‘...I could just tell that during the tour, you could see that these people did not know the equipment, I had a challenge and I felt it was very unfair...’ (P2, 2:8, 66:66). As stated above, the reviewers were selected basing on their academic qualifications with the assumption that because they were qualified, they would be conversant with the equipment used in the programme. Some reviewers were said to be good, as expressed by one academic:

I had a team that was very good. They had someone from industry and I felt that was the best team. The IT guy was looking into issues of IT. Our tour was about three hours, touring the institution, and the gentleman understood what he was doing. I was very happy, but others... (P2, 2:44, 89:89).

Whether the differences in the approach and the level of professionalism were due to differences in personalities, to inexperience, or to unsatisfactory competency levels (P2, 2:39, 236:236), the training should be re-structured to minimise inconsistencies in the process. The observations are an indication of irregularities in the process which can make room for appeals. One academic appreciated that the programme reviewers had different levels of understanding programme accreditation issues:

I think no matter how much training we do, we are dealing with a composite set of people, different institutions, but one thing accreditors should understand the guidelines and specific dos and don'ts. We cannot conduct a test for them, we will be undermining them because they are academicians but I think guidelines should be given before the process... (P2, 2:39, 236:236).

Notwithstanding the above observation, the level of expertise and professionalism of the reviewers ought to be seriously considered. One of the academics said:

The programme review team should be rigorously trained before they are sent to the institutions so that they have a clear idea of what they are supposed to do. There are two things here, there is an element of technical people which is what is it that they must look for, for example if you talk about whether the curriculum is relevant or not, if the person does not know about the curriculum, they cannot make a proper judgment. Secondly, there is the personal element where we talk about the ethical values. So we should re-visit the training that was done last time and put more meat into the training based on our experience (P3, 3:21, 57:57).

Another academic suggested that:

Rigorous training for the review team should be done because some of the programme reviewers come from public institutions and their way of perceiving things can be different. The programme reviewers' experience will solely be on the traditional mode of classroom delivery, or running assessments which are normally a written exam or structured exam, so when they see something totally different from what they practice, they immediately say it is not right. This could be a kind of debate because what they might have been practicing might

be writing the terms of what they are doing in their institution but it need not be the case in another institution. So sometimes this might cause conflicts when the team makes such observations and conclusions. The team must come with an open mind (P3, 3:5, 32:32).

The above discussion indicates that the quality of a programme review team plays a significant role in the programme review process. The programme review team comprises professionals and the TEC expects them to act as such. Nonetheless, judgment about the credibility of the programme accreditation exercise is directed to the TEC, as it is its responsibility to ensure that the quality of work presented meets or exceeds expectations. The quality of programme reviewers and review report, meeting deadlines and giving feedback with evidence are some of the characteristics that can authenticate the credibility of an accreditation process (P4, 4:16, 69:69).

The TEC and the TEI assume the programme reviewers' level of expertise in the programme surpasses that of the academics and would therefore give the institution esteemed guidance on the delivery and management of the programme at hand. It is expected that once the level of expertise of the reviewers is relevant for the programme the reviewers' attitude, competency, thoroughness, and objectivity will be right for the assignment henceforth be able to advise the institution in a more constructive way. The professionalism of the programme reviewers would hence take care of the ethical issues in the programme accreditation process. However, knowledge alone is not sufficient for one to become a programme reviewer, guiding principles, patterns of work and attitudes, as well as managing relationships should be addressed. Flexibility and objectivity is also essential to be able to accept the legitimacy of educational projects and processes, though they might differ from the ones to which the reviewers are accustomed to.

One person might combine several forms of expertise. Experienced reviewers should be chosen to chair the programme review team, all-inclusive of academic qualifications, leadership skills, competencies, and seriousness expressed in their ability to perform high responsibilities and capacity to produce knowledge, as evident from their academic life. Professionalism and expertise of some programme reviewers was reflected in the quality of some programme review reports and recommendations as well as feedback from the institutions. Such programme reviewers remain in the TEC database of programme reviewers. It can then be deduced that:

- s) The quality of the programme review team has a great bearing on the quality of the programme review exercise, henceforth on the final accreditation recommendation.
- t) The programme review team should be trained, going through the process and the requirements and criteria. There should be no assumptions made, for example, that people are professionals.
- u) Before each accreditation session the programme review team should be briefly taken through the expectations of the accreditation process and the requirements and criteria to remind them of the requirements. This can act as a deterrent to some unprofessionalism that was mentioned.
- v) The TEC should evaluate the reviewers after each accreditation process so as to build a strong team per specialisation. The programme reviewers who had elements of unprofessionalism during the exercise should not be re-engaged.

It was evident throughout that capacity building for all people engaged in the programme accreditation process forms an important part of the programme accreditation system.

5.3.8 Capacity building

The theme on capacity building consolidated certain factors and themes, namely: training of the review team, TEC staff, and the institution. The TEC held a stakeholder's workshop on 28 and 29 August 2008 to update institutions on the plans for accreditation of programmes during 2008/2010. The workshop participants included two representatives from each of the TEC-registered private TEIs. The institutions were requested to send drivers of quality assurance matters within their respective institutions, the expectation being that the trained personnel would return to cascade the information to other members of staff. The resource persons included TEC staff and two external quality assurance officers, one from Namibia Qualifications Authority and the other one from Council on Higher Education, South Africa.

The stakeholders' workshop was followed by individual institutional workshops for those institutions that were going to have some of their programmes accredited. The institutions were advised to start working on the self-evaluation reports immediately after the workshop so that their programmes could be taken through programme accreditation. As part of strengthening capacity for the production of the self-evaluation report, the TEC monitored progress and advised where necessary, albeit some challenges still surfaced. The idea behind mounting capacity building workshops was to ensure that the programme accreditation process went smoothly. As will be shown, the programme accreditation process had some loopholes that needed to be redressed.

Findings

The self-evaluation reports reflected a lack of institutional readiness, implying that there was inadequate capacity to carry out the process of self-evaluation within some institutions. Instead of concentrating on the programme under consideration the reports gave a cross-section of what was happening in the institution.

Programme accreditation is an evidence-based process, therefore the TEIs needed to be ready for the programme accreditation process. *Institutional preparation was necessary* (P3, 3:13, 45:45) *to avoid window-dressing* (P4, 4:5, 25:25) (P4, 4:6, 31:31), as when the reviewers were given a wrong group of students to interview, disguised as the student representative council (P4, 4:7, 33:33). One of the programme reviewers stated that:

At one institution, there was one guy who seemed to know it all, and he was very defensive during the briefing session. He would talk about different programmes, he actually seemed drilled. Financial management, he will be there, budgeting, computers, students he is there, until we said there must be some other people here. He was just hovering around so that his presence was felt; making people uncomfortable, even academics. We asked for specific people to interview, looking at their portfolio and they would say that one is not available but you can speak to so and so (P4: 4:11, 45:45).

The above statement is a sign of a panicking institution that did not understand the purpose of programme accreditation. It is a reaction from an institution that '*...looked at the process as a policing exercise or a controlling exercise to an extent that programme accreditation teams failed to access documents...*' (P3:3:13, 45:45).

The accreditation regulations (TEC, 2008) have guiding statements that when understood and applied to the programme accreditation process, can curb some of the experiences that depict lack of understanding. Within the regulations, there is a checklist that the TEC should follow to assess the application for accreditation, before taking the programme through (pp. C668-669). Perusal through the applications for accreditation did not show adherence to such, which contributed to mediocre self-evaluation reports culminating in ineffective programme accreditation reports. Having material produced and not applying it is tantamount to not having enough guidance, ending up with assumptions and decisions which were not beneficial to the TEC.

Alternatively the signs of lack of training could be attributed to a time lapse between the training of the programme review team and the actual accreditation visit. Documents analysed did not mention a refresher workshop for the programme reviewers. It was also revealed during interviews that the TEC staff provided inconsistent information to both the programme review team and the institution. Searching through the records did not yield any training records for the TEC staff. From experience, the TEC staff trained themselves, through reading or being trained through attachments to some reputable programme accreditation agencies, probably because they were employed as suitable candidates for the job, hence it was personal responsibility to upskill. The impression from the interviews on the management of the programme accreditation process is that the training was insufficient.

The self-evaluation reports also indicated that the institutions required more training. As a way forward:

- w) All people involved during programme accreditation should be trained before embarking on the process and no assumptions such as people will manage the assignment without proper training should be made.
 - ❖ The programme review team should be trained to ensure that fairness is exercised during the programme accreditation process.
 - ❖ The TEC staff should be well trained so that they can advise and guide the programme review teams from an informed position.
 - ❖ The people responsible for programme accreditation in the institution should be well trained so that they understand the purpose of accreditation and prepare for the process accordingly.

Training of the key people might improve on the credibility of the programme accreditation output, for the following reasons:

- x) It would be prudent to hold a meeting with the institution to explain the programme accreditation process before the site visit especially when the institution has no prior experience.
- y) Both the institution and the TEC should ensure that there is a conducive environment for the accreditation exercise. It is important that the atmosphere should be collegial because the exercise is purely a fact-finding mission to assist the institution to improve and to guard against poor educational provision to the nation.

The outcomes from different sections of the presentation of the findings were put together and rationalised to come up with design principles for the prototyping phase.

5.4 Design Principles from Phase 1

The findings for the preliminary phase of the study indicate that the TEC, the TEI, and the programme reviewers are important actors for the success of the programme accreditation process. The programme accreditation requirements and criteria, the self-evaluation report, and the institutional visit to verify what is on the ground are all key components of the programme accreditation system. The accreditation requirements and criteria should include contemporary issues that affect the education system while taking cognisance of the uniqueness of the economy in which it operates. The quality of the programme review team is also paramount for the success of the process. The accreditation decision should not be the end of accreditation process because every evaluation for accreditation is likely to come up with recommendations for improvement, as a key component.

The shortcomings that were identified in the Botswana programme accreditation process (findings) were consolidated and presented as recommendations for improvement. These recommendations were further enhanced with findings from the comparative study which is reported in Chapter 6 Section 6.3, and turned into design principles for the first prototype. The findings were classified under TEC, TEI, and programme reviewers using the criteria of *who is responsible for addressing the shortcomings*.

Box 5.1: Phase 1 – Part design principles for Prototype 1

TEC

- a) There should be a distinction between programme accreditation and institutional accreditation. The guidelines used for programme accreditation should reflect such.
- b) All programmes in all institutions should be accredited.
- c) There should be capacity building for the TEC staff, TEI and programme reviewers on the programme accreditation standard, process and requirements and criteria.
- d) The self-evaluation report should be assessed by the TEC before giving it to the programme reviewers.
- e) The TEC should develop the assessors' manual to guide the programme reviewers during the programme accreditation process.
- f) The TEC should re-visit the programme accreditation decision-making protocol.

TEI

- a) The institution should provide all necessary information required for the programme accreditation process.
- b) The institution should make preparations so that all sites of delivery are visited for assessment.
- c) The self-evaluation report should follow the guidelines as provided by the TEC, and these should take cognisance of the programme accreditation requirements and criteria.
- d) The institution should be transparent during the programme accreditation process, that is, point out strengths, weaknesses, and indicate where they have challenges to arrest the situation.
- e) The institution should act on the recommendations immediately after receiving the first draft of the report.

Programme reviewers

- a) The programme reviewers should prepare for the programme accreditation process by reading the self-evaluation report before visiting the institution.
- b) The programme reviewers should focus on the programme, assess all necessary areas and produce a report that clearly communicates the findings including the delivery site.

5.5 Conclusion

The research question addressed in this chapter is: *How is programme accreditation carried out in Botswana?* Data collected and analysed indicate that the Botswana programme accreditation system, like other systems, uses programme accreditation requirements and criteria, and follows the standard procedure of programme assessment by the institution resulting in the production of a self-evaluation report, site-visit by programme reviewers culminating in a programme accreditation report which contains commendations, recommendations, and an accreditation decision. A deduction was made that the self-evaluation report, the programme review team, and the accreditation standard, requirements

and criteria, are important factors in the accreditation process. An analysis of the programme accreditation process was carried out and deficiencies that might contribute to the ineffectiveness of the programme accreditation system were attributed to insufficient training of all the relevant people for the process; the TEC, the TEI, and the programme reviewers. Because the programme reviewers validate the contents of the self-evaluation report against programme accreditation requirements and criteria, and what is practiced in the said programme, its quality and clarity is paramount. However much improvement is necessary. In the same vein, the quality of the programme accreditation report partly determines the amount of improvement that could be done to the programme as a result of the accreditation process. The shortcomings that need to be addressed were identified and recommendations for design principles made which when implemented, might result in an effective programme accreditation system. Thus, the problem was identified and the needs analysed. The elements that ought to be considered in improvement or development of the programme accreditation system were consolidated (Box 5.1) and used as design principles for the development of the first prototype, as discussed in the next chapter (Chapter 6).



Chapter 6

Prototyping Phase: Design, Development and Implementation of Prototypes

6.1 Introduction

The preliminary phase (Chapter 5) provided a base for the prototyping phase. In this chapter two prototypes of the programme accreditation system for tertiary education in Botswana were developed, the first by applying the design principles as found out from the research proceedings in Chapter 5 (consolidated in Box 5.1) and the first part of Chapter 6 (Sections 6.3 and 6.4). The prototype was tried out in three institutions by accomplishment of the process of programme accreditation (Section 6.6). As the aim of this study was to develop an effective programme accreditation system, try-out of the prototype was meant to assess the impact of the suggested modifications to the Botswana system and in this way the recommendations for improvement of the tertiary education programme accreditation system would be based on a tried out formula. The second prototype was developed from a research cycle based on the try-out of the first.

The chapter begins by presenting the research procedures for this phase (Section 6.2) followed by a comparison of the Botswana programme accreditation system with other systems in order to answer the research sub-question number 2: *How does the Botswana Programme accreditation system compare with other systems?* (Section 6.3). A comparison of the Botswana programme accreditation system with other systems paved the way to partly addressing the third research sub-question: *What constitutes an effective programme accreditation system?*

Common practices from the sampled accreditation systems were filtered out from the observed characteristics, consolidated with those from Chapter 5 (Box 5.1), resulting in design principles for Prototype 1 (Section 6.4). Formative evaluation of the design principles for Prototype 1 was carried out (Section 6.5) prior to the finalisation and try-out of Prototype 1 in three institutions (Section 6.6). The impact of the modifications made to the existing Botswana tertiary education programme accreditation system were assessed through focus group interviews to people who participated in the try-out session (Section 6.7). Phase 2 resulted in

the development of design principles for Prototype 2, which were evaluated by programme accreditation experts (Section 6.8). The chapter is concluded in Section 6.9.

6.2 Research Design for Phase 2

Phase 2 presents the design and implementation phase of the design research process as carried out in this study (refer to Figure 4.3). The phase comprises micro-cycles of research (Sections 6.3, 6.5, 6.6, and 6.7). The research procedures for each micro-cycle will be elaborated upon in the respective sections.

Section 6.3 presents a comparative study of the Botswana programme accreditation system with other systems, supplementing the literature review (Chapter 3). The intent of studying practices in other accreditation agencies was to provide answers to research sub-question 2: *How does the Botswana Programme accreditation system compare with other systems?* Which builds on to the first research question, *How is programme accreditation carried out in Botswana?* Studying various systems helped to determine the consistency and practicality of the findings as they unfolded. Common features from the other accreditation systems that could be applicable to the Botswana system were drawn out (Table 6.3), and consolidated with findings from Chapter 5 (Box 5.1). The consolidated features were turned into design principles for Prototype 1 (Box 6.2), in turn evaluated to assess their practicality through screening and walkthrough by four practitioners, namely institutional administrator, quality assurance officer, academic, and programme reviewer. Prototype 1 was then tried out in three institutions. To find out the effect of the changes to the accreditation system, participants in the try-out session of Prototype 1 were interviewed and the findings used to further modify the Botswana programme accreditation system, resulting in design principles for Prototype 2. The answer to research sub-question 3, *what constitutes an effective programme accreditation system?* was thus answered, thereby closing the design, development and implementation phase.

Quality Criteria

As reflected in Figure 4.3, Phase 2, the quality criteria addressed are consistency and practicality, which were further ascertained through a try-out session of the programme accreditation system besides lessons from other accreditation systems. The aim of the study was to develop characteristics of an accreditation system that is effective and of international comparability, hence it was important to assess the consistency and practicality using other accreditation systems as benchmarks.

6.3 Programme Accreditation in Different Countries

A further analysis of the accreditation practices in some countries discussed in Chapter 3 (Sections 3.3 and 3.8) was made in order to decipher practices that could be used to improve on the Botswana programme accreditation system. Data from each accreditation agency was collected from various sources, condensed and consolidated to make it manageable, being guided by the study questions (Box 6.1). Patterns and common themes that emerged from the systems were considered according to principles of selectivity with the intention of finding out how they will help to illuminate the research question. Conclusions from the various sources were drawn and triangulated (Table 6.3) to ascertain validity and credibility of the findings. A summary of key features is given per accreditation agency and a consolidation of common features is then presented in Sub-section 6.3.7.

The quality assurance agencies studied are Council on Higher Education (CHE) of South Africa (Sub-section 6.3.1), Malaysian Qualifications Agency (MQA) of Malaysia (Sub-section 6.3.2), National Assessment and Accreditation Council (NAAC) of India (Sub-section 6.3.3), National Council on Higher Education (NCHE) of Namibia (Sub-section 6.3.4), New Zealand Qualifications Authority (NZQA) of New Zealand (Sub-section 6.3.5), and Tertiary Education Quality and Standards Agency (TEQSA) of Australia (Sub-section 6.3.6).

The following set of questions (Box 6.1) guided the comparison of the systems as reflected under Phase 2 of the research model (Figure 4.3).

Box 6.1: Guiding questions for the analysis of the programme accreditation systems

1. Who is mandated to do programme accreditation in higher education in the country?
2. How is the programme accreditation process carried out?
3. What are the accreditation standards, requirements, and criteria followed?
4. At what level of the programme is accreditation done?
5. Is the programme accreditation process carried out in selected institutions?
6. Are there any exceptions to programmes during accreditation like franchised programmes accredited in mother countries?
7. How does the accreditation team arrive at the accreditation results?
8. How do the agencies arrive at the accreditation results?
9. Who pronounces the accreditation decision?
10. Are there any special features in the agencies' accreditation process?

A synopsis of each programme accreditation system of the six countries is presented in the subsequent sub-sections, followed by a summary of the similarities and the differences between the Botswana accreditation system and the others. Following are highlights of the findings from the six accreditation agencies, starting with CHE.

6.3.1 Council on Higher Education (CHE) South Africa

The Council on Higher Education (CHE) in South Africa discharges its mandate of programme accreditation through the Higher Education Quality Committee (HEQC) to accredit programmes in both private and public institutions (CHE, 2004b). The programme accreditation applications are considered by the accreditation committee. A programme must be a full qualification complying with the requirements of the South African Qualifications Authority (SAQA) before it can be accredited. Programmes are provisionally accredited before being offered and a re-accreditation is carried out once the programme is running.

All offshore or cross-border provision by South African institutions are subject to HEQC's programme accreditation requirements (Table 3.1). In addition, the quality requirements of the importing country have to be complied with and the HEQC will be open to sharing programme accreditation information with such countries. Imported programmes are also required to comply with the HEQC's programme accreditation requirements. All modes of delivery, distance, e-learning, and contact should comply with applicable regulations. A programme is accredited per site of delivery. In cases in which the programme is offered in different sites, the HEQC makes an informed decision based on the availability of information to carry out an accreditation process for all sites or to accredit other sites based on information provided.

The HEQC has developed programme accreditation criteria (Table 3.1) for new programmes and accreditation criteria for existing programmes. The accreditation and re-accreditation criteria are categorised using an input, process, output, impact, and review model, the elements of which are interrelated. The accreditation criteria are presented in Table 6.1.

Table 6.1: CHE accreditation criteria

	Programme areas	Assessment stage
Input	1.Programme design 2.Student recruitment, admission and selection 3.Staffing 4.Teaching and learning strategy 5.Student assessment policies and procedures 6.Infrastructure and library resources 7.Programme administrative services 8.Postgraduate policies, regulations and procedures	To be met before the programme can be offered. This is the candidacy stage.
Process	Programme coordination Academic development for student success Teaching and learning interactions Student assessment practices Coordination of work-based learning Delivery of postgraduate programmes	To be met for re-accreditation including the input programme areas.
Output and impact	Student retention and throughput rates Programme impact	
Review	All of the above programme areas	

Source: CHE (2004a, p.28)

The HEQC has developed a manual for evaluators to guide the accreditation process. Key aspects of the programme evaluation process, such as accreditation and re-accreditation criteria, evaluator's report form, information table, instructions in making accreditation recommendations, are addressed within the manual. In addition, brief information about the contractual agreement between the HEQC and the evaluator is given. The manual is labelled "guide for evaluators: accreditation and re-accreditation of programmes submitted to the HEQC" (CHE, 2004a, 2009).

The programme qualification types are clearly placed into nine areas, and designators are applicable to degrees but not to certificates or diplomas. Undergraduate qualifications are classified under higher certificate, advanced certificate, diploma, advanced diploma, and bachelor's degree. Postgraduate qualifications are classified under postgraduate diploma, bachelor honours degree, master's degree, and doctoral degree (CHE, 2009, p.10). The HEQC operates an online system whereby institutions can submit programmes for accreditation. Stakeholders, such as students, have access to the accreditation guidelines (CHE, 2004a, 2004b, 2013).

6.3.2 Malaysian Qualifications Agency (MQA) Malaysia

The Malaysian Qualifications Agency (MQA) resulted from a merger of the National Accreditation Board and the Quality Assurance Division of the Ministry of Higher Education in 2007. MQA has been given the responsibility to take care of quality assurance in Higher Education in Malaysia therefore carries out programme accreditation. The MQA programme accreditation system operates through accreditation committees covering major fields of study: science and medicine, engineering and built environment, information technology and multimedia, arts and humanities, and the social sciences. The evaluation is made by a panel of assessors who present their findings to the respective accreditation committees for an accreditation decision. It is a requirement that accreditation of programmes leading to professional qualifications should be done by or in close collaboration with professional bodies. The professional bodies are established through various Acts of Parliament to regulate the profession and license the professionals to practice. Therefore, if a professional programme is accredited it follows that the programme is recognised by the relevant professional body.

The accreditation process follows self-evaluation, peer review, and an accreditation decision. The standards and criteria for programme accreditation are accompanied by guidelines that are designed to encourage diversity of approach. There are benchmarked standards that must be met and enhanced standards that should be met within the areas of evaluation (Table 3.1). The areas of evaluation are adjusted and applied accordingly to meet distinctive purposes. The same standards and procedures apply to foreign schools. The MQA has developed a code of practice for programme accreditation to guide the institutions.

The MQA has two levels of accreditation, provisional accreditation, which allows the institution to offer the programme, and full or final accreditation that ensures that the programme has met the necessary standards. An institution that applies to start a new programme must demonstrate that it has capacity to offer and sustain such a programme. The institution is expected to apply for programme accreditation at least nine months before the start of the programme. If the institution has demonstrated that it has capacity to run the programme by satisfying the nine areas of evaluation (Table 3.1), especially curriculum design, the programme is placed on provisional accreditation. Failure to achieve accreditation for the programme results in revocation of the provisional accreditation status. The institution can apply for accreditation of the programme only after two years (MQA, 2013).

6.3.3 National Assessment and Accreditation Council (NAAC) India

The autonomous accreditation agencies in India are the National Assessment and Accreditation Council (NAAC) and the National Board of Accreditation (NAB). The NAAC was established in 1994 to assess and accredit institutions of higher education in India under the University Grants Commission. India is said to be one of the largest technical power exporters to the world, however, with the large population and the resulting numerous unaccredited institutions and programmes, some graduates end up with degrees not acknowledged by the outside world (Anand, 2011). India is alert to the need to carry out programme accreditation in all HEIs (NAAC, 2012).

The programme accreditation process follows a two-step approach whereby the institution first seeks eligibility for accreditation by meeting certain requirements through an online application. This step helps the institution to identify deficiencies and work on them before applying for accreditation. Once the institution satisfies the institutional eligibility for quality assessment it can apply for programme accreditation. The NAAC follows the process of self-evaluation, peer review, and accreditation decision using the accreditation standards as set out in Table 3.1. The self-evaluation report is evaluated in-house by NAAC to make sure that it has all the necessary information before constituting the peer review team. The institution is advised to provide any missing information before the self-evaluation report can be passed on to the programme reviewers.

The programme review team evaluates the programme and submits the report together with a confidential grade sheet, worksheets, and other relevant documents to NAAC. The executive committee of NAAC considers the reviewer's report and communicates the accreditation decision to the institution within 90 days of the visit. The reviewer's report is then published on the NAAC website, with appeals considered by an appeals committee. The programmes are accredited on a scale of A, B, C, for those accredited, and D for those that failed to be accredited. Amongst others, the accreditation team validates information supplied in the self-evaluation report to check authenticity and originality in order to guard against unfair practices such as plagiarism (Mishra, 2006, NAAC, 2013).

6.3.4 National Council for Higher Education (NCHE) Namibia

The National Council for Higher Education in Namibia (NCHE) is charged with the responsibility for programme accreditation within TEIs, working together with the Namibia Qualifications Authority to take charge of programme accreditation process. The programme accreditation system applies to all programmes in both public and private institutions. The

NCHE ensures that programmes are accredited in all sites of delivery including offshore provision and all modes of delivery. Imported and franchised programmes are also subjected to the accreditation regulations of NCHE even if accredited in their countries of origin. Some institutions offered programmes before the implementation of the NCHE's quality assurance system and these will not be accredited or re-accredited by the NCHE within the first cycle of activities (2011-2016), except under special calling situations.

A new programme is accredited before being offered, in this stance, the focus of the accreditation process is on evaluation of the programme's capacity or potential to meet the NCHE's criteria within a specified time. It is a requirement that the application for the introduction of a new programme be accompanied by a needs analysis study that supports its introduction. If an existing programme has more than 40 percent of its contents changed, it becomes a new one, or if an existing one is offered at a new site of delivery it becomes a new programme. Evaluation of new programmes follows three stages: validation of the institution's self-evaluation report of the programme against individual criteria and determination of whether the requirements have been met; assessment of the quality of themes; and the accreditation recommendation (NCHE, 2009, p.9). Table 6.2 summarises the assessment criteria applied.

Table 6.2: Assessment criteria for new programmes

Criterion validation	Quality of themes	Judgements on themes	Accreditation recommendation
<i>Good</i> - fully met	<i>Good</i> - Criteria in theme are sufficiently met)	All themes are evaluated as good	Accredited
<i>Satisfactory</i> - relatively met. Deficiencies can be remedied in a short period of time.	<i>Satisfactory</i> -Criteria met relatively well. Deficiencies can be remedied in a short time	Good and satisfactory. No theme is evaluated as poor.	Accredited, with conditions
<i>Poor</i> - insufficiently met. Serious problems exist.	<i>Poor</i> - Criteria insufficiently met. Serious deficiencies exist in many cases	One or more themes are evaluated as poor	Not accredited

Source: NCHE (2009, p.9)

The procedure for accreditation of new programmes and existing programmes are the same as application of the accreditation standards listed in Table 3.1. The programme review panel

can make a decision to accredit the programme just by assessment of the submission of the curriculum, without necessarily going to the site. The accreditation and quality assurance committee of the NCHE then submits the panel's report to the NCHE governing council for approval. It is mandatory that an institution should not offer a programme that failed accreditation. The programme review team is made up of academics from Namibia, the Southern African Development Community (SADC) countries, or other countries where appropriate. A student member is included within the programme review panel.

The institution is expected to conduct an internal review of the programme within two years of graduating the first group of students using NCHE's criteria for the re-accreditation of existing programmes. The same process of self-evaluation, peer review, and approval by NCHE governing council is followed. A programme should establish itself by graduating students and substantiating its graduation rate before it can introduce a higher level of a qualification. Programmes that require the graduate to be registered with a professional body are taken through the accreditation process in conjunction with the relevant professional body (NCHE, 2009).

6.3.5 New Zealand Qualifications Authority (NZQA) New Zealand

The New Zealand Qualifications Authority (NZQA) is mandated to ensure that the qualifications are regarded both nationally and internationally as trustworthy and robust. The NZQA has developed course (programme) accreditation criteria (Table 3.1) that are used by all bodies with delegated responsibility to perform accreditation. Authority for approval of programmes and accreditation within the university sector has been given to the New Zealand Vice-Chancellors' Committee (Universities NZ) while the NZQA has authority to approve and accredit programmes of study in the rest of the higher education sector. All programmes leading to degrees and related qualifications must be approved. The term 'course' is used in New Zealand legislation and is equivalent to programme of study (NZQA, 2010a), therefore in this study the term 'programme' will be used to replace 'course' for consistency.

The programme accreditation process follows an approval and accreditation structure, with programme approval checks of whether it is based on clear and consistent aims, content, outcomes and assessment practices that meet the established criteria and requirements. Programme accreditation ascertains that a provider can deliver an approved programme and sustain the delivery over time. The accreditation status can be granted without a time limit. Once the programme is approved, the NZQA monitors the management and delivery through an annual report produced by the institution and one produced by an appointed monitor who carries out a monitoring visit to the institution at least once a year during the first two to three

years of the delivery of the programme. It is a requirement that approved programmes undergo a major review that embraces input from relevant professional and academic communities every five years. The monitor may recommend that the monitoring visits be suspended after the first cohort of graduates from the programme. Monitoring ensures that the institution meets the accreditation requirements, and is conducted by an experienced academic with high level of expertise in the discipline area.

Accreditation of programmes leading to a qualification that requires professional registration is carried out in conjunction with the relevant professional registration body. In addition, a stakeholder group outside the professional registration body with particular interest in the programme is also considered during the accreditation process. Where the development and delivery of programmes involves collaboration between organisations, such as franchise agreements, consortium arrangements, approval by more than one quality assurance body, NZQA applies some flexibility to avoid excessive duplication of external quality assurance measures. Care is taken to ensure that key issues are satisfactorily addressed. Programmes imported into New Zealand are subjected to the NZQA regulations partly to ensure that they have been suitably adapted to New Zealand requirements. NZQA has specified that the course and qualification titles should be consistent with the New Zealand Qualifications Framework and that they should be made up of a qualification type (such as diploma), a designator (such as computing), and if required a qualifier (for instance, software) (NZQA, 2010b). A programme is offered only after approval and accreditation.

6.3.6 The Tertiary Education Quality and Standards Agency (TEQSA) Australia

The Tertiary Education Quality and Standards Agency (TEQSA) is responsible for regulating the quality of higher education in Australia, both public and private providers including Australian branches outside Australia. A panel independent of TEQSA, the Higher Education Standards Panel, is an expert advisory body established to provide independent advice about the quality of education provision to the Minister(s) responsible for education and research. The panel carries out programme accreditation in higher education, an arrangement that ensures separation of standards setting, monitoring, and enforcement functions carried out by TEQSA. The accreditation status may be granted for up to seven years.

Providers can be authorised to self-accredit some or all of the programmes using the set accreditation standards and criteria (Table 3.1). The provider should satisfy certain conditions, for example having demonstrated their ability to uphold quality standards by maintaining quality assurance measures within the institution and having graduated a minimum of three cohorts with successful graduate outcomes. The providers will still be expected to comply with

the TEQSA accreditation standards and criteria, however, compliance assessment is only carried out on TEQSA accredited courses. The providers who teach graduate courses are expected to demonstrate that the faculty constantly engages in research and contributes to the body of knowledge in the respective academic area. Students in the same disciplines are also part of the scholarly community. Besides programme accreditation standards and criteria, the professional bodies have their own stipulated knowledge areas that should be satisfied for the programme to be accredited (TEQSA, 2011).

6.3.7 Summary of a comparison of the Botswana system to other systems

After a study of the different accreditation systems, an analysis of the findings was made to compare and contrast the Botswana programme system with the six studied systems. The analysis resulted in the extraction of key features which together with findings from Chapter 5, were used in the development of the first prototype. A summary of the comparison of the Botswana programme accreditation system to other systems is presented in Table 6.3. The first column shows the key activities that emerged from the analysis and form part of the programme accreditation process. The second column presents the Botswana system. The outstanding practices that are applied in some of the agencies are presented in column 3 (practices observed). The last column presents recommendations that could be implemented to improve on the Botswana accreditation system to partly answer the research sub-question 3. *The highlighted cells indicate where Botswana needs to consider improvement.* This recommendation is not dependent upon the number of accreditation agencies that practise such, but on the perceived improvement to the effectiveness of the accreditation system once implemented.

Table 6.3: Comparison of the Botswana accreditation system to other systems (Highlighted cells indicate where Botswana needs to consider improvement)

Key activities	Botswana practice	Practices observed	Recommendation for Botswana
Start of the accreditation process.	Institutions apply for programme accreditation.	The practice in all agencies studied is that Institutions apply for programme accreditation.	Common practice. Continue with the practice.
Programme or institutional accreditation.	Programme accreditation. Initially, there was uncertainty between the two but improvement was evident after the first round of accreditation, programme reviewers concentrated on the programme.	Programme accreditation is practised in all the six agencies studied. The programme cannot be completely divorced from the institution therefore at some stage, reference is made to the institution but with particular attention to the programme under assessment.	Programme accreditation. TEC should consider improvements where necessary such as ensuring that the programme review team concentrates on the programme with particular reference to the institution where the programme is concerned.
Accreditation applications.	All applications accepted.	In CHE, MQA, and NAAC applications are considered by accreditation committees to ensure that the application meets the accreditation requirements.	All programme accreditation applications are accepted. However, as the number of institutions and programmes increase, it might be necessary to change the approach such as sampling programmes per faculty/unit.
At what stage is the programme accredited?	One year after being offered.	All the six agencies accredit programmes before being offered and while they are running. NZQA carries out programme approval just like Botswana.	Assess curriculum and accredit before offering. The current practice of programme review (Section 2.7) can be strengthened by applying relevant criteria from the accreditation guidelines.
Mandate to carry out accreditation.	TEC is mandated to carry out programme accreditation and in the process engages experts in the field.	Some agencies appoint experts and others such as CHE, MQA, TEQSA, and NZQA appoint independent bodies to run the process.	Botswana appoints relevant experts per programme and these can be considered as independent bodies since they come from various sectors outside the TEC.
Programme accreditation process.	Self-evaluation followed by validation by reviewers (peers) through site visit.	All agencies studied practice self-evaluation followed by validation by reviewers (peers)	The accreditation process can be improved by further training of the TEC, TEI, and programme reviewers.
Programme reviewers.	Peers and industry people review the programme. Students participate through interviews only.	Peers and industry people review the programme. NCHE includes a student in the review panel.	It is a requirement that industry should be represented in the panel. Botswana can consider including student member as per the governance of good practice and as the system matures.
Institutions involved.	Accreditation is carried out in private tertiary education institutions only as per the dictates of the law.	All accreditation agencies studied accredit programmes in both private and public institutions.	Programmes in both public and private institutions should be accredited. The education system of Botswana refers to both public and private institutions (Section 2.2), as such, both institutions should be given a chance to quality assessment through programme accreditation.

Table 6.3: Comparison of the Botswana accreditation system to other systems (Highlighted cells indicate where Botswana needs to consider improvement)

Key activities	Botswana practice	Practices observed	Recommendation for Botswana
Types of programmes.	All programmes, including franchised/offshore, are eligible for accreditation.	All programmes are eligible for accreditation in all the agencies.	Botswana accredit all programmes regardless of the place of origin.
Sites of delivery	Main campus even though the regulations provide for accreditation in all the sites of delivery (Section 5.3.4).	CHE and NCHE state that programmes should be accredited at all sites of delivery.	Programmes should be accredited at all sites of delivery (Section 3.4 and 5.4) in order to get evidence as to whether what is practised in the main campus is duplicated in the satellite campuses. Such attestation is important to ensure that learners on either site are not disadvantaged.
Mode of delivery.	Traditional/contact mode of delivery. No other mode of delivery had been accredited.	CHE and NCHE state that programmes should be accredited in all modes of delivery. NAAC does not cover distance education.	Since different modes of delivery are encouraged, programmes should be accredited on all modes of delivery. The accreditation process could be adapted for such.
Standards.	Standards are similar to other countries (Table 3.1). Botswana applies one set of standards for all programmes.	All the six agencies have standards for specialised programmes and different levels of accreditation.	A standalone standard to cater for disadvantaged groups should be included.
Accreditation recommendation.	No grading system to guide reviewers, reviewers use own discretion to come up with a recommendation.	CHE, MQA, NAAC and NCHE uses a grading system to guide the accreditation recommendation.	Botswana should introduce a grading system that could be transparent and assist the reviewers to arrive at an accreditation recommendation.
Who pronounces the accreditation decision?	The accreditation recommendation goes through three committees before it can be approved as a decision pronounced by the Minister of Education and Skills Development.	NAAC, NCHE, TEQSA, and MQA get the accreditation recommendation from the accreditation panel, sanctions or the accreditation decision or otherwise, and informs the institution.	Introduce accreditation panel to avoid the long decision making process and take the panel's decision as final. Composition of the panel should include TEC and relevant stakeholders.
When are the accreditation results pronounced?	Has taken more than a year for institutions to be informed of their accreditation outcome.	All studied agencies pronounce the accreditation decision in less than a year.	The accreditation should be communicated to the TEI within three months of the accreditation site visit.
What happens to programmes put on provisional deferred accreditation?	Institutions are encouraged to work on the defects and monitoring and reassessment is done to ensure action is taken.	Revocation of provisional accreditation and the programme is withdrawn.	Might have to consider revocation once the programme is given provisional accreditation before offer. Will depend upon several decisions.
Publishing of reports.	Reports have not yet been published but there is provision.	NAAC publicises reports on the websites for public consumption.	Publish reports as per the policy.

Table 6.3: Comparison of the Botswana accreditation system to other systems (Highlighted cells indicate where Botswana needs to consider improvement)

Key activities	Botswana practice	Practices observed	Recommendation for Botswana
Guidelines	Only accreditation guidelines available.	CHE has developed other guidelines.	Develop an accreditation manual to assist in understanding the regulations.
Self-accreditation	None so far. The system is still young.	TEQSA, permits institutions to do self-accreditation following criteria set by the agency once satisfied that the institutions have capacity to do as such.	To consider as the system matures. Institutions are still getting used to the accreditation process.
Re-accreditation.	Not yet due but catered for in the regulations.	All studied agencies have been operating for some time and do re-accreditation of programmes.	Re-accredit when time is due. Botswana has an allowance for re-accreditation of programmes.
Monitoring progress.	Done by TEC as per the regulations. Where the programme was not accredited, re-assessment for accreditation is done once major recommendations have been addressed.	NZQA appoints a monitor to assess the progress on implementation of the accreditation recommendations and produces a report every year until satisfied with the institution's quality assurance structures.	Consider appointing a monitor and ensure programme is re-evaluated immediately after graduating first cohort of students. A monitor could assist to ensure that the recommendations are complied with and improvement to the programme is made.
Qualification types.	Not stipulated. Institutions follow nomenclature as it suits them.	CHE clearly stipulated the qualification types in line with SAQA.	Clearly state qualification types. Might have to follow BQA guidelines.
Introduction of a higher qualification.	TEC allowed institutions to offer a higher level qualification even before evidence of success of the lower level.	NCHE allows the institution to introduce a higher level qualification only after demonstrating capability to offer lower level.	It would be prudent to ensure that an institution has capacity to offer the programme that it has been allowed to run, before introduction of a higher level. This could assist to take care of articulation issues since students' should have opportunities for progression to higher qualification.
Professional qualifications.	Accredited just like other programmes with no special management.	MQA and NZQA involves professional bodies and once a professional programme is accredited, it is recognised by the relevant professional body. TEQSA provides knowledge areas that should be complied with for accreditation to be awarded.	Involve professional bodies either in the actual programme accreditation process or in the development of the accreditation standards. This might lead to having an agreement that a TEC accredited professional qualification will be recognised by the professional body as such, duplication of assessment would be avoided

Out of the 24 key activities listed on the summary table (Table 6.3, above), Botswana already practices nine. The remaining 15 are not practiced in Botswana therefore they partly informed the development of Prototype 1. This indicated the improvement needed to the Botswana accreditation system and thus provides an answer to research sub-question 2: *How does the Botswana Programme accreditation system compare with other systems?* The answers to the research sub-question together with consideration of the responses from the needs and context analysis (Chapter 5) indicated some of the limitations in the Botswana programme accreditation system.

6.4 Design Principles for Prototype 1

The design principles for Prototype 1 were developed by consolidating those from Chapter 5, Box 5.1 (Phase 1-Part design principles for Prototype 1) with those that arose from comparison of the Botswana accreditation system with other systems (highlighted in Table 6.3). The principles are classified under three sections: TEC, TEI, and programme reviewers to signify who should make improvements. The separation indicates that most of the improvements should be made by the TEC.

Box 6.2: Design principles for Prototype 1

TEC

- a) There should be a distinction between programme accreditation and institutional accreditation. The guidelines used for programme accreditation should reflect such.
- b) Programmes should be accredited in both private and public institutions, in all sites and all modes of delivery.
- c) A grading system should be introduced to guide the accreditation decision.
- d) Qualification types of programmes should be clearly stated and the next level of a programme should be introduced only after demonstrating capability of the lower level.
- e) An accreditation panel should be introduced to avoid the long decision making process and the panel's decision taken as final. Composition of the panel should include TEC and relevant stakeholders including professional bodies.
- f) A monitor should be appointed to ensure that a programme is re-evaluated immediately after graduating the first cohort of students.
- g) A standard to cater for disadvantaged groups should be introduced.
- h) There should be capacity building for the TEC staff, TEI and programme reviewers on the programme accreditation process and standards.
- i) The self-evaluation report should be assessed by the TEC before giving it to the programme reviewers.

<ul style="list-style-type: none"> j) The TEC should develop the assessors' manual to guide the programme reviewers during the programme accreditation process. k) The curriculum should be assessed and accredited before being offered. l) Programme accreditation reports should be published as per the policy.
<p>TEI</p> <ul style="list-style-type: none"> a) The institution should provide all necessary information required for the programme accreditation process. b) The institution should make preparations so that all sites of delivery are visited for assessment. c) The self-evaluation report should follow the guidelines as provided by the TEC, and these should take cognisance of the programme accreditation standards. d) The institution should be transparent during the programme accreditation process, that is, point out strengths, weaknesses, and indicate where they have challenges to arrest the situation. e) The institution should act on the recommendations immediately after receiving the first draft of the report.
<p>Programme Reviewers</p> <ul style="list-style-type: none"> a) The programme reviewers should prepare for the programme accreditation process by reading the self-evaluation report before visiting the institution. b) The programme reviewers should focus on the programme, assess all necessary areas and produce a report that clearly communicates the findings including the delivery site.

The principles that could be applied to make improvements to the Botswana programme accreditation system were taken through formative evaluation to ascertain consistency and practicality of the system once the recommendations are applied. This was important because the programme accreditation system should be consistent and practical in all the tertiary education programmes. The evaluation concentrated on the content and technical quality of the design principles to assess relevancy, consistency, and practicality.

6.5 Formative Evaluation of the Design Principles for Prototype 1

The consolidated design principles for Prototype 1 (refer Box 6.2 above) were sent to quality assurance practitioners for formative evaluation to ascertain their practicality. This section starts with presentation of the research design by describing the sampling process that was used to obtain a team of evaluators, and the data collection and analysis strategy that was used to carry out the evaluation (Sub-section 6.5.1). Feedback from the evaluators (Sub-

section 6.5.2) and a reflection on the feedback (Section 6.5.3) precedes consolidation of design principles for Prototype 1 (Sub-section 6.5.4).

6.5.1 Research design

The practitioners were given the design principles (Box 6.2) to evaluate using the screening approach. Although the respondents were not directly part of the research team they were considered relevant to do the screening of the recommendations because they were actively involved in the programme accreditation process and hence were conversant with the existing programme accreditation system, thus able to recognise suggested modifications made to the programme accreditation system and assess the impact and practicality of the changes.

Sampling programme accreditation practitioners

Programme accreditation practitioners were sampled to evaluate the recommendations for design principles of Prototype 1. Convenience sampling (Patton, 2002) was used to get the respondents. The practitioners were sampled basing on their expertise which was evident during active involvement in the Botswana programme accreditation exercise. In addition, the selection criteria was that the practitioners should:

- a) be at administration level
- b) be in charge of quality assurance activities at own institution
- c) have more than five years teaching experience
- d) have attended at least one TEC institutions' programme accreditation workshop
- e) have attended TEC workshop at own institution.

The selected respondents met at least four of the above criteria. The ethical issues in research, such as freedom to participate or not to participate were considered. The following four accreditation practitioners evaluated the recommendations:

1. The institutional administrator holds a master's degree in education and has nine years' experience in the tertiary education setting. He joined the TEI as a quality assurance officer and ascended the institutional ladder to join institutional management. His participation in and enthusiasm for quality assurance activities were evident in the quality assurance measures that he engineered in the institution in which he was working.
2. As of 2013, the officer had worked in the quality assurance section for more than seven years. In order to gain international experience she travelled to several countries and

participated in several workshops that dealt with programme accreditation. She brought to the quality assurance section a wealth of experience from the education sector spanning over 25 years as a teacher and an administrator of several schools. She holds a master's degree in education.

3. The academic held two master's degrees, one in education and one in business administration. He came into the Botswana education system after amassing experience from different countries. In Botswana, he taught in both private and public institutions. He has held senior administrative posts in the tertiary education setting. He is one of the first people to be trained on programme accreditation at both institutional level and at programme reviewer level. The academic was in charge of programme accreditation in his institution and he has also participated in several programme reviews for accreditation. At the time of data collection, he had over 20 years' experience in higher education.
4. At the time of sampling practitioners, the programme reviewer had made three programme reviews for accreditation. He prepared for the programme accreditation process in his institution. He held a master's degree in education studying towards earning a PhD. He had taught in the higher education sector for over 15 years and was now at head of department level. He taught in both public and private institutions outside Botswana, but had only the experience of teaching in private institutions in Botswana.

The initial plan was for the guidelines to be assessed by the quality assurance officers in TEC only, however, the small population size was not helpful because of the possible three only one officer gave feedback, hence another strategy of involving programme reviewer, administrator, and an academic sufficed, culminating in four evaluators

Data collection and analysis

The assessment centred on the content and technical quality of the design principles, on which the practitioners were asked to comment, assessing their practicality if applied to the Botswana accreditation system. The design principles listed under Box 6.2 were turned into a checklist of *yes or no* response and the practitioners asked to indicate whether they agreed or disagreed with them by responding to the checklist. This had a space for comments, however, the respondents did not make any, preferring to tick mainly the 'yes' column, thus agreeing with all the suggestions. Another request was sent to the same team to respond to a summary of the design principles, the response to which is captured under Sub-section 6.5.2. The

evaluation method applied was walkthrough with focus on practicality. The following questions and statement further guided the formative evaluation of the design principles:

- 1) Do you think applying the following design principles to the current Botswana accreditation system will make an impact to the system?
- 2) What kind of impact?
- 3) Kindly go through each principle and state your opinion regarding the practicality of the suggestions.
- 4) Will the improved system be relevant, effective, and practical?

A summary of feedback from the practitioners is presented.

6.5.2 Summary of the formative evaluation

Given the recommendations for design principles to critique, the respondents agreed with them and stated that generally the principles were clear and straightforward. A summary of their feedback that is not reflected in the findings (to avoid repetition) is as follows:

- a) There is need for a shared vision and commitment to quality by all concerned educational practitioners.
- b) Institutions should take responsibility for the quality of their programmes.
- c) An effective programme accreditation system should focus on accrediting institution's programme design and development processes and not the programmes themselves. Such a system could encourage diversity and innovation by forcing institutions to invest upfront in their processes and on quality, hence freeing up the regulator's resources to focus on process quality assurance.
- d) Programme accreditation approach or standards must be in an integrated model to ensure that graduates are internationally marketable.
- e) Prudence should be exercised in developing standards to avoid standardisation within institutions.
- f) Cultural requirements, such as learner behaviour, knowledge, tradition, and other influential factors should be considered during the programme accreditation process.
- g) Strategies to develop personal qualities of a learner, such as basic competencies, bridging courses, and internship modules should be incorporated within the system.
- h) Requirements for infusing skills and habits of learners, such as graduate profile, entrepreneurialism, leadership, embedding professional practice or apprenticeship within the programme/curriculum, adopting innovation, and language should be highlighted.

- i) The criteria that are used to appoint the review team should be clear.
- j) The issues of adequate capacity and resources are very important for a fair and comprehensive programme accreditation process to be manageable. Training and system orientation, including the appropriateness of professional mind-set of the team could go a long way in coming up with a credible programme review system.

The suggestions were considered during the development of Prototype 1.

6.5.3 Reactions to the practitioners' evaluation

From the programme accreditation practitioners' appraisal on the suggested design principles, it can be surmised that accreditation systems and their activities should provide lasting benefits and competitive advantage to students, institution, job market or industry, and society otherwise programme accreditation becomes routine without indispensable benefits. The research objective hereafter still stands, to find out what can be done to improve on the Botswana programme accreditation system, after attesting that there are limitations that need to be addressed.

The practitioners generally agreed with the design principles. The core issues raised centred on the grading system to support the accreditation decision. Consideration of emerging issues such as cultural requirements were also mentioned. Capacity building for all active participants during the accreditation process emerged. In addition, some issues that need to be discussed were raised, recommending that instead of accrediting individual programmes the TEC should consider accrediting the programme design and development processes.

The assessment of the quality of the education system should start with the quality of the processes, thus the assessment of the quality of the programme should start with the quality of curriculum development. However, in the current setup, two specific requirements and criteria for accreditation in the programme accreditation guidelines cover programme design and delivery. The requirements and criteria are design and development of programmes (TEC, 2008, p.C.675) and delivery and management of programmes (TEC, 2008, p. 679). This arrangement of assessing the quality of the curriculum under the stated requirements and criteria for accreditation seems relevant. Checking of the institutional curricular development processes can be done at institutional level when examining the quality management system of the institution. The suggestion implies that the overall development process of programmes per institution should be accredited (curriculum development) and by further inference the quality of the programmes would be established as per the accreditation requirements. The curriculum development structures can be well developed and in place, just as a good

curriculum can be in place. However, good structures in place do not guarantee proper implementation processes. The purpose of programme accreditation is to assess active programmes, hence the site visit, and therefore the suggestion would not address the purpose of programme accreditation for programmes that are in operation.

Furthermore, the intention of the programme accreditation system is not to standardise the programmes and the processes but rather to assist in improvement of the programme besides accountability considerations. The programme accreditation system checks on whether the programmes conform to threshold standards therefore leaving room for institutions to diversify and display their uniqueness. Innovation and diversity of the programmes cannot be affected by the programme accreditation system because the accreditation system evaluates programmes as individual programmes taking cognisance of their differences, hence the use of experts. The robustness of the programme accreditation system should be directly related to the dynamics of the education system and taken care of at all stages to ensure that the end product (graduate) is of marketable quality.

6.5.4 Consolidation of evaluated design principles for Prototype 1

Based on the consulted programme accreditation practitioners generally agreeing with the proposed design principles, modifications were made to the accreditation system and incorporated in the consolidated design principles. The first prototype of the accreditation system resulted, however, only design principles that could be accomplished within a short time and that were within this research's sphere of activity were applied. The design principles that would require policy change, such as a protocol for pronouncing accreditation decision, carrying out programme accreditation in both private and public institutions, and the production of a programme reviewer's guide, require more time. These recommendations found their way into the final recommendations resulting from this research. Prototype 1 was therefore ready for try-out by carrying out the programme accreditation process within three institutions. The listed modifications (see Box 6.3) resulted in a different approach, thereby resulting in a different programme accreditation system, hence Prototype 1.

The design principles (Boxes 5.1 and 6.2) were consolidated and applied to make changes to the current programme accreditation system in preparation for the try-out of the modified programme accreditation system. The following was carried out:

Box 6.3: Changes made to the programme accreditation system resulting in Prototype 1

- a) The programme accreditation teams and the sampled institutions were trained before the commencement of the programme accreditation exercise. The TEC officer (the researcher) facilitated the training taking cognisance of the changes that ought to be made to the accreditation process.
- b) The institutions submitted draft self-evaluation reports to the TEC and all reports from the three institutions for all the programmes were read and sent back for improvement. Glaring omissions, such as not providing quantitative data on student enrolment per programme and number of academics plus their qualifications, as well as provision for internship where necessary, were some of the noticed shortcomings. The improved self-evaluation reports were then sent to the programme reviewers at different lag times to try and assess the effect of sending the reports in advance.
- c) All the three parties (the TEC, the TEIs, and programme reviewers) were clear that the accreditation was for the programme, not institutional accreditation, therefore the self-evaluation reports focussed on the programme and information provided was about the programme.
- d) Emphasis was made through the programme accreditation report guidelines that the programme accreditation report should be self-explanatory and all biographical data about the institution like name and site of delivery should be supplied in the report. In addition, the programme reviewers were encouraged to assess the quality of the programme by assessing the curriculum and comparing it to what has been covered.
- e) The TEC held meetings with the institutions to prepare for the accreditation site visit. The site visits were carried out to three institutions at different times.
- f) The programme accreditation teams had relevant expertise in the programmes that were to be accredited.

The effectiveness of the modifications to the system was then evaluated by holding interviews with people who had participated in the programme accreditation process (the try-out cycle, refer Figure 4.3, Phase 2).

6.6 Try-out of Prototype 1 of the Programme Accreditation System

Given that programme accreditation is implemented in private TEIs only, try-out of the first prototype was achieved by carrying out programme accreditation processes in three private TEIs. Circumvention to perform one programme accreditation process or three programmes in one institution for the try-out cycle was a drive to improve on the quality of the findings by testing the prototype on different environments. The purpose of this was to assess the consistency and practicality of the modified programme accreditation system through a programme accreditation process. The consistency and practicality was ascertained through

feedback from the assessment of three programmes in three different institutions, and a triangulation of the feedback received from the programme reviewers. The research procedures for the try-out are reported in Sub-section 6.6.1, starting with the sampling process for institutions and programme reviewers, followed by data collection and analysis strategy. Observations and findings from the try-out activity are reported in Sub-section 6.6.2.

6.6.1 Research procedures

Prototype 1 was developed by making modifications to the Botswana programme accreditation system (refer to Section 2.6) as per the changes listed in Box 6.3 above, therefore a different programme accreditation system resulted in Prototype 1. Programmes that were ready for accreditation were sampled for try-out of Prototype 1, to ascertain whether changes made to the programme accreditation system would result in any improvement to the programme accreditation process. Knowing the impact of the changes to the programme accreditation process helped to discern good practices in order to get closer to distinguishing characteristics of an effective programme accreditation system. Thus, the evaluative foci was consistency and practicality.

Sampling of institutions

Purposive sampling was used to obtain one programme per institution from three institutions that had not gone through the programme accreditation process. A decision to use institutions that had not experienced the Botswana programme accreditation process was to guard against improvements that the institution might have made to their internal processes and procedures resulting from experiences during the previous accreditations. The institutions had programmes that were ready for accreditation and as per the TEC procedure had applied for programme accreditation. Thus, the sample for the first prototype was three institutions and three programmes.

Sampling programme reviewers

Programme reviewers were sampled to facilitate assessment for programme accreditation. Based on the programmes to be accredited, the curriculum vitae for programme reviewers supplied relevant information that was used to sample them. The key criteria used for the selection was the reviewer's qualification, specialisation and experience; employment details, and their availability. Nine programme reviewers were thus engaged to make three programme accreditations. The reviewers were selected from the TEC data base using the above criteria, with particular reference to the appropriateness of the reviewer's qualifications

to the programme. The credentials for the programme reviewers are listed in the third row of Table 6.4 (below).

Data collection and analysis

Table 6.4 summarises activities that were carried out for the whole programme accreditation process (refer Section 2.6). The presentation begins with training of the institution to pronouncement of the accreditation results. Training was carried out at the same time and the accreditation visit at different times, resulting in different schedules for various assignments. Succinctly presented, the following data were collected for the accreditation processes carried out from the try-out cycle in three institutions:

Table 6.4: Prototype 1 try-out activities

Activity	Institution A	Institution B	Institution C
Date of training on the production of the self-evaluation report	27/09/12	27/09/12	27/09/12 (re-training)
Programme reviewers	2 university academics (PhD) 1 private practice (Masters)	Civil servant (PhD) University academic (Masters) University administrator (PhD)	University academic (PhD), Technical college academic (MTech), Private practice (PhD)
Training for the reviewers	27/03/13	25/06/13	18/10/12
Date self-evaluation report given to the reviewers.	27/03/2013	25/06/13	18/10/12
Date of the site visit	15/04/13 to 17/04/13	26/06/13 to 28/06/13	31/10/12 to 2/11/12
Programme accreditation report finalised	19/06/2013	20/11/13	08/02/13
Feedback to institution about accreditation status where the programme is not accredited	02/07/13	26/02/14	17/03/13
Re assessment for accreditation [2 nd site visit] because the programme was not accredited first round.	31/10/2013	21/02/14	Not yet as at 01/04/14
Final accreditation report	01/11/2013	25/02/14	Not yet as at 01/04/14
APDC DECISION	18/11/2013	05/03/14	Not yet as at 01/04/14

Green row indicates when the programme accreditation report was finalised.

Since the programme accreditation process involves training of the institution and of the programme reviewers, a different approach to the Botswana programme accreditation process was followed, whereby all institutions that were to go through the accreditation process were trained. On all occasions, the reviewers were given the self-evaluation reports immediately after the training and the site visit was made at different times to enable assessment of the impact of the time difference. Logistical arrangements for the site visit were made (refer Section 2.6). The programme reviewers assessed the programmes and produced programme accreditation reports against the modified programme accreditation system as reported lower in Table 6.4. The programme reviewers took three days per programme (Table 6.4) carrying out interviews, document analysis and class observations to ascertain the contents of the self-evaluation reports (Section 5.3). Observations were made from the try-out programme accreditation process. A research cycle (Section 6.7) was carried out to find the impact of the changes made by the modifications to the system. Following are observations from the try-out cycle.

6.6.2 Observations from the try-out cycle

Table 6.4 shows improvement in the turnaround time during the try-out accreditation cycle as compared to the first cycle as stated in Chapter 1. The accreditation report went through the necessary steps of production of the report by programme reviewers, first reading by the TEC, forwarding to the institution to check factual errors, and then returning the accreditation report to the programme reviewers to consider input from the institution before being finalised (Chapter 2, Section 2.6).

The row shaded green is a very important step in the turnaround time, because if the accreditation recommendation was *accredit*, the decision process would start immediately, but if it was *provisionally accredit, deferred, or reject* (Chapter 2, Section 2.6) the institution would be called in immediately after the management's meeting and advised to work on the recommendations. The time between the accreditation visit and the production of the accreditation report for the three programmes varied from two months to five months. The accreditation reports from institutions A and C were finalised within two and three months respectively.

The two reports were professionally written and the institutions accepted all factors contained within the reports, therefore the processing time was shortened. The accreditation report for institution B was professionally written but had areas that needed improvement, which, by deduction, the institution realised that the accreditation decision did not favour them (the accreditation report was sent to the institution without the accreditation recommendation). The

institution took more than a month responding to the recommendations, which was not the purpose of sending the draft accreditation report. Taking into consideration all these factors, it would be reasonable to expect the finalised report from the reviewers within three months.

It is evident that if the programme reviewers were trained and given the self-evaluation report at least two weeks in advance, the accreditation process's turnaround time and maybe the quality of the process would be improved. However, the responsiveness of the institution had a great influence on the processing time. Though the TEC had very little control in getting feedback from the TEI, persuasion ought to be exercised to try and encourage the TEI to honour timelines. TEC delayed in giving feedback to the third TEI, which should not be the case, again the sensitivity and the quality of service from the TEC to the TEI is crucial. The institution could not be given the report immediately because there was a delay in assessing the recommendation from the programme reviewers before being passed on to the TEI.

The decision process from the final submission of the report by programme reviewers to pronouncement of the accreditation recommendation by the TEC Council (Chapter 2.6) was shortened because any reports that were available were acted upon timeously. In one instance, the accreditation report was considered by the TEC internal structures at the same time. The arrangement seemed ineffective because management raised pertinent issues that were usually dealt with at the directorate level. It was evident that having a combined meeting with management to decide on the recommendation could only be beneficial if initial assessment to corroborate or disagree with the programme reviewers was effectively made. The vital step in the decision-making process could then be determined by who makes the final recommendation so that the institution could be informed. The APDC and the Council held four scheduled meetings in a year and the accreditation system could be structured in such a way that the time lapse between final accreditation report and the meetings was reduced.

Several issues resulted from the analysis of the improved programme accreditation process, listed in Box 6.4.

Box 6.4: Issues raised from the try-out cycle

- i) The institution should be trained at least nine months before the expected date of the programme accreditation process to allow time for the production of the self-evaluation report, bearing in mind that programmes should be accredited within a year of running.
- ii) The programme reviewers should be trained and given the self-evaluation report at least two weeks before the site visit (training need should be determined).
- iii) The programme reviewers should present the draft report to the TEC within six weeks after the site visit.
- iv) The institution should give feedback to the TEC within two weeks of receiving the accreditation report.
- v) The TEC should re-organise the decision-making process to avoid delay in conveying the programme accreditation decision to the institution.
- vi) The TEC should set the timelines (turnaround times) for the accreditation process.
- vii) Publicly known standards of operation to all concerned parties (the TEC, the institution and the programme reviewers) should be developed to guide the accreditation process.

The issues raised from the try-out cycle (Box 6.4) corroborate the design principles listed in Box 6.2 and the changes made to the accreditation system in preparation for the try-out cycle (Box 6.3), as shown in the next table (Table 6.5). Box 6.4 is more specific than Box 6.2 and gives advice because the recommendations came after a try-out cycle. Table 6.5 presents the issues raised from the try-out cycle (Box 6.4), the changes made to the accreditation system (Box 6.3), and the design principles as listed in Box 6.2. The rows indicate the corresponding activities or outcomes realised as a result of implementing the recommendations during the try-out session. The empty spaces signify that there was no corresponding finding or activity.

Table 6.5: Validating the design principles

Box 6.4 Issues from try-out of Prototype 1	Box 6.3 Changes made to the accreditation system	Box 6.2 Design principles for Prototype 1	Effects of the change to the Botswana accreditation system
1. Train TEI nine months before the accreditation process.	Training done in advance. Focus report on the programme.	Capacity building for TEI. TEI provide all necessary information.	Nine months seemed sufficient to produce the self-evaluation report.
2. Train programme reviewers in time. Give reviewers the self-evaluation reports in advance.	Self –evaluation reports quality assured by TEC and corrections made. Reports given to programme reviewers in advance.	Capacity building for programme reviewers. They were given self-evaluation reports in advance to read and prepare.	Quality of the reports improved. Complaints from reviewers minimised.
3. Report to TEC from reviewers within six weeks.			Reasonable time as observed from the try-out.
4. Feedback from TEI to TEC within two weeks.			Time achievable. Current practice in TEC.
5. Reorganise decision making process.		Accreditation panel.	Policy issue.
6. Set turn-around times.	Times set.	TEI to act on the recommendations timeously.	Improvements evident in responses.
7. TEC develop standards of operation.	Standards of operation agreed upon.	Distinction between programme and institutional accreditation. Develop assessors manual.	Could assist to guide the process

The design principles that were not addressed from Box 6.2 are:

- a. Programmes should be accredited in both private and public institutions, in all sites and all modes of delivery.
- b. A grading system should be introduced to guide the accreditation decision.
- c. Qualification types of programmes should be clearly stated and the next level of a programme should be introduced only after demonstrating capability of the lower level.
- d. A monitor should be appointed to ensure that a programme is re-evaluated immediately after graduating the first cohort of students.
- e. A standard to cater for disadvantaged groups should be introduced.
- f. The curriculum should be assessed and accredited before being offered.
- g. Programme accreditation reports should be published as per the policy.

- h. The institution should make preparations so that all sites of delivery are visited for assessment.

The above recommendations are necessary and could make a positive impact on the accreditation system, however, they could not be applied onto Prototype 1 because some of them (a, d, e, and f) were policy issues, while the others needed a longer period to be implemented (b, c, g, and h). Although operational, they could not be implemented immediately.

The impact of the changes made to the accreditation process were further assessed by interviewing a sample of programme reviewers, students, and administrators as reflected in the design research model (Figure 4.3).

6.7 Reflections on Implementation of Prototype 1

The main purpose of carrying out programme accreditation in different institutions was to see how the revised programme accreditation system would perform. Using three institutions and three programmes helped in assessing the consistency and practicality of the programme accreditation system and, in the same vein, going through interview sessions with students, administrators, and programme reviewers. The research procedures for the interview sessions are reported in Sub-section 6.7.1, stating sampling of students, institutional administrators and programme reviewers, followed by data collection and analysis strategies. Presentation and discussion of the findings is in Sub-section 6.7.2 while Sub-section 6.7.3 presents development of design principles for Prototype 2.

6.7.1 Research procedures

After try-out of Prototype 1, interviews of different categories of people, namely students, programme reviewers, and institutional administrators, who participated in the try-out of the accreditation process were conducted. The aim of the interviews was to collect data that could be analysed to reveal and assess the impact of the changes that were made to the existing programme accreditation system.

Students

Two focus group interviews of students from reviewed programmes comprising seven respondents and five respondents were conducted. Institutional administration was requested to select ten students each from the reviewed programmes, however, it was not possible to get the requested student numbers. After a few attempts the two groups were interviewed. The difficulty in getting the preferred numbers was due to students' schedules and their

unwillingness to participate. Although availed in the third institution, they stated that they did not know what the interview was about therefore no data was collected from them.

Programme reviewers

The programme reviewers who reviewed the programmes during the try-out session formed the research population for this cycle. All the programme reviewers were targeted through interviews at different times, due to their different schedules. Three individual interviews, and three focus group interviews were conducted.

Institutional administrators

Four institutional administrators whose institutions went through the try-out session of the programme accreditation process were purposively sampled for interviews. The interviews were conducted at individual institutions. In one institution, two administrators attended the interview session, although only one was requested. This did not affect the interview process because the administrators complemented each other. In one TEI, an institutional administrator who was reportedly resisting the programme accreditation process was also interviewed to obtain her views about programme accreditation.

Data collection and analysis

The interview protocol was prepared with reference to the design principles (Box 6.3). The institutional administrators (Appendix J for interview schedule) and programme reviewers (Appendix F for interview schedule) were mainly asked for their observations about the programme accreditation system, whether it measured what it ought to measure, and if the guidelines were sufficient for the programme accreditation process. In a way, assessment of the impact of the changes in the programme accreditation system was made through the interview process. The respondents were asked to advise on any missing aspects, give credit and censure where necessary. In addition, the programme reviewers were asked to give reflections about the process, the standards, the arrangements, capacity to carry out the accreditation process by the TEC, and the process at the institution.

The approach that is articulated in Chapter 5 (Section 5.2) of this study was followed in analysing qualitative data. One hermeneutic unit was prepared for data analysis for programme reviewers and institutional administrators (10 interview transcripts). Information received from students' interviews was analysed separately through thematic analysis. However, students' input was very limited. Efforts to probe for more information did not yield much. Information collected on the programme accreditation report and on the programme

accreditation recommendations did not show much variation from the analysis in Chapter 5. The key features that resulted from the interview analysis are presented in this section. Any repeating data that was realised was not reported but was reflected in the summary of findings.

6.7.2 Findings

The presentation is made under seven topics: capacity building; the programme accreditation standards, requirements, and criteria; the self-evaluation report; the programme accreditation site-visit; the programme review team; curriculum development; and students' interviews. Students did not present much data. The interview for students was mainly to assess their awareness of and participation during the programme accreditation process (Refer Appendix I for interview schedules).

Capacity building

Capacity building for people who run the programme accreditation process still arose as a critical issue. The programme reviewers believed that their training was not sufficient and suggested that there should be preliminary training whereby a dummy programme review could be performed. After the training, the programme reviewers should be given a reviewer's manual that they could refer to during the process. Some reviewers actually suggested that '*a checklist that will assist the reviewers to grade objectively during the accreditation process*' (P8, 8:25, 33:33) (P9, 9:27, 77:77) would be valuable. In addition, a refresher meeting before an accreditation process would be ideal to remind them of the key issues during the programme accreditation process. The programme reviewers stressed the need to perfect the assessor's skills in assessing the standards, including interview skill's training.

Two institutional administrators expressed concern that senior TEC officers did not agree, the first of which said, '*I hold TEC with high esteem and if senior members disagree on the process, it causes concern, my assumption is that when we are called, we are told what has been agreed upon, not personal opinions*' (P7, 7:11, 32:32). The second administrator concurred with the first, '*There was a lot of fighting between TEC and the accreditation manager, they were not agreeing on a lot of things*' (P1, 1:19, 43:43).

It is clear that the reviewer's expertise and the TEC's expertise are key to the success of an accreditation process. One of the reviewers asked a question which indicated that it is important to carry out a review of each programme accreditation exercise, '*If it wasn't for your PhD, would you do this? It is important to brief TEC immediately after the visit just as we brief the institution*' (P8, 8:16, 46:46). The point made is critical to the whole programme accreditation process. One institutional administrator, also on the lack of professionalism in

handling the accreditation process, said, '*Feedback took longer than we were promised. We were promised three weeks but it came after three months. One programme report came as a mess, it was not satisfactory*' (P7, 7:7, 32, 32).

Based on information from the research cycles it can be concluded that:

- a) A specialist programme accreditation unit in TEC with the right calibre of staff could help to alleviate the discrepancies experienced during the accreditation process.
- b) Guidelines and operational procedures should be clearly laid out to guide the members of TEC staff, the programme reviewers, the institution, and stakeholders.

The programme accreditation standards, requirements, and criteria

The programme accreditation standards, requirements, and criteria were said to be satisfactory. One stand-alone requirement and criterion that was conspicuously lacking was on access and equity. The criterion would cater for inclusive education, inclusiveness of programmes, and education for all. The accreditation team had a reviewer from the special education unit, deliberately included in the team to assess if the accreditation guidelines and process provided for disadvantaged groups:

I am coming in with the disability aspect, that institution does not have provision for people with disabilities. Delivery of the programme assumes that all the students will be normal. Institutions should comply with international standards on disability, it is like they are not obliged to provide for people with disabilities (P8, 8:9, 32:32).

However, further discussion on the standard on disabilities landed on the inclusive term of disadvantaged people, that:

- c) There should be a standard that caters for all forms of disadvantaged groups. Disadvantaged groups include slow learners, fast learners, people with disabilities, and marginalised groups.

The self-evaluation report

There was improvement in the quality of the self-evaluation reports evidenced by reduced queries from the programme reviewers. The reports were directed towards the programmes and the improvement could be attributed to assessment of the reports before the accreditation process and improvements having been made. Although this study concentrated on one

programme per institution there was one that had applied for accreditation of five programmes. These were given treatment equal to those used for the study because the changes had made improvements to the system and therefore were beneficial to the process. The institution produced five self-evaluation reports for five different programmes in the same field of study. Two programme accreditation teams were assigned to two programmes each because the programmes were related. Both teams reported that the self-evaluation reports duplicated each other. One would assume similarities could not be avoided, especially for the same field of study, but the distinctiveness of each programme should be evident.

The content of some self-evaluation reports once more was not satisfactory. Institutions were expected to identify their challenges and suggest ways of addressing them, however, *'some self-evaluation reports had challenges and hanging recommendations with no plans to address the challenges'* (P8, 8:14, 39:39). Again, the quality of the self-evaluation report contributes to the quality of the programme review process, because the self-evaluation report forms the basis for evaluation therefore:

- d) Institutions should be trained in the production of the self-evaluation reports, following established guidelines.

The programme accreditation site-visit

The main issue that was observed from the accreditation site visit was that the programme review team visited the main site only. One reviewer affirmed that they *'were only restricted to the Gaborone centres yet the institutions had branches. The managers came to Gaborone, we were not satisfied with that. The danger is that equipment can be transferred from one centre to the other'* (P10, 10:6, 40:40). Programme accreditation deals with the overall delivery of the programme and it is indispensable that:

- e) The programme is assessed at its station by visiting all sites of delivery.

The programme review team

The quality and complementarity of the programme review team arose during interviews. It was emphasised that a strong team of assessors should be developed and work-shopped on assessment because there were different issues of ethics and culture in interviews. Some of the topics suggested were the mode of talking, the fashion of approaching people, and the style of presenting issues of differing sensitivity. One reviewer said:

There was a time when the atmosphere was not relaxed, people were thinking about assessment, there was anxiety, and I was wondering if people have been trained. You don't go out and be like a policeman, to make people tense. Calling people for interviews was like interrogation. Some people were shaking. The team should be trained on how to make the process relaxed and collegial. Workshop the team, not just bring people together. People are different, we might be from the same discipline but approaches are different. (P4, 4:21, 60:63).

The institution validated the reviewer's observation that some academics were left wondering if they still had jobs. They were said to have gone through a counselling process by the institution because they were shaken. The reviewers suggested that TEC '*can come up with a tool that identifies people skills for a reviewer*' (P5, 5:17, 54:54) because it is very important that:

- f) The programme reviewer should be conscious of ethical countenances and have social skills to be able to deal with conflicts and tense situations.
- g) The programme review team members should complement each other.

Curriculum development

The curriculum for the programme under review forms part of the key documentation that is supplied for assessment. The reviewers stated that there should be evidence of where the programme originated, and whether it was purchased or tailor-made for the institution, including decision-making structures that approved it (P4, 4:20, 121:121). This idea brings about the notion of curriculum development, that institutions should confirm that their programmes were developed following good and ethical curriculum development guidelines. In addition there should be evidence of curriculum evaluation before the programme is offered. It was advocated that a well-designed curriculum that contains all the elements of a curriculum is unlikely to pose problems. In this light, the process of developing the curriculum should be the first step towards expected quality and relevance of the curriculum. One reviewer expressed her disappointment at lack of evidence for curriculum development and stated that she took it that every institution had the history of development of the programme because the review had to be done against the curriculum, hence:

It would be proper to know how the programme was developed. For example, we were told the curricular was reviewed by experts but there was nothing, not even a report. We review everything against the

curriculum, maybe there were some recommendations that were made by the curriculum reviewers and those might assist in evaluating the programme (P9:9:27, 99:99).

It is evident that a programme review should be carried out against the curriculum, therefore:

- h) The curriculum, curriculum development process, and evidence of curriculum approval should be amongst the documentation presented to the programme review team for assessment.

Students' interviews

Students were interviewed to assess their rate of involvement during the programme accreditation process. Data that surfaced indicated that students had been informed of the programme accreditation process and that some of them might be interviewed. They said that they saw some programme reviewers in some classes during the accreditation process and reported that their classes were not disturbed. Students however wished that they could be given feedback on the accreditation status of their programmes so that they could make a decision on whether to continue on the programme or not. They indicated lack of training before the process, therefore information collected was considered authentic. A weakness was evident in that some students did not know the importance of programme accreditation. A recommendation to the institutions could be that:

- i) The students should be informed about the importance of programme accreditation.

After assessing the impact of the changes that were carried out on the Botswana programme accreditation system as per the output of the previous research cycle, improvements to the programme accreditation system were suggested resulting in design principles for Prototype 2 of the accreditation system.

6.7.3 Development of design principles for Prototype 2

The recommendations for improvement to the Botswana programme accreditation system from different sections of Chapter 6 were consolidated to come up with design principles for Prototype 2. Table 6.6 presents recommendations as they evolved from Sections 6.4, 6.5, and 6.6, summarised under the last column. Succinctly, the findings in this chapter build on those in Chapter 5. Box 6.2 (Design principles for Prototype 1) gives a consolidation of Box 5.1 (Phase 1 – Part design principles for Prototype 1) and Table 6.3 (Comparison of the Botswana accreditation system to other systems), therefore the findings from Chapter 5 are reflected in

Chapter 6 (Box 6.2). Box 6.4 contains issues raised from the try-out cycle and these issues emerged after improvement of the accreditation system. Analysis of the issues indicate that they are subsumed in those captured in Box 6.2. Some design principles (Box 6.2) could not be applied to the programme accreditation system for the try-out cycle, although necessary for the development of the programme accreditation system, either because they were policy issues or they needed more time (Sub-section 6.6.2). Therefore, the basis for design principles for Prototype 2 was Box 6.2, to ensure that the issues not covered during the try-out cycle are included during the evaluation process to assess whether or not they could be regarded as characteristics of a more effective programme accreditation system.

Table 6.6 gives a summary of the findings from Phase 2. Students appeared only in one set of data, however, this does not imply that they are not important stakeholders during the programme accreditation process. As part of the accreditation process, students should be interviewed so as to get their views regarding the quality of the programme.

Table 6.6: Analysis of findings from Phase 2

Recommendations from the interviews after try-out session (Section 6.7)	Observations from the try-out cycle (Section 6.6)	Changes made to the system (Box 6.3)	Design principles for Prototype 1 (Box 6.2)	Summary of the findings
a) Set up a specialist programme accreditation unit in TEC.		Clear instructions were given to the TEI and the programme reviewers. Preparations for the accreditation process were done in advance.	Differentiate between programme accreditation institutional accreditation. Assess the self-evaluation report before giving it to the programme reviewers.	All staff in charge of programme accreditation should be trained so that they carry out preparations for the process effectively.
b) Guidelines and operational procedures should be clearly laid out to guide the TEC, TEI, and the programme reviewers.	Standards of operation regarding the programme accreditation process should be made available.	Guidelines for the production of both the self-evaluation report and the accreditation report should be availed.	Both the TEI and programme reviewers should follow guidelines for the production of the reports. The programme reviewers should read the report before visiting the TEI.	Programme accreditation guidelines (manual) should be developed.
c) There should be a standard that caters for all forms of disadvantaged groups.			A standard to cater for disadvantaged groups should be introduced.	There should be evidence of ensuring that institutions provide inclusive education.
d) Institutions should be trained on the production of the self- evaluation report.	Training of the institution should be done at least nine months before the accreditation process.	Training on the production of the self-evaluation report is critical for the success of the accreditation process.	The format and content of the self-evaluation report should follow the TEC guidelines.	Training should be done for all people in involved in programme accreditation.
e) The programme should be assessed at all sites of delivery.			The institution should make preparations for all sites of delivery to be visited.	All sites of delivery should be visited.
f) The programme reviewer should be a well-rounded figure. Members of the programme review team should complement each other.	The programme reviewers should be trained to ensure that they are fit for the assignment.	There should be clear selection guidelines for the programme review team and these should be adhered to.		Training should be done for all people in charge of programme accreditation. Members of the programme review team should complement each other.
h) The TEI should present the curriculum development process.			Assess the curriculum before offering.	The curriculum should be availed for assessment
i) Involve students				Botswana system not ready to involve students.

6.8 Formative Evaluation of Design Principles for Prototype 2

The summary of the research findings (Table 6.6), informed the design principles for Prototype 2. The design principles were evaluated by programme accreditation experts to review the suggested developments to the Botswana programme accreditation system, to assess their relevancy, consistency and practicality, and to proffer advice on the suggested modifications to the system so as to make the system more efficient. Research procedures (Sub-section 6.8.1) are followed by feedback from the experts (Sub-section 6.8.2).

6.8.1 Research procedures

Three programme accreditation experts assessed the recommendations for design principles and proffered advice on the suggestions. The quality criteria focus was consistency and practicality. The experts can be considered as professionals interested in the development of the programme accreditation process and, borrowing Popham's words, not "distant aloof judges" (1988, p. 14). They were all part of the tertiary education system setting. Following are the research procedures, starting with sampling of the experts, then data collection and analysis (Sub-section 6.8.1) followed by findings (Sub-section 6.8.2).

Sampling of experts

Five invitations were sent out to local experts but only three honoured the request. The stipulations in research ethics that people should not be forced to participate in research (Smith, 2003) were followed. The criteria that was used for selection was that the programme accreditation expert had:

- a) Participated in at least one programme accreditation process in 2012/2013. The objective of this criterion was to try and ensure that the experts still had the programme accreditation process fresh in their mind.
- b) Participated in at least three accreditation processes since inception of the programme accreditation process in 2010.
- c) Been a team leader of at least one programme accreditation process.
- d) Not been a subject of unprofessionalism, such as production of a poor quality programme accreditation report or failing to meet deadlines.

The programme accreditation experts in this stance were:

1. A university academic who was also a visiting professor to two institutions in South Africa. He had participated in the Botswana programme accreditation process on more than three occasions at different times and in different institutions. He held a PhD.
2. An academic in a private institution in Botswana. She held a master's degree in education and had taught in other countries before coming to Botswana. She had experienced programme accreditation and was therefore not new to the process when it was introduced in her institution.
3. A consultant, based in Botswana who had conducted programme accreditation for TEC representing industry. She held a PhD.

Data collection and analysis

The design principles for Prototype 2 (Table 6.6) were crafted into questions (refer to column 1 Table 6.7) and were given to experts for their response and informed opinion on the consistency and practicality of the system. Since the response was to specific design principles, the analysis was made per expert and per design principle to compare and contrast the feedback.

6.8.2 Findings

Feedback from the programme accreditation experts is presented in Table 6.7 under three columns labelled response from expert 1, 2, and 3 with the first column presenting the questions. The blank spaces indicate that there was no response from the expert.

Table 6.7: Feedback from experts – Formative evaluation of design principles

Questions Crafted from Design principles	Response from Expert 1	Response from Expert 2	Response from Expert 3
1. When should programmes be accredited before being offered or while running? Why?	The current system of programme review, running for a year then programme accreditation is the right one.	As it is, after one year of running. This is international practice.	There is need to subject a proposed accreditation programme to serious scrutiny, not only on content but also the availability of supporting structures and resources (e.g. human resource qualifications and experience) before introducing the programme.
2. There are different modes of offering programmes, such as face to face and online. The same programme can be offered using different modes and at different sites. <ul style="list-style-type: none"> • Should programmes be accredited only on the face to face mode? Why? • How can online programmes be accredited? • Which sites of delivery should be accredited? 	Accreditation of the online courses can be done by: <ol style="list-style-type: none"> 1. Getting access to the programme using various “roles” like administrator, teacher and student. 2. Getting access to all study materials and assignments submitted. 3. Being able to review and accredit the programmes as we do for normal courses. 4. Checking the accreditation status of the degree awarding institution. 	The programmes should be accredited at all sites of delivery and all modes of delivery should be accredited. The programme reviewers should have access to all study materials and assignments submitted. It is not enough to posit that, for example, a franchise campus in campus will only send documentation to say their story when accreditation is done at the main campus	Each site where the programme is offered needs to be subjected to serious accreditation rigor. Programme accreditation and other aspects of the institution accreditation overlap and therefore it is necessary that all the sites of delivery should be inspected.
3. How can the TEC guide the programme reviewers in coming up with an accreditation decision?	The TEC framework serves as a guideline. A checklist could assist.	This is one porous area in the accreditation guidelines in Botswana A grading system should be developed. A checklist will be applicable	The current programme accreditation process is highly subjective therefore accentuates the need to come up with an objective programme accreditation system. There is urgent need to come up with a checklist with specific scores. This is a huge assignment which needs to be done with caution so that it is not contested by the institutions at a later stage.
4. The TEC should make up teams of programme reviewers for various fields of study. This will assist the reviewers to improve on their efficiency. What are your comments regarding the above statement?	The current system works well. The reviewers are efficient.	The TEC train the reviewers. The programme reviewers should have access to all study materials and assignments submitted. The panel should have relevant members from the TEC.	The advantage of the current dispensation is that reviewers are chosen based on their availability and expertise and if they have conflict of interest then they could declare at the first stage of being nominated. The formation of static teams may be disadvantageous in an environment like Botswana where expertise in various fields is limited

Table 6.7: Feedback from experts – Formative evaluation of design principles

Questions Crafted from Design principles	Response from Expert 1	Response from Expert 2	Response from Expert 3
5. Should professional bodies be involved in accreditation of programmes leading to professional qualifications? <ul style="list-style-type: none"> • How can they be involved? 	Yes. It is a good suggestion	Yes they should. They know what is happening in their programmes. It should be a given that accreditation of programmes leading to professional qualifications should be done by or in close collaboration with professional bodies	Leaving out professional bodies has the potential of missing out current developments in the programme.
6. Do you think institutions should demonstrate capability to manage a lower qualification of a programme before being allowed to offer a higher qualification, or they should just be allowed to introduce the next level?	Yes, it will help to understand the demand for that in the labour market / understand the strength and weakness and give scope for improvement and design the next level of programme accordingly.		
7. Should the graduate profile of a programme be stipulated in the curriculum?	Each programme should specify the graduate profile		Programme content and availability of competent teaching carder is not in itself the whole requirement for programme accreditation. There is need to assess other attributes (which may be confused with institutional accreditation) such as availability of appropriate learning spaces.
8. Should there be room for revocation of accreditation?	Yes. And TEC should introduce the system of unannounced inspection of the institution to check whether they are adhering to the policies.	Revocation means students will be affected, therefore it would be necessary to consider alternative measures on the part of the students if revocation of accreditation were to happen.	There should be continuous monitoring and evaluation of the programme as it is running. If a programme does not comply with the stated criteria as shown during the accreditation process, then it is fair to revoke the accreditation.
9. On the whole, what are your suggestions towards improvement of the programme accreditation system?	The panel should have one subject expert, one finance person ([since it is not just the programme content checked) one general person with teaching and other experience in the education field. 2. A compulsory workshop for the reviewers before the accreditation. 3. Deadline to submit the final report.	A lot needs to be revisited if competitive accreditation were to be achieved given the Botswana context. The institution should be immediately informed of the accreditation decision	From the outside it seems there are a lot of undertones in the accreditation process which makes robust and effervescent accreditation in Botswana unachievable. It would be wise to investigate more into such issues in the study.

The accreditation experts generally agreed with the design principles. Their comments stressed the need for the proposed changes to the programme accreditation system, except in one instance (Table 6.7 number 4) when they disagreed with the formation of standing teams for programme reviewers. However, they did agree with panels for decision-making to cut down on the amount of time spent in considering the same recommendation from the programme review team by different teams in the TEC. One of the experts suggested impromptu visits to institutions, however, unannounced institutional site visits can be used for monitoring but not for programme accreditation. The nature of programme accreditation is such that the institution should have the opportunity to prepare for the site visit. If the programme reviewers feel that the institution was not genuine during the site visit they should state as much in the programme accreditation report. Proper follow-up and monitoring visits can then be arranged to assess the situation (quality of programme provision) and make recommendations, but programme accreditation should be followed by monitoring to ensure that the institution acts on the recommendations.

A comparison of Tables 6.5 and 6.6 reveal that they carry the same message, such as training of the TEI and the programme reviewers, and clear guidance on the production of the self-evaluation report and the programme accreditation report. Henceforth it can be surmised that the features described in Box 6.5 contributes to an effective programme accreditation system.

Box 6.5: Part-characteristics of an effective programme accreditation system

An effective programme accreditation system is partly dependent upon:

- a) The production of a well thought-out self-evaluation report with evidence of the claims made within the report. The successes, strengths, weaknesses and challenges well-articulated with suggestions on action items for improvement. Transparency and honesty from the authors are of paramount importance to assist the programme reviewers and the TEC in assessing the TEI's predicament from an informed position thereby being able to suggest possible solutions towards addressing the shortcomings before they become unmanageable.
- b) The production of an informative programme review report that has evidence of assessment of the institution's programme infrastructure and resources with recommendations that can be substantiated.
- c) Staff at both TEC and TEI who are conversant with the programme accreditation process and procedures.
- d) Availability of self-explanatory guidelines to assist in the production of the self-evaluation report, the accreditation process and, the production of an accreditation report with guidance on the content of the report.

- e) A well planned site-visit where transparency and integrity are exercised.
- f) Assessment of the curriculum to validate the programme processes and evaluate their impact and effectiveness.
- g) Inclusive accreditation standards that cater for all learners and point to all areas of the programme.

6.9 Conclusion

The intent of the research sub-questions (2) *how does the Botswana Programme accreditation system compare with other systems?* and (3) *what constitutes an effective programme accreditation system?* was to find ways of optimising the Botswana programme accreditation system. A summary of the practices that could be learnt from other accreditation systems illuminated the similarities and dissimilarities that could be considered for improvement to the Botswana programme accreditation system (Table 6.3). An analytical overview of the programme accreditation system in Botswana and others gave rise to some of the characteristics that constitutes an effective programme accreditation system (Section 6.5). The research questions were hence answered. A prototype of the programme accreditation system was developed and tried out in three programmes. The findings indicate that although the programme accreditation system in Botswana is internationally comparable there are still important features that can be adopted and adapted to make improvements. The suggested improvements provided guidelines for the development of Prototype 2 (Section 6.8). The design principles as deduced from the research findings so far were evaluated by the experts. The next chapter (Chapter 7), presents an assessment phase of Prototype 2.



Chapter 7

Evaluation Phase

7.1 Introduction

This study has resulted so far in the development of two prototypes of the programme accreditation system, both presented in Chapter 6. The first was evaluated through try-out sessions in three programmes in three institutions. A research cycle to further refine the characteristics of an effective programme accreditation system resulted in design principles for the second prototype concluding Chapter 6. In this chapter (Chapter 7), design principles for Prototype 2 as developed in Chapter 6 are assessed in order to finalise the prototype. In this way, answers to research sub-questions 4 and 5 are realised. Both research sub-questions seek to determine how the Botswana programme accreditation system can be improved in order to compensate for the weak points in the current one. The two research sub-questions (refer Figure 4.3) are: *How can the Botswana programme accreditation system be optimised?* and *To what extent could the identified characteristics optimise the Botswana programme accreditation system?* Answers to the two research sub-questions concluded the research process as planned for this study.

Prototype 2 could not be evaluated by the try-out method as was intended due to unforeseen circumstances. This study commenced in 2010 with a proposal to enrol with the University of Pretoria. The research activity commenced with a proposal justifying the topic in 2011, consequently permission was granted to continue with the study by both the Botswana Government (refer to Appendix B) and the University of Pretoria ethics committee (Appendix A). By then, everything seemed normal and positive, with the Tertiary Education Council (TEC), having started operating in 2003 (Chapter 1 Sub-section 1.2.3) and instituted programme accreditation in 2009 (Section 1.3). However, as stated in Chapter 1 Section 1.2, the Botswana Qualifications Authority (BQA) took over the mandate to conduct programme accreditation in October 2013, with a complete takeover effective from 1 April 2014. This scenario made it difficult to hold a second try-out in institutions because the change in management (from TEC to BQA management) had challenges beyond both managements. For instance, the cost implications of carrying out a programme accreditation process and an envisaged change to the accreditation requirements, such as a new accreditation system, was not conducive to the study, hence, an alternative evaluation method, namely micro-evaluation

with a focus on expected effectiveness had to be decided upon. However, the output of the study would still be relevant to improvement of quality assurance of the Botswana tertiary education system.

The chapter begins with the research procedures for Phase 3 (Section 7.2). The focus groups for micro-evaluation were categorised into *professionals*; *benefactors*, and *recipients* to further improve the accreditation system (Section 7.3). To progress towards finalisation of the characteristics of an effective programme accreditation system, a questionnaire was administered to different categories of people and an interview to one local expert (Section 7.4). In Section 7.5, the findings from the study are discussed by giving a summary of the changes to the accreditation system that could be achieved within a short term and those that could be achieved in a longer term. The chapter closes with a conclusion (Section 7.6).

7.2 Research Procedures for Phase 3

Phase 3 is the evaluation phase for the design research process as carried out in this enquiry (refer to Figure 4.3). The main intention was to assess the expected effectiveness of the programme accreditation system so as to make conclusions as to whether the suggested modifications would produce a more effective programme accreditation system than the original TEC one. The prototype was evaluated by professionals, benefactors and recipients (Section 7.3). Supplementary evaluation was carried out by another team of professionals through a questionnaire and finally by an expert to close off the evaluation of the design principles (Section 7.5), resulting in the final prototype of the programme accreditation system (Appendix K). As can be seen, four groups of people participated in the evaluation (including experts' evaluation in Chapter 6, Section 6.8), partly to compensate for lack of a try-out session. The expected effectiveness was hence ascertained through the responses obtained from the four groups.

The research process for Phase 3 (refer to Figure 4.3) starts with evaluation of the modified programme accreditation system (Prototype 2) through micro-evaluation by professionals, benefactors, and recipients of the programme accreditation system. The purpose of this micro-evaluation was for people who use the system to assess its expected effectiveness once applied during the accreditation process. This stage gave an idea of how the system would perform. Considering that the aim of the study was to develop characteristics of an effective programme accreditation system, the draft characteristics were deduced from the research output, guided by the results of the micro-evaluation (refer Section 6.8). These characteristics were then turned into questions and a questionnaire was administered to professionals, again to ascertain if the proposed characteristics would add value to the current TEC programme

accreditation system. One programme accreditation expert was given a summary of the intended changes to the system to provide expert opinion on whether the suggestions would make the system more effective. The following section presents formative evaluation of Prototype 2 as carried out by professionals, benefactors and recipients.

7.3 Advancing the Programme Accreditation System

Input from the programme accreditation experts solidified design principles for Prototype 2 (Sub-section 6.8.3). Changes were made to the accreditation system following the design principles. The suggested changes underscore analysis of the activities that contribute to programme provision and delivery of the programme, following the model presented in Figure 3.2 (Chapter 3), the review and improvement as learning processes illustrated by the Commonwealth of Learning. The following modifications were made to the accreditation system:

Table 7.1: Modifications made to the accreditation system

Activity	Modification
When to accredit	Accredit programmes before offering.
Standards	Include a standard for disadvantaged groups.
Process	Accredit programmes at all sites of delivery, treating each site as unique Accredit programmes through all modes of delivery. Assess the self-evaluation report before handing it over to the reviewers.
Self-evaluation report	Should evaluate the programme and include successes, challenges and suggestions for improvement. Analysis of delivery methods should be evident.
Site visit and programme review report	Analyse the self-evaluation report against what is prevailing in the institution. Evidence of the quality of provision and delivery should be supplied. Quantitative data where necessary should be provided to substantiate quality claims. The programme content should be reviewed and compared to the delivery. Student's portfolios should be evaluated.
Capacity building	Intensify training of the TEC, TEI and programme reviewers. Introduce a refresher meeting before the start of the accreditation process.
Accreditation recommendations	To be made by the programme review team, vetted by the TEC and information sent to the Minister.
Programme review teams	Have standing teams for programme accreditation. The teams should compose programme professionals, finance people, and industry people.

The improved system was discussed with different categories of people as mentioned in Section 4.7 and demonstrated in the research model (Figure 4.3). These people were purposively chosen because they were likely to benefit from the results of the study and from the group discussions, either because they regulated the programme accreditation system or would profit from the results of the programme accreditation process. The objective of this part of the research was to address research sub-question 4: *How can the Botswana programme accreditation system be optimised?*

The micro-evaluation method whereby “a limited number of the target group (refer to Sub-section 7.3.1) use parts of the prototype outside their day to day user setting” (Nieveen & Folmer, 2013, p. 167) was applied. The quality aspect considered was expected effectiveness which was assessed by the respondents during the group discussions. The responses that are presented culminated from such discussions. At this stage, the ideal evaluation method would have been a try-out of the programme accreditation system in active programmes. However, this was not possible due to changes in the mandate of programme accreditation, hence micro-evaluation was found sufficient as explained in Section 7.1.

Following are research procedures for the micro-evaluation of Prototype 2 starting with sampling of different informants categorised under professionals, benefactors and recipients (Sub-section 7.3.1). Data is analysed per category and the findings presented, followed by a reflection on the findings after each presentation (Sub-section 7.3.2).

7.3.1 Research procedures

The focus groups for micro-evaluation were categorised into *professionals*, responsible for implementing the programme accreditation process in Tertiary Education Institutions (TEIs); *benefactors*, including some members of the committees, coming from different sectors such as industry and institutions who made decisions with regard to programme accreditation decisions; and *recipients*, who were academics and administrators in tertiary education. The purpose of the meetings and the research project were clarified to the participants that the intention was to make improvements to the Botswana programme accreditation system after realising some shortcomings in the system. The participants were given the TEC accreditation guidelines and taken through the process of programme accreditation exercised by TEC. The suggested modifications were highlighted (Table 7.1) and the participants asked to evaluate the modified accreditation guidelines to assess:

- 1) whether the suggested changes could help to improve the current accreditation system
- 2) whether the changes would be feasible (practicality)

- 3) the impact of the changes on the current accreditation system (effectiveness)
- 4) whether the accreditation guidelines could contribute towards improvement of the programme.

The sampling and data collection procedures precede a summary of the outcome of discussions per group, as reported under data analysis below.

Sampling and data collection - professionals

Practitioners in the field (professionals) were purposively sampled to evaluate the suggested changes and make their input. These were officers in charge of programme accreditation at Botswana Training Authority (BOTA) and the Tertiary Education Council (TEC), sampled for their experience either in the programme accreditation process or as academics in TEIs, or both. The aim was to involve people suitable to contribute towards improvement of a programme accreditation system. The BOTA team was included because members were in charge of programme accreditation in TEIs for programmes below diploma level. Their experience was therefore thought to be invaluable, and they augmented the small number of practitioners in the TEC. The seven consulted officers were all at management level, had different years of experience, and different academic qualifications ranging from masters level to PhD.

The professionals were presented with the TEC programme accreditation guidelines and the modified guidelines, and reminded of the TEC programme accreditation process, thereby completing the programme accreditation system. The professionals discussed the programme accreditation system and considered the suggested modifications to it. Data was collected as the discussions continued and the findings are reported in Sub-section 7.3.2.

Sampling and data collection - benefactors

A team of seven people responsible for overseeing the quality of education in TEIs, coming from different organisations (refer Section 2.6) were consulted through a meeting session. Another team made up of 13 people who were in charge of quality assurance issues and recommendations from the BOTA and TEC were consulted at a later date. The teams had their own meetings and a slot was availed for the consultation. In this regard, it was not possible to have control over who should attend or who should not, therefore the whole meeting formed the research population for this activity. These two teams formed the benefactor's group and are significant contributors to evaluation of the programme accreditation system, being interested in seeing improvement in the quality of tertiary

education in the country. Data collection from the benefactors followed the same process as for the professionals.

Sampling and data collection - recipients

The recipients were academics and administrators from both public and private TEIs. Seven educators were purposively sampled from a team of educators attending a quality assurance workshop in Francistown. Another team of five academics were sampled from a similar workshop in Gaborone. The informants were chosen because they had been actively involved in education reforms in the country, had tertiary education experience, and were at management level. The workshop attendants were a combination of people from general education and tertiary education, split into two groups: those who handled lower than diploma programmes (BOTA registered) and those who handled programmes above diploma level (TEC registered).

These two teams, though not representative of the educator cadre, were considered relevant to the programme accreditation system because they came from different regions of the country. Some officers were responsible for a few schools in their capacity as education officers. The value add to the research from these officers was that views of those who had been accredited were heard by those who had not, and a comparison in terms of the need for accreditation resulted.

Each participant was given a copy of the TEC accreditation regulations and the focus group taken through their arrangement. The TEC programme accreditation process was presented to accommodate the recipients who had not experienced programme accreditation and remind others of the process. Focus was directed to the accreditation standard, requirements, and criteria (sometimes referred to as 'standards') as key guidelines for the accreditation process. The suggested modifications were highlighted so that both teams understood the purpose of the consultation. A discussion mode following the programme accreditation process, guided by the outcome of the previous research cycles (Section 6.8), ensued. The team did not just concentrate on the modifications but made a scrutiny of the programme accreditation standard, requirements, and criteria, making suggestions where they saw fit. Data was collected during the discussions, noting commendations and recommendations, with clarifications where appropriate.

7.3.2 Findings from the micro-evaluation

Data collected per team (professionals, recipients, and benefactors) was analysed, the intention being to find views of participants about the modified programme accreditation

system. In this section, feedback from the professionals, recipients, and benefactors is given, followed by a reflection after each presentation.

Feedback from professionals

The professionals considered the suggested changes to the Botswana programme accreditation system and expressed satisfaction with the idea of programme accreditation. They stated that this was the first attempt by the country to nationally monitor the quality of education in TEIs and as such much was bound to be learnt during the first round of accreditation visits. The hope was that the TEC would learn from the experience and be flexible enough to modify its approach in the light of experiences and findings of the study, which is in line with best international practice. They stated that some countries treated the first round of programme accreditation as a developmental process in order to make it easier to modify the approach. They made the following observations:

- a) Programme accreditation is not a uniform (*'one size fits all'*) activity because programme offerings and delivery modes are different, therefore there should be room for differentiation in the specific requirements and criteria for accreditation. There should be criteria for different levels of programme offerings, different modes of instruction and different types of programmes.
- b) Programme accreditation is a costly process and as such has to benefit the education system. Improvement could be made through capacitating subject matter experts and rewarding them generously to eliminate reservations about poor remuneration as contributing to limited exertions during engagement for the review. The costs could be factored into administration fees that TEC charges the institutions. The experts should be evaluated after each assignment.
- c) No institution should be allowed to run a programme before it has been reviewed and approved by the TEC. Success of the first review should give the programme provisional accreditation status and thus permission to be offered. Where the site of delivery and resources for the programme are already available they should be visited and assessed before the programme is introduced. Otherwise, assessment of such should be made once ready, but before offering the programme. The accreditation status should only be awarded after assessment during offering of the programme.

The team suggested that the following programme accreditation process be followed:

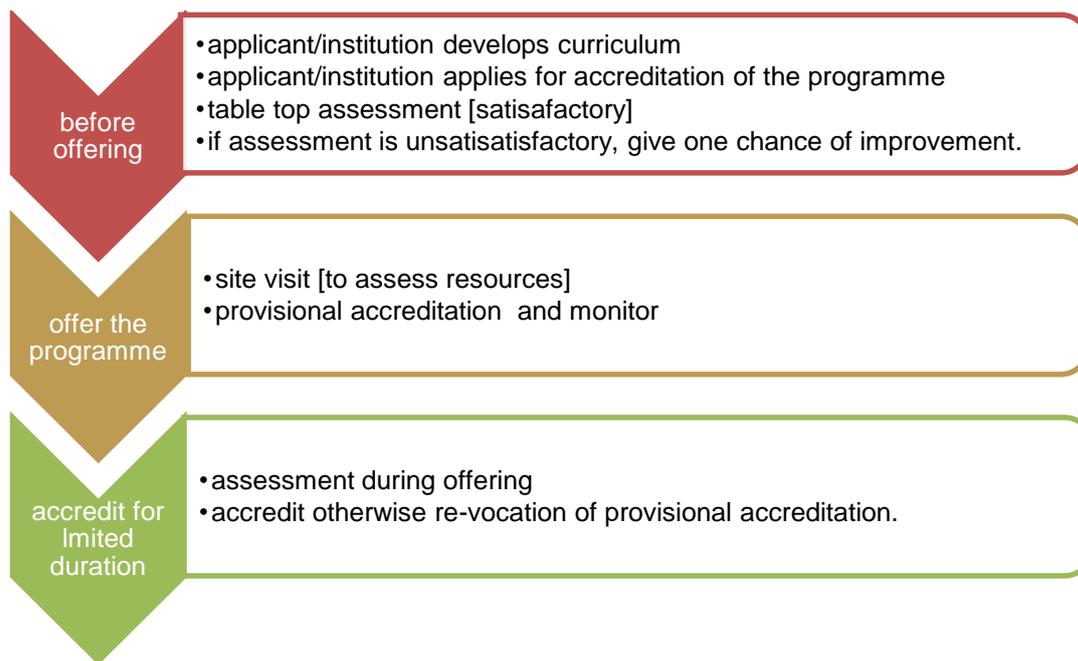


Figure 7.1: Proposed programme accreditation process (by professionals)

The professionals surmised that the programme should be assessed before being allowed into the education system, thus curriculum content and suggested methods of instruction and assessment should be ascertained before being offered. The general agreement was that if a programme did not comply with the accreditation regulations it should not be allowed into the education system. The institution should be given some time to improve on the programme before they could re-submit. A curriculum that fails to be accredited twice should not be allowed into the system immediately, whilst modifications and improvements to the new one should be given one chance, otherwise the institution should re-submit the improved one after two years. This could force institutions to follow proper guidelines and produce quality curricula first time around, with the assumption that this would curtail introduction of substandard programmes into the system.

Reflection on professionals' feedback

Programmes are different and each should be treated as such. Nonetheless, the intent of the research is to develop a programme accreditation system for TEIs, which in essence means developing a framework that will form the basis of guidelines for accreditation of different programmes. The outcome of this research would be an all-embracing programme accreditation system. Different programmes and different modes of delivery could be considered at regulation level. The suggested accreditation process seems reasonable in that it forces institutions to have a firm foundation for the programme by assessing the quality of

the curriculum and the availability and quality of resources before a programme can be introduced.

It is evident that programme accreditation is an expensive exercise. For example, as of January 2014 the institutions paid TEC P7000.00 (about US\$1000.00) for accreditation of one programme while TEC paid three programme reviewers a minimum of P18000.00, minimum because there were incidental costs, such as travelling and feeding involved. This dug deep into the TEC coffers and was likely to be unsustainable. It is possible that as the system evolves all the costs that are related to the programme accreditation process will be borne by the institutions. Most accreditation agencies consulted are quiet about the programme reviewers' remuneration, probably because it is secondary when considering issues of quality, or the programme reviewers conduct it as part of their social corporate and academic responsibility. Whatever the case, programme accreditation is a costly exercise in terms of time, the calibre (academic standing) of people involved, their number, and the production of relevant material.

The issues of costs will become more complicated once programmes in public institutions are also accredited, which, according to this study so far, is the way to proceed. Public institutions receive their subventions from government, which in most cases is less than the institutions ask for. However, paramount in this study is that it would be prudent to carry out programme accreditation well the first time around. Programme accreditation reviewers are professionals, and as such like to represent themselves well in whatever assignment they are given. Remuneration should not determine the quality of work, but rather the aim of professional development and community service.

Learning from experiences during the programme accreditation process has revealed that it was erroneous to accredit programmes in private institutions only. The professionals stated that all programmes in TEIs should be accredited, by implication, in both private and public institutions. This would be a welcome development because the TEC is concerned about the quality of education in the whole tertiary education system, not only private institutions.

The quality of a programme begins with the curriculum development process. It would be prudent to assess a programme before introducing it into the education system, resulting in some form of accreditation, hence all newly introduced programmes should be accredited before being offered.

Feedback from recipients

Generally, the teams welcomed the idea of programme accreditation. Both expressed their wish that the public institutions could be given the same attention as private ones by assessing the quality of programme delivery through accreditation. Some officers saw the accreditation regulations and criteria for the first time, and some team members felt ‘cheated’ by the system, in that the private institutions were given an opportunity for improvement through a system of programme accreditation. Participants from private institutions assured those from public counterparts that although the process of programme accreditation was costly in terms of time and resources expended, the rewards would be beneficial and long term. Those who had experienced the process reiterated the need for capacity building for all the concerned parties, especially the programme reviewers. However, much time was spent on analysing the criteria. In the end, the teams expressed their satisfaction with the general approach but stated their discontentment with some criteria that seemed to repeat what was covered during registration of the institution, such as funding issues and physical facilities.

Reflection on recipients’ feedback

Public institutions also welcomed the idea of programme accreditation. The attitude resonates well with Stephens (1994, p.188) in his write-up about collaborative evaluation, that assessment concepts “rely on relationships between the school, the students or the member of staff and ‘critical friends’, be they advisors, teachers or managers”. The accreditation agency in this regard becomes a critical friend by taking the institution through programme accreditation. However, the accreditation agency should assure the institutions of their role, whether they police institutions for some other reasons, such as being anti-government, or their aim is developmental, thereby being a buffer against government control and regulation (Crow, 2009).

Comparison of the headings of the programme accreditation criteria with the registration criteria did not show much repetition. Further analysis of evidence required within the criteria indicated some areas that could be removed. The criterion that caused most concern was funding, and matters relating to finance gave rise to special issues in that one of the registration requirements was that institutions were to supply the TEC with audited financial statements on a regular basis. The programme review teams were, according to the guidance set out in the accreditation regulation’s document, also instructed to consider the institutions’ overall financial position. The review teams frequently asked for financial documentation such as their audited financial statements, which might have already been supplied to the TEC during the submission of the annual report. The idea was not acceptable to institutions

because some programme reviewers were competitors, and as such they saw the ‘secrets’ of the institution under review. The recipients expressed their wish that matters of finance should be handled by the TEC. The following overview presents the registration criteria and the accreditation criteria:

Box 7.1: Registration and accreditation criteria

Institutional Registration	Programme Accreditation
1. Legal status of applicant.	1. Design and development of programmes.
2. Governance of the institution.	2. Funding of programmes.
3. Justification of the institution.	3. Staffing of programmes.
4. Financial viability.	4. Resourcing of programmes.
5. Availability of land, land use and physical development plans.	5. Delivery and management of programmes.
6. Buildings and equipment.	6. Assessment of learner attainment.
7. Student residences and amenities.	7. Certification and reporting.
8. Human resources.	8. Reporting learner attainment and progression.
9. Adequacy of student numbers.	9. Impact of programmes.
10. Suitability of programmes of study.	10. Degree-level programmes.
11. Entry requirements and adequacy of course descriptions.	
12. Academic support services.	
13. Quality assurance mechanisms.	

Source: TEC, (2004, part 2). TEC (2008, pp. C675- C685)

As stated above, the registration and accreditation criteria do not show much repetition at face value. The registration criteria focussed on the institution in a broader sense such as financial viability while programme accreditation would require information on funding of a programme. The adequacy and appropriateness of physical facilities should be ascertained during each accreditation visit to ensure that the programme is well provided for. A further look at sources of evidence revealed that there were some areas that were covered during registration as well, such as resourcing of programmes. This criterion required institutions to state how they were going to provide necessary resources for the programmes. The repetition was considered beneficial because it was assessing a real situation whereby the programme was on offer, and was a way of ascertaining maintenance and improvement of the quality of programme provision and delivery.

Benefactors' feedback

Besides asking for clarity on the presentation, the two teams welcomed the suggested changes and emphasised that it was the responsibility of individual institutions to ensure delivery of quality education to the nation, and the TEC should develop quality assurance mechanisms that emphasise self-monitoring and self-accreditation by institutions. The team expressed their concern about the quality of delivery within institutions and the quality of monitoring by the TEC. They suggested that the programme accreditation system should clearly show how the institutions would be held accountable for their own quality delivery.

Another contribution that stood out was the quality of the academics within institutions. Some members observed that the programme accreditation system suggested did not have a way of assessing the quality of academics, yet they are central to the delivery of quality education. A debate ensued about ensuring the quality of academics through academic registration, ultimately leading to the suggestion that all academics should be registered, stating their academic qualifications and pedagogical skills. The academics should then be identified by a number, just as in the medical, law, engineering, and nursing professions, and the list be availed during programme accreditation.

Some members were in favour of registering academics and others against. The main argument for registration of academics was that it might ultimately be beneficial because those on the database would presumably have requisite qualifications, and academics could be easily checked during the accreditation process by requiring registration numbers and the academics' classes. Those who were against registering academics said it would be academic interference and academics could not entertain the idea besides the complications that might come with the registration requirements. The discussion was then directed by an Internet search which revealed that registering academics is common in some countries. One administrator saw nothing wrong with the suggestion.

Reflection on benefactors' feedback

Programme accreditation in a way promotes self-evaluation of an institution because the report is the result of a process of self-reflection on all areas of the programme. It gives the institution an opportunity to identify its strengths and weaknesses because in the process of producing it the institution is expected to carry out a thorough analysis and evaluation of its processes as they pertain to the particular programme. The production of a self-evaluation report should be considered with high regard because it gives the institution an opportunity to examine itself without outside interference, and whatever defects are detected could be given

immediate attention, thus the institution becomes accountable for their own quality assurance mechanisms. Ramaley (2006) compares the self-evaluation in preparation for programme accreditation to design research, “a process through which, with careful experimentation and testing, a stronger and more institutional model would emerge” (p.xiii). In this stance it would be a quality assurance culture within the institution (Figure 3.4). The onus is also upon the administrators to ensure that the findings from the self-evaluation process benefit the institution (Shapiro, 2006). The programme reviewers produce an accreditation report, which helps the accreditation agency to account to the stakeholders and attest to the quality of education provided within the TEIs. In a way it promotes transparency of the accreditation process and output.

Academics play an important role in the delivery of quality education and as such their relevancy should be assessed during the programme accreditation process. The New Teacher Project (2010, p.2) asserts that “a few years with effective teachers can put even the most disadvantaged students on the path to college. A few years with ineffective teachers can deal students an academic blow from which they may never recover”. Further, while the academics can be evaluated by assessing their credentials:

Research has also shown that the best predictor of a teacher’s effectiveness is his or her past success in the classroom. Most other factors pale in comparison, including a teacher’s preparation route, advanced degrees, and even experience level (after the first few years). The lesson is clear: to ensure that every child learns from the most effective teachers possible, schools must be able to gauge their teachers’ performance fairly and accurately (New Teacher Project, 2010, p.2).

Registration of academics could contribute to the assurance that the academics are appropriately qualified for the programme or course of study they are assigned to teach. The registration requirements could have fields such as the qualification, experience, and programmes that the academic could resource. It does not have to be carried out by the TEC, but what is important is that academics are registered, most probably by an academics’ professional council, once in place. The council could stipulate minimum requirements for professional registration and set minimum professional criteria that must be met by all professionally registered candidates (South African Council for Educators, 2011). The Botswana system is still very young and susceptible to abuse by people taking advantage of the skill’s shortage in the country. Registration would then be beneficial if in addition to other investigations, the authenticity of the credentials is ascertained. Although there is a standard

on staffing of programmes amongst the accreditation criteria, it does not so much stress the quality of academics, or their pedagogical skills, but rather the quantities, student-teacher ratio, and the qualifications. However, central to the education system is the success of students.

Deductions from the micro-evaluation

The professionals, recipients and benefactors responded to the expected effect of the majority of modifications made to the accreditation system (as listed in Table 7.1), except site visit and programme review report, accreditation decisions, and programme review teams. However, these are factors crucial to the success of the accreditation system, as evidenced by the research output. The output from the micro-evaluation cycle corresponds to findings of the study. The teams found programme accreditation standards satisfactory without anything lacking. The recommendation from the try-out cycle that a standard that caters for disadvantaged groups should be included as a standalone was neither approved nor disapproved by the respondents. However, to avoid discrimination, and address inclusiveness of education (Section 6.7), disadvantaged groups are taken care of throughout the requirements and criteria, as would be seen in Prototype 2 (Appendix K).

The teams agreed with the suggested modifications to the programme accreditation system (Prototype 2) as presented. The major additions that were suggested were that the academics should be registered, and programmes should be assessed before being introduced into the system and during offering. The suggestion that programmes should be accredited before being offered resonates well with what transpires in other accreditation agencies, such as Council on Higher Education of South Africa and Namibia Council on Higher Education (refer Chapter 6, Section 6.3 and Table 6.3 row 4), and would be a welcome move since programme quality would be ascertained at curriculum level.

To further evaluate the research output, the design principles that were used to develop Prototype 2 were evaluated through another micro-evaluation process of questionnaire administration. The intention of the evaluation was to close any gap that could have been overlooked by the professionals, recipients and benefactors. Running several micro-evaluation cycles was intended to ensure that the end result would have expected effectiveness (Figure 4.3, Phase 3), since the aim of the study is to develop an effective programme accreditation system for the Botswana tertiary education system.

7.4 Evaluation of Characteristics of the System

To get a shared understanding of the output of the research (McCandliss, Kalchman, & Bryant, 2003), and to contextualise the research results by connecting the research design through which results were generated and the research setting (Wang & Hannafin, 2005), interview schedules and a questionnaire were prepared and administered to different categories of research co-participants. Barab and Squire (2004) prefer to call the respondents in design research 'co-participants' in both the design and even the analysis, because they participate throughout the research. They might not be the same individuals, as is the case in this research, but comprise a sample from the same population of people who have experienced programme accreditation. The intention of the evaluation was for the research participants to assess the suggested amendments to the Botswana programme accreditation system for scientific relevance, unbiased presentation, appropriateness, and quality of the recommendations. Thus, the quality criteria employed were relevancy, expected practicality, and expected effectiveness.

The recommendations for modification to the programme accreditation system were screened and restructured into a questionnaire (Table 7.2), the intention being to have characteristics of an effective programme accreditation system. The questionnaire was administered to 12 local practitioners for evaluation. To further assess the recommendations and enhance the reliability and internal validity of the findings (Miles & Huberman, 1994), four questions were sent to programme accreditation experts for their advice. However, only one expert responded. Input from the expert and practitioners helped to answer research sub-question 5: *To what extent could the identified characteristics optimise the Botswana programme accreditation system?*

This stage was referred to as semi-summative evaluation because further development to the programme accreditation system might still take place (Plomp, 2009). The presentation starts with research procedures.

7.4.1 Research procedures

In this section (Section 7.4), the research design and methods for the evaluation process commencing with sampling of experts and their interview schedules, sampling participants for the questionnaire, and the questionnaire are presented (Sub-section 7.4.1). Data is analysed and presented in tabular form ending with a summary of responses to the questionnaire (Sub-section 7.4.2).

Sampling experts

Purposive sampling was used to select respondents for the interview because people were needed for a specific purpose (Teddlie & Yu, 2007), namely those who had been involved with programme accreditation in higher education and had international experience. One expert operated from South Africa as a quality assurance consultant, the other two from quality assurance agencies in Namibia and Canada. Three requests were sent to these international experts but none responded, despite follow-ups through e-mails and telephone calls over a period of two months. One local expert was included in this team and he responded. Realising the delay, a decision was made to continue without international experts' advice because the research included international experience from literature. To try and close the gap created by lack of international experts, two more local experts were consulted through e-mails, telephone, and face-to-face meetings, explaining the importance of their input. However, there was no response. The expert who did respond had collected a wealth of experience in quality assurance matters as an academic in TEIs and through attending international conferences. He held a PhD.

Interview schedule for the expert

To avoid fatigue answering the questions, the suggestions were summarised into four questions by selecting the not so obvious suggestions and grouping them together. The following guidelines were used:

1. The TEC goes through a decision-making process of programme reviewers, Directorate of Quality Assurance and Regulation (DQAR), TEC Management, Academic Planning and Development Committee (APDC), TEC Council, and the Minister of Education and Skills development to pronounce the accreditation decision. This has proven to be too cumbersome. What is the best way of arriving at the accreditation decision?
 - ❖ Do you think a grading system would help to arrive at an accreditation decision?
 - ❖ Who should pronounce the accreditation decision?
 - ❖ Considering the implications of a programme that failed accreditation and the consequences of revocation of accreditation, what steps would you recommend for a programme that failed accreditation?
2. The TEC nominates teams of programme reviewers for every programme accreditation, do you think constituting standing teams for different fields of study could increase efficiency?

3. Monitoring the institution after programme accreditation has not been easy for the TEC. What is the best way for having effective monitoring?

- ❖ Do you think appointing a monitor to check the institution in the implementation of the recommendations can assist in relieving the TEC of the backlog in ensuring that recommendations are taken care of?
 - ❖ What else can be done to assist in ensuring that institutions act on the recommendations?
4. Self-accreditation could be one way of relieving the TEC from the backlog of programme accreditation, at what stage can institutions be allowed to self-accredit?

Sampling for questionnaire

A purposive (quota) sampling method was used to select respondents to the questionnaire (Fink, 2009), because two credible, information-rich, and readily available people from different categories who were directly involved with the programme accreditation process were needed to validate the findings (Babbie, 2001). Triangulation was afforded by including different types of respondents (Nieveen & Folmer, 2013). For institutional administrators, three people were consulted to elicit more views from those directly benefiting from the programme accreditation process. Although respondents were chosen per category, the initial data analysis was based on the 12 responses, divided into two groups, institution and accreditation agency, and a final analysis (reporting) was based on all the 12 respondents. The programme reviewers, BOTA, and TEC formed the accreditation agency group while the rest fell into the institution group. Two respondents held an academic qualification of a bachelor's degree while the rest held minimum of a master's degree. The total of 12 was arrived at as follows:

Two respondents each from BOTA and TEC programme accreditation officers at senior level together with two programme reviewers made the TEC group; three institutional administrators and three academics from different institutions made the Institution group. The administrators were made aware during staff interviews in June 2012 that they would be consulted towards the end of the research. None of the respondents had been used as research subjects for this research previously.

To maximise the response rate, telephone calls were made to the respondents to make appointments for delivery of the questionnaire. Presenting it by hand helped to make necessary clarifications, such as explaining the purpose of the questionnaire as being to validate research findings. The respondents were referred to the clause in the participants' briefing and consent letter of January 2012 which reads, 'some participants will also have the

opportunity to review the findings prior to publication and will be able to provide advice on the accuracy of the information'. A time of collection of the completed questionnaire was agreed upon, helping a 100% response rate to be achieved.

The questionnaire

The questionnaire called for a 'yes and no' response to 22 questions. Although there are very few questions with a purely 'yes or no' response (Suskie, 1996), the format was found suitable for this stage of the design research process. The idea was to assess the rate at which the co-participants agreed with the suggestions, therefore either 'agree' or 'not agree' was sufficient. The purity or non-purity of the response was taken care of by adding a comment column, which was used by some respondents (see Table 7.2). The number of questionnaire items was determined by the suggestions that emerged from the research as being necessary changes in the development of the programme accreditation system in Botswana.

7.4.2 Data capturing and analysis

Data from the expert was summarised by highlighting key issues (presented below). Data from questionnaires was summarised and presented in tabular form (Table 7.2), showing the questions that were in the questionnaire and their summarised corresponding responses. The issues of statistical power (Peers, 1996) were of little concern at this stage because the procedure was meant to validate what had already been found from a valid and reliable analysis. The ethical issues of research were followed through gaining informed consent, explaining and discussing the purpose of the interview and questionnaire, and reporting data in a manner that would protect the identity of the respondents (Kvale, 1996).

Expert's feedback

The response from the expert was summarised as follows:

- 1) The TEC Act mandates accreditation of programmes to the TEC. Until the regulations specify otherwise, it will be the responsibility of the authority to continue with accreditation of programmes. Regarding the modalities for the basis of the accreditation judgement, the TEC could adopt what other authorities do by grading each criteria on a 1-5 basis. (1 being the lowest grade and 5 the highest). Even in this case the issue of reliability of the grade could still be debated.
- 2) Having teams to review the programmes on a retainer basis might help to speed up the review process. Obviously the team would be set up on the basis of knowledge nodes (fields). The logistics of how this could be organised can be worked out. Some other teams

could be established to monitor the performance of the institutions against set criteria. This could help avoid a situation where the TEC act as players and referees.

- 3) Institutions are required to act on the recommendations made by the programme reviewers, it should not be an option. Recommendations are intended to get rid of defects identified. Institutions should not continue with the shortcomings since student learning will seriously be compromised. In effect, not implementing the recommendations might be one way of closing an institution out of business, which could be suicidal.
- 4) Self-accreditation happens in situations where there is high confidence in the institutions' quality management system. Right now the institutions in Botswana have not put in place robust internal quality assurance systems. Self-accreditation, which in a number of cases is facilitated by heads of institutions (Vice Chancellors), is an ideal that the TEC should be working towards. Self-evaluation as a quality assurance practice is evidence of the maturity of the institution in managing quality.
- 5) A programme that has been rejected during accreditation should not be offered. The learners should be transferred to another institution offering the same programme. Putting in the required resources to support learners in the programme is another option, however, transferring the students would be ideal since it would provide the students with a conducive learning environment.

The expert's feedback was considered when finalising the characteristics of an effective programme accreditation system. The expert agreed with the suggestions except the idea of self-evaluation because the system was still in its developmental stages, which is true. Another point raised was that accreditation was carried out as per the dictates of the law, which again is true. A summary of the responses from the questionnaire follows.

Summary of responses to the questionnaire

Due to the small size of the survey, simple statistical analysis was used to compare the responses. The participants were divided into two groups; BOTA, TEC, and programme reviewers were regarded as representing the accreditation agency (TEC) and the results are reported under 'TEC' totalling six respondents. The results from the academics and the administrators were analysed together as representing the institution, reported under 'TEI' also totalling six respondents. Comments were captured in the comments section, as seen in Table 7.2. The 'yes' column summarises the number of respondents per group who agreed with the suggestion, and the 'no' column represents number of respondents who did not agree with the suggestion.

Table 7.2: Optimising programme accreditation in higher education in Botswana

Accreditation suggestion		Yes		No		Comments
		TEC	TEI	TEC	TEI	
1	A specialist programme accreditation unit in TEC with the right calibre of staff could help to alleviate the discrepancies experienced during the accreditation process.	6	6	0	0	
2	Training of institutions in the production of the self-evaluation report should be intensified.	6	6	0	0	Critical area of QA process. Most institutions produce erratic, poorly structured unreadable documents.
3	Programmes should be accredited before being offered to ensure that what goes into the system is credible.	4	6	2	0	To meet national, regional and international standards relevant for students and provide public confidence. Institutions may be allowed to offer the programme so as to measure its worth.
4	The curriculum, curricular development process and evidence of curriculum approval should be amongst the documentation presented to the programme review team for assessment.	6	3	0	3	Relevant tools should be available for credible assessment. Institutions should have processes in place to ensure quality programmes.
5	Each programme should be accredited at all sites of delivery.	5	4	1	2	The main campus acts as the parent institution. Plans could be made to verify resources.
6	Each programme should be accredited in all modes of delivery.	4	5	2	1	
7	The accreditation criteria should be coined in such a way that they accommodate different modes of delivery.	5	4	1	2	
8	A higher qualification programme should only be introduced once the lower qualification has graduated the first cohort. There should be indication that the institution managed the programme well.	3	2	3	4	As long as the institution has potential and has proven so, it should be allowed to offer the next level before graduating first cohort. The delay might lead to students not progressing to the next level and the institution might lose students to other institutions.

Accreditation suggestion		Yes		No		Comments
		TEC	TEI	TEC	TEI	
9	There should be a standalone standard that deals with students' welfare in the programme. This will take care of international students, disadvantaged minorities including different ability students.	5	5	1	1	This will be application of equal opportunity policy which is very important. The current system ignores even adult learners.
10	The graduate profile of each programme should be demanded during the accreditation process.	6	3		3	It would be difficult to give graduate profile within one year although this will assist to test the relevance of the programme to industry and employability of graduates.
11	The TEC should have an evaluation criteria for the self-evaluation report. The self-evaluation report should only be given to the programme reviewers when it meets the criteria, that is, if it is of acceptable quality.	6	3		3	The suggestion would ensure that institutions pay attention to detail and prepares well for programme accreditation hence avoid unnecessary back and forth of the draft report.
12	The programme reviewers should be given the self-evaluation report at least two weeks in advance before the accreditation visit.	6	6			Reviewers should be given ample time to prepare and avoid making skewed decisions due to lack of information.
13	The TEC should develop a criteria that guides the programme reviewers in arriving at the accreditation recommendation.	6	6			Reviewers have a diverse background and they need a common tool to guide their process and decision making.
14	The TEC should have the power to announce and publish the accreditation results.	5	6	1		Executive summary would suffice for public information.
15	There should be room for self-evaluation that leads to self-accreditation of programmes by institutions.	4	2	2	4	Not advisable. The education system is not yet ready therefore can lead to malpractice. Can be applied to institutions with delegated responsibility
16	Accreditation of programmes leading to professional qualifications should be done by or in close collaboration with professional bodies.	4	5	2	1	Will be a challenge because professional bodies are outside Botswana.
17	If a professional programme is accredited, it should follow that the programme is recognised by the relevant professional body.	4	6	2		Professional bodies could be involved in validation.

Accreditation suggestion		Yes		No		Comments
		TEC	TEI	TEC	TEI	
18	The TEC should have a panel of accreditation specialists for various fields of study who will evaluate the accreditation recommendations from the programme reviewers.	5	3	1	3	The team's decision should not be final.
19	The accreditation team should have a student member.	2	3	4	3	Only if the student is experienced in the subject area. Students are not qualified to accredit programmes, experts are sufficient.
20	Programme reviewers should be evaluated	5	6	1		
21	Quantitative data should be included in both the self-evaluation report and the accreditation report.	5	6	1		
22	After successful accreditation of a programme, the TEC should appoint a monitor to ensure that the institution improves on the quality of the programme [continued compliance].	4	5	2	1	A compliance unit separate from accreditation to look into issues of auditing and monitoring would be ideal. The current model, ignores this important aspect, however institutions should comply with what they were accredited for.

7.5 Discussion of the Findings

The findings from the experts and those from the questionnaire were triangulated. The main observation was that the experts agreed with the findings of the study. Their contribution reinforced the findings with a few modifications. Considering the questionnaire, the respondents mainly agreed with the suggestions, taking nine out of 12 as a convincing grade of agreement. There were three suggestions that did not convincingly indicate that the respondents agreed with or that clearly indicated a difference in opinion. These are discussed below:

a) A higher qualification programme should only be introduced once the lower qualification has graduated the first cohort. There should be indication that the institution managed the programme well.

The advanced reasons are valid. A delay in introduction of a higher qualification would not be conducive to both the students and the institution because it might hamper progression. The institution will inevitably lose students to other institutions that offer a higher qualification of the same programme. In the same vein, students of the same institution will be disadvantaged because they will have to look for places in other institutions. The suggestion that an institution should be given permission to introduce a higher qualification as long as it has potential and has proven that it can do so could also help to raise its profile, resulting in improvement and growth.

b). There should be room for self-evaluation that leads to self-accreditation of programmes by institutions.

Self-accreditation could be a long-term development as per the expert's advice that the Botswana education system is still in its developmental stages. A minimum of two accreditation processes of the same programme might give the TEC confidence that the institution has the necessary quality assurance structures in place to manage the programme.

d) The accreditation team should have a student member.

Inclusion of a student member in the accreditation panel brings forth some issues, such as: will the student member be a standing committee member for all accreditations, which brings forth other concerns such as time and expertise, and whether the student will be from the same institution and programme that is undergoing accreditation. It is premature to consider including a student member in the programme accreditation panels of the TEC.

The rest of the suggestions can be divided into short-term and long-term suggestions, respectively those that the TEC can implement within a year and those that need consultation with other stakeholders.

Box 7.2: Summary of short-term achievable changes

1. The TEC should have a specialist unit that deals with accreditation matters. These officers could be held responsible for any non-conformities identified during the programme accreditation process.
2. Staff responsible for programme accreditation, at TEC, TEI and programme reviewers should all be trained to enable them to undertake their responsibilities effectively.
3. There should be two programme accreditation processes for one programme; before being offered to ensure that what goes into the system is credible and while running to assess the resources and quality of provision. The curriculum development and compliance issues can be addressed before the programme is introduced.
4. The TEC should have evaluation criteria for the self-evaluation report. The self-evaluation report should only be given to the programme reviewers when it meets the criteria, that is, if it is of acceptable quality.
5. The self-evaluation report should provide an analysis of the programme content indicating the skills that will be attained by offering such a programme and the various progression pathways that the graduate of the programme could follow.
6. The programme reviewers should be given the self-evaluation report at least two weeks prior to the accreditation visit.
7. The TEC should develop an accreditation manual that will guide the accreditation process.
8. Each programme should be accredited at all sites of delivery to ascertain uniform and sufficient provision of resources.
9. All modes of delivery of the programme should be accredited. This will enable recognition of qualifications obtained through different modes.
10. There should be a standalone standard that deals with student's welfare in the programme. Assessment of provision for disadvantaged students should be conspicuous.
11. The graduate profile for each programme should be demanded during the accreditation process.
12. The TEC should develop criteria that guides the programme reviewers in arriving at the accreditation recommendation. The accreditation decision should be guided by a clearly stipulated classification system.
13. Accreditation of programmes leading to professional qualifications should be done by or in close collaboration with professional bodies. Therefore, if a professional programme is accredited, it should follow that the programme would be recognised by the relevant professional body.

14. The TEC should have panels of accreditation for various fields of study to evaluate the accreditation recommendations from the programme reviewers. The panels should have relevant members from the TEC therefore their decision should be taken as final.
15. After successful accreditation of a programme, the TEC should appoint a monitor to ensure that the institution implements the recommendations so that improvement can be accomplished.
16. Institution wide issues should be assessed periodically. Programme accreditation should concentrate on the programme.

Box 7.3: Summary of the Long Term Changes

1. The TEC should have the power to announce and publish the accreditation results.
2. There should be room for self-evaluation that leads to self-accreditation of programmes by institutions.
3. The TEC should revise the accreditation guidelines and name them appropriately as programme accreditation guidelines to ensure that they communicate what they are meant for.
4. Programmes in public institutions should be accredited.

The research sub-question 5, *To what extent could the identified characteristics optimise the Botswana programme accreditation system?* has since been addressed. The shortcomings that were identified as having prompted this study (listed in Chapter 1 Section 1.3) could be addressed by implementing the suggestions above. The shortcomings are succinctly restated and discussed below:

a) *Delay in conveying the accreditation decision*

The delay could be counteracted by giving the TEC the authority to announce the accreditation decision. A regular update on the status of programmes in institutions would give the Ministry of Education and Skills Development relevant information to report and account to stakeholders.

b) *Distinction between programme accreditation and institutional accreditation*

The TEC should revise the accreditation regulations and name them appropriately, then revise the accreditation standards, requirements and criteria to ensure that they are specific to the programme.

c) *Structure of the programme accreditation reports*

The programme review team should be given a structure of the programme accreditation report and instructed to adhere to it. The analysis of the curriculum and curriculum development process, content coverage, including assessment of emerging issues, students' performance, and relevancy of the programme to the human resource needs of the country should be some of the areas that the TEC should ensure are included in the report, otherwise it should be considered incomplete and not be accepted. This last aspect would help to advise if students were being given skills that would help them to fit in the market. An extensive self-evaluation report would require that all the concerned parties were taken through capacity building workshops, followed by guiding principles in the form of a manual.

d) *Quality of the self-evaluation report*

Capacity building workshops for all the concerned parties, giving guiding principles in the form of a manual, and evaluating the report before sending it out to the programme reviewers, could help to curb this situation. A deliberate effort should be made to ensure that quantitative data and students' progress report are included in the self-evaluation report. Institutions should be encouraged to report on the strengths, weaknesses and improvement strategies towards improvement of the programme.

7.6 Presentation of Prototype 2

Prototype 2 was developed after consideration of the short-term changes and the long-term changes. Following is a brief outline of the prototype. The programme accreditation system (the prototype) should be used in accordance with regulatory requirements as set out by the accreditation agency and other policy documents related to education. The guidance notes are divided into 6 Parts, labelled Part A to Part F presenting the following (refer Appendix K):

PART A: Preliminary considerations give an introduction to the accreditation system and explains the 3 levels of accreditation: approved programme; accredited programme; and provisionally accredited programme. A statement about significant changes to the programme that should be reported is made. The programme accreditation process is presented.

PART B: The accreditation standard outlines the conditions for accreditation.

PART C: Requirements and criteria for accreditation presents the accreditation criteria for new programmes and for existing programmes.

1.0 *Criteria for evaluation of a new programme seeks to establish the design and development process of the programme and uses the following lead points:*

- 1.1 Curriculum design
- 1.2 Programme instruction requirements
- 1.3 Programme resources
- 1.4 Articulation requirements
- 1.5 Institutional approval
- 1.6 Market survey

2.0 *Criteria for existing programmes evaluate programmes in the system and uses the following lead points:*

- 2.1 Delivery and management of the programme
- 2.2 Assessment of learner attainment
- 2.3 Learner records
- 2.4 Resourcing of the programme
- 2.5 Staffing of the programme
- 2.6 Funding of the programme
- 2.7 Impact of programmes
- 2.8 Qualification titles
- 2.9 Certification
- 2.10 Accreditation decisions
- 2.11 Accreditation fees

PART D: The self-evaluation report gives guidance on the production of the self-evaluation report.

PART E: The programme review report gives guidance on activities to be carried out during the site visit and the production of the programme accreditation report.

PART F: The accreditation schedule gives guidance on the schedule to be followed.

The accreditation manual came through the research findings as one of the vital instruments for programme accreditation, however, it was not developed at this stage, but recommended for development.

7.7 Conclusion

In this chapter, the assessment phase of the design research process was documented. A complete cycle of design research took place during this phase. The cycle began with sampling of the respondents, data collection, capturing, analysis, and discussion of the findings. Accordingly, the global design of the programme accreditation system was considered. The evaluation was achieved through expert evaluation, micro-evaluation, and a questionnaire to different categories of people. The overall evaluation of the characteristics of a programme accreditation system was positive, suggesting that the suggested modifications to the Botswana accreditation system would result in a more effective one. The main design principles and recommendations for policy and for further research will be discussed in Chapter 8.



Chapter 8

Conclusions and Recommendations

8.1 Introduction

Botswana employs the programme accreditation system as a quality assurance mechanism to ensure that quality education is delivered to the nation (TEC, 2008). Caillods and Bray (2007) state that it is important to ensure that the accreditation standards, criteria, and practices are internationally comparable and regularly reviewed to make them up-to-date as the information provided by accreditation systems is used by a variety of stakeholders in society. This study was conceptualised to make improvements to the system.

Educational design research was found to be a suitable research design for this study. In this last chapter of the study, a summary of the research problem, process, and approach are recapitulated (Section 8.2). The main findings of the study are discussed per research question, ending with a summary of the characteristics of an effective programme accreditation system as deduced from the study (Section 8.3), followed by reflections on the conceptual framework (Section 8.4). A reflection on the methodology applied in the research is presented in Section 8.5. The main conclusions that resulted from the study are submitted in Section 8.6. This chapter (Chapter 8) concludes the study, *Development of a programme accreditation system to address quality in tertiary education institutions in Botswana* with recommendations for practice, policy and research presented in Section 8.8.

8.2 Summary of the Research

The Tertiary Education Council (TEC) was mandated by the Botswana government, through an Act of Parliament (the Act), to coordinate maintenance of quality tertiary education in the country (Republic of Botswana, 1999). Programme accreditation as one of the quality assurance mechanisms in tertiary education was introduced to realise this function (TEC, 2008). However, the Act mandated the TEC to accredit programmes in private institutions only, but not in public institutions (Sections 2.4 and 2.6), a decision which proved unfavourable to improvement of the quality of tertiary education within the country (Sections 5.3 and 6.3).

Meeting programme accreditation prerequisites set by an external body to the institutions was thus relatively new (introduced in 2008) to both institutions and the TEC. As in any new system, challenges that were not anticipated emerged during the first round of implementation of the

programme accreditation system. An abridgment of the observations as elaborated in Chapter 1 (Section 1.3) that constituted a problem worth investigating is as follows: a decision to accredit or not to accredit some programmes that underwent programme review for the purposes of programme accreditation took more than 12 months to be finalised; students continued in the programmes that were found not to meet threshold standards; the institutions were burdened by answering the same type of questions from different teams of programme reviewers; there was considerable confusion about the distinction between programme accreditation and institutional accreditation during the accreditation process; there were several variations in the programme accreditation reports produced; and some self-evaluation reports were not informative.

These challenges triggered the inception of this study in 2011, the main commitment being to contribute to the education system and the body of knowledge on quality assurance in higher education by recommending the characteristics of an 'effective' programme accreditation system. The research process occurred in the tertiary education setting, involving multiple variables, students, academics, programme reviewers, officers, experts, and different programme accreditation systems, with focus on developing the characteristics of an effective programme accreditation system, thereby using relevant data collection methods at any given time (Barab & Squire, 2004), and involving stakeholders. Two versions (or prototypes) of the programme accreditation system with ongoing reflection on the research process were tested in the target contexts so as to develop the desired design guidelines (Plomp, 2013). The aim of the study was to develop design guidelines/principles, in the form of characteristics that could be used in the development of a programme accreditation system, hence the structure of the main research question (Plomp, 2013):

What are the characteristics of an effective programme accreditation system for tertiary education institutions in Botswana?

The following research sub-questions introduced in Section 1.5 helped to address the main research question:

1. How is programme accreditation carried out in Botswana? (Addressed in Chapter 5).
2. How does the Botswana Programme accreditation system compare with other systems? (Addressed in Chapter 6).
3. What constitutes an effective programme accreditation system? (Addressed in Chapter 6).

4. How can the Botswana programme accreditation system be optimised? (Addressed in Chapter 7).
5. To what extent could the identified characteristics optimise the Botswana programme accreditation system? (Addressed in Chapter 7)

Since the process of change should be implemented strategically by managing different ideas collected from different quotas and identifying opportunities that could be used to execute the plan (Voorhees, 2007), educational design research was found suitable to develop an effective programme accreditation system for Botswana. Educational design research proved relevant for this study because it aims at finding solutions to challenges in educational practice to which no or only a few validated principles ('how to do' guidelines or heuristics) are available to structure and support the design and development activities (Plomp, 2010, p.13). As of 2011, there were no design guidelines for developing a programme accreditation system for use in tertiary education institutions in Botswana.

The intention of the study was to align research and utility (van den Akker, 1999) to ensure that the research product would be relevant, consistent, practical, and effective within the context of use (Nieveen, 2010). The iterative nature of design research through the combination of design, development, and implementation, with formative evaluation throughout to ensure relevancy of the end-product, culminating in semi-summative evaluation to check the expected effectiveness of the product, made the research design relevant. The ontological assumption for this research was that the realities are constructed by real life situations hence the research findings were constructed from real life situations as programme accreditation is a real life activity, conducted in active tertiary education institutions. The epistemological assumption was that the researcher interacts with the objective of the research in order to gain knowledge and be able to interpret what needed to be known in the process of programme accreditation, the design research process enabled the researcher to be involved throughout the research process thereby satisfying the methodological assumption of having close interaction between the researcher and participants during data collection (Table 4.1).

The study consists of three research phases made up of the "preliminary research, the prototyping phase, and the evaluation phase" (Plomp, 2013, p. 17) as developed in Chapter 4, Figure 4.3 and reproduced in Figure 8.1. The research process started with problem identification which was achieved through own experience and a reflection on the Botswana programme accreditation process with reference to literature. A needs analysis was carried out by interviewing academics and programme reviewers who participated in the first cycle of

programme accreditation in Botswana. Document analysis provided vital information for the enquiry resulting in Phase 1 of the study, named *problem identification and needs analysis*. The research question addressed in Phase 1 was ‘How is programme accreditation carried out in Botswana?’ (Sections 5.2 and 5.3). The quality criterion addressed in this phase was relevance because it was necessary that the developed programme accreditation system should be relevant to the environment for which it was developed.

The second phase of the study, *design, development and implementation* was the prototyping phase. Phase 2 started with a comparative study of the programme accreditation process in Botswana to six other systems (Sections 6.3 and 8.3). Literature review (Chapter 3), the findings from the comparative study (Section 6.3), the Botswana programme accreditation system documentation, and the analysis of the Botswana programme accreditation process (Section 2.6) provided data that was used to compare the Botswana programme accreditation system to other systems (Table 6.3), thereby answering research sub-question 2, ‘How does the Botswana Programme accreditation system compare with other systems?’ (Section 6.3).

A prototype of the programme accreditation system was developed and tried out in three institutions. Data was then collected from people who participated in the try-out cycle (Section 6.7). A comparison of data collected in Chapters 5 and 6 provided answers to research sub-question 3, ‘What constitutes an effective programme accreditation system?’ (Sections 6.6 and 6.7). The quality criteria addressed in this phase was consistency and practicality to ensure that the system could be applied in different programmes, since the tertiary education system comprises a variety of programmes, most of which should be quality assured through programme accreditation.

Research sub-question 4, ‘How can the Botswana programme accreditation system be optimised?’ and research sub-question 5 ‘To what extent could the identified characteristics optimise the Botswana programme accreditation system?’ were addressed in the third phase of the research process (Figure 4.3). The research phase is referred to as the *evaluation phase*. Micro-evaluation by different groups of people assisted in completing the research process.

The research model presented in the next page (Figure 8.1) demonstrates the research process as carried out in this enquiry.

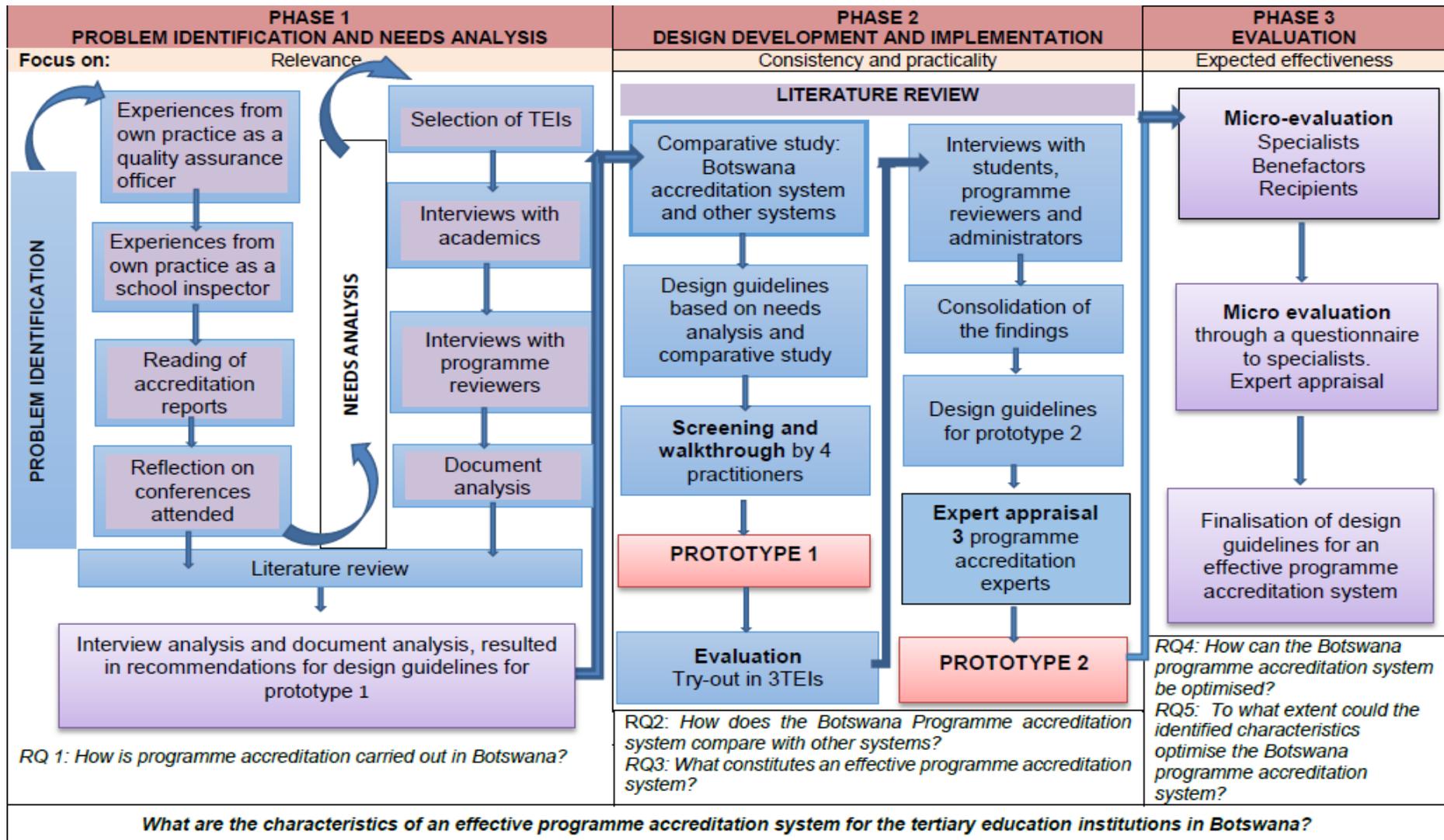


Figure 8.1: Research process for the study

Literature reviewed indicates that programme accreditation is carried out for improvement to the programme (Section 3.5) and accountability to the stakeholders (Section 3.6), hence is one way of ensuring delivery of quality tertiary education to the nation. The accreditation status is awarded on the basis of meeting threshold quality standards as prescribed by the accreditation agency (Section 3.8). This mandate should not be perceived only in terms of measurement and standards to be met but rather as assurance of provision of education that “... empowers, unlocks people’s potential and gives them the voice to argue, reflect and say what they want and how they want things to be, it opens pathways for self-actualisation, broadens perspectives and opens up minds to a pluralistic world” (Maila, 2006, p. 9). Tertiary education cultivates the intellectual capability of individuals and provides them with broader learning skills, critical knowledge, and transforms them into lifelong learners. In that train of thought, Botswana needs a quality tertiary education system to realise national priorities and goals within the framework of an efficient and effective use of resources. It is in this vein that tertiary education programmes offered should be regularly appraised using internationally recognised and comparable quality standards to give graduates a competitive edge in the knowledge society, to ensure excellence and global competitiveness as demonstrated in the conceptual framework for this study (Figure 3.4).

Programme accreditation provides relevant data and information on the quality of education provided to the nation, be it for economic development or improvement of human resources. Burquel and van Vught (2010) state that governments need institutional data to support policy, strategic developments and the restructuring of tertiary education. Woodhouse (2004) opines that student mobility across countries has increased and this necessitates clear programme accreditation procedures to facilitate credit transfer and qualification portability, which could be included in the accreditation standards as they evolve (Section 3.7). The conceptual framework (Figure 3.4) demonstrates that during the programme accreditation process there is systematic identification of facts and processes to meet learner needs, culminating in a programme that is fit for purpose, empowers learners who can fit in the knowledge society, and provides a globally competitive education. This assertion is corroborated by the Commonwealth of Learning (COL, 2010) through the Commonwealth of Learning Review and Improvement Model (COL RIM Model) (refer Section 3.9).

8.3 Main Findings

In this section, the research results are presented with reference to each research sub-question. The research had one main research question and five research sub-questions. The research sub-questions were used to address the main research question: *What are the*

characteristics of an effective programme accreditation system for tertiary education institutions in Botswana?

The research question was addressed through three research phases. The evidence obtained assisted the study to reveal limitations in the Botswana programme accreditation system and recommend a possible remedy by presenting the characteristics of an effective programme accreditation system. A response to each research sub-question is provided, starting with the first to the fifth (Sub-sections 8.3.1 to 8.3.5), then the *characteristics of an effective programme accreditation system for tertiary education institutions in Botswana* (Sub-section 8.3.6) concludes Section 8.3. A response to each research sub-question ensues.

8.3.1 Botswana programme accreditation system

How is programme accreditation carried out in Botswana?

The objective of this question was to get a better understanding of the programme accreditation system in Botswana, to find out what went well and what needed to be improved. Data was collected through document analysis, focus group interviews on academics, and programme reviewers (Section 5.2). A questionnaire administered to people who participated in the programme accreditation process of The Tertiary Education Council (TEC) between 2009 and 2010 was also referred to (Sections 5.2, 5.3). Twenty programme accreditation reports and their corresponding self-evaluation reports produced between November 2009 and February 2010 were analysed through thematic analysis (Table 5.2). In addition, the programme accreditation regulations and the programme review guidelines (Section 2.7) provided data for this question.

The findings indicated that Botswana's programme accreditation system is in line with international procedure of self-evaluation, a site visit resulting in a programme accreditation report, followed by a programme accreditation decision (Sections 2.6 and 6.3). All accreditation agencies studied, such as the Council on Higher Education (CHE) of South Africa, National Assessment and Accreditation Council (NAAC) of India, and Tertiary Education Quality and Standards Agency (TEQSA) of Australia (Section 6.3), subscribe to such a model. It allows institutions to make a critical analysis of their programme environment and find ways of providing 'an exemplary programme' by designing improvement strategies (Section 3.11 and Figure 3.2), thereby allowing them to be innovative.

Programme accreditation provides a fertile ground for a deliberate collaborative partnership between the tertiary education provider (institution), the academics, the students, and the accreditation agency, with the results filtering down to government, industry, and society.

Tertiary education provides individuals with tools to improve their lives by realising their potential and enhancing it, contributing, through research, to addressing the needs of the innovative society. It is befitting that the programme accreditation system as a quality assurance mechanism conforms to international standards.

Some challenges, such as applying programme accreditation as per the dictates of the law in private tertiary education institutions only, leaving out public institutions (Republic of Botswana, 1999), became conspicuous through the study (Section 5.3). Both private and public institutions are expected to contribute to the human resource needs of the country. One of the expected benefits of programme accreditation is quality delivery (Section 3.2), which could be manifested through the graduates. It is therefore logical to expect that there should be no dividing line between whether the graduates were trained in public or private institutions. The mandate of the TEC is directed towards both in similar terms, and at the same time. Inclusion of the clause in the TEC Act could be considered as an oversight and therefore should be superseded by implementing the programme accreditation process in both.

Whilst the regulations are mainly for application in private tertiary education institutions, they are relevant and could be sufficiently efficacious to help all tertiary institutions in Botswana to improve the quality of their programmes and general services. It would be in the best interest of the institutions to comply with the set quality standards for purposes of assuring stakeholders that they are offering credible programmes that above all are responsive to the human resource development needs as well as international competitiveness indicators. International practice as revealed from other accreditation agencies (Section 1.2) attests to this.

Another challenge that emerged was that training of the TEC staff, institutions and programme reviewers needed to be improved so as to contribute towards an effective programme accreditation system (Sections 5.3, 6.4, 6.7, and 7.6). A guiding manual for the programme accreditation process, in addition to the programme accreditation regulations, could help to alleviate the deficiency that was well pronounced (Sections 5.4, 6.3, and 7.6). Monitoring of the institutions to ensure that they act on the accreditation recommendations could be done through appointment of a well-qualified professional in that subject area (Section 6.3).

8.3.2 Comparative study: Botswana versus other countries

How does the Botswana Programme accreditation system compare with other systems?

The research findings to the first sub-question provided a basis for addressing this research sub-question. A comparative study of the Botswana programme accreditation system with six

other accreditation agencies was carried out to obtain answers to this question (Section 6.3). A set of questions guided the data collection procedure (Box 6.1). A summary of key features is given per accreditation agency, then a consolidation of common features is presented (Table 6.3). The quality assurance agencies studied were the Council on Higher Education (CHE) of South Africa, Malaysian Qualifications Agency (MQA) of Malaysia, National Assessment and Accreditation Council (NAAC) of India, National Council on Higher Education (NCHE) of Namibia, New Zealand Qualifications Authority (NZQA) of New Zealand, and Tertiary Education Quality and Standards Agency (TEQSA) of Australia (Section 6.3.)

The findings of the research sub-question revealed that the Botswana programme accreditation system is similar to those in other countries (Sub-section 8.3.1). A frame of reference for the accreditation process includes standards, criteria, and procedures to assist in meeting the condition of equivalency (Erichsen, 2004) to enable a decision to be made as to whether to grant the programme accreditation status (Harvey, 2004). A comparison of the accreditation standards and criteria used to assess the programmes for accreditation (Table 3.1) indicate that the requirements and criteria (standards) used in Botswana are similar to those of other countries, which is a good indication of international comparability. Both the institutions and the programme reviewers apply the standards, albeit there are signs of conformism as opposed to being investigative and diagnostic, in order to provide more information that could assist in improvement of the programme (Section 5.3). Thus, appropriate execution of the standards and criteria can be one of the panaceas to the provision of quality education. Having standards as ‘furniture’ will not improve the education system. The focus on programme accreditation is to ensure that the institution delivers a quality programme or, in the case of professional accreditation, to ensure that a subject area links into professional employment, especially where one requires certification apart from academic qualification in order to practice (Harvey, 2004).

Some of the differences observed were the pronouncement of the accreditation decision by the Minister of Education and Skills Development (Section 5.3), which delayed finalisation of the accreditation process; dependence on accreditation guidelines and training by the TEC without an accreditation manual that could be used to guide the process; and absence of a decisive grading system to guide the accreditation decisions (Table 6.3). Some unique practices in different accreditation agencies are the attachment of a monitor to assess implementation of the recommendations for a certain period, use of a definitive grading system, and involvement of the professional bodies were observed (Section 6.3). These, once applied, could help to improve the prestige of tertiary education

It was revealed through reports and interviews that although the regulations provided for assessment of programmes in both the main campus and the satellite campuses, the evaluation of programmes was made only on the main campuses, with the assumption that whatever was on the main campus was duplicated on the satellite campuses (Section 5.3 and Table 6.3). There was evidence that, in some instances, the academics from the satellite campuses joined those on the main campus (Section 6.7), which was not very convenient for assessment of quality issues. Another glaring difference detected was that some agencies accredit programmes before being offered (Section 6.3), which is not the case with Botswana (Section 2.6). To address this weakness, the TEC developed a criterion for review and approval of programmes so that private institutions could submit programmes for review and possible approval before being offered (Section 2.7). The programme review process is not as robust as the programme accreditation process (Figure 2.4), therefore there might be room that the quality of the programme is not effectively determined.

8.3.3 An effective programme accreditation system

What constitutes an effective programme accreditation system?

To determine the factors that contribute towards an effective programme accreditation system, differences and similarities that resulted from the comparison of the Botswana programme accreditation system with other systems were studied (Table 6.3). The common practices were considered to be normal practices that the TEC exercises. The shortcomings in the Botswana system that could be addressed for improvement purposes are hence listed in Box 6.5 and Table 6.6 as recommendations for Botswana to implement so as to drive towards a more effective programme accreditation system. The characteristics of such a system are identified in Sub-section 8.3.6.

Programme accreditation is partly made for improvement and accountability (Sections 3.5 and 3.6). The commendations and recommendations that result from the accreditation process should articulate the amount of improvement that could be realised by implementing the accreditation recommendations. The accreditation results should explicitly state the accountability issues raised through the accreditation process. These could be partly reported in terms of international academic competitiveness, and contribution to the required skilled manpower to the nation (Section 2.5) because quality and purpose in tertiary education cannot be separated (Harvey & Knight, 1996). Thus, the programme accreditation procedure is expected to assist in mobility of the workforce (Section 3.11) by ensuring equivalency, guaranteeing quality, creating transparency and also encouraging and facilitating diversity (Erichsen, 2004).

An effective programme accreditation system would steer the education system towards a knowledge economy in line with aspirations of the nation. Graduates of such a system would be able to demonstrate acquisition of the 21st century skills (Table 2.4 and Section 5.3). The Global e-Schools and Communities Initiative (GeSCI) explains the term ‘Knowledge Society’ as a society “where knowledge is the primary production resource instead of capital and labour” (2011, p.3) and “includes a dimension of social, cultural, economic, political, and institutional transformation, and a more pluralistic and developmental perspective” (2011, p.6), which could be ascertained through assessment of the curriculum (Section 2.5 and 6.7). Thus, the graduates should have the programme content as well as skills to survive in the job market. The qualification types that result from a programme assessed using an effective programme accreditation system would be internationally comparable thereby opening doors for the graduates to be absorbed into the global job market (Section 5.3), or articulate from a lower qualification to a higher qualification, or even a professional qualification. An effective programme accreditation system employs internationally comparable standards and criteria (Section 3.8) to assess and ensure the worthiness of a programme (Section 6.3).

8.3.4 Improvement strategies

How can the Botswana programme accreditation system be optimised?

The design principles for prototype 2 were evaluated by consulting three programme accreditation experts to assess the recommendations that were made as to what constitutes an effective programme accreditation system. The experts gave their feedback which was incorporated into the design principles (Section 6.8) which were then used to improve the prototype of the programme accreditation system (Section 7.3). The prototype was discussed against a set of criteria with three different groups of people considered to be key stakeholders to the programme accreditation system through mini workshops (Section 7.4). Feedback was received, analysed and incorporated into the programme accreditation system (Section 7.5).

The Botswana tertiary education sector is growing and becoming more complex than previously, when the sector was small (Section 2.3). Increase in student population due to the labour market needs brought along a range of different stakeholders, all with different needs and expectations, programmes, programme resources and delivery mechanisms which must be considered during the programme accreditation process. Internationalisation and globalisation also brought up factors that the educationists should consider in producing the workforce (Section 1.2). These changes dictate modification of the accreditation system.

Improving the quality of the Botswana programme accreditation system was an effort to get the best results out of the process. Refining the characteristics involved micro-evaluation of the prototype by users. One of the immediate responses was that programme accreditation should be conducted in all programmes, sites of delivery, and modes of delivery (Sections 7.3, 7.5 and 7.6). In addition, all programmes should be assessed before being offered (Section 7.4). A key role of tertiary education is contributing to the knowledge capital, therefore standards and criteria which include the anticipation of labour and educational needs of the economy as well as emerging issues (Section 7.6) ought to be considered. Other ways of optimising the programme accreditation system are reflected in the characteristics of a programme accreditation system discussed in Sub-section 8.3.6.

8.3.5 Degree of improvement

To what extent could the identified characteristics optimise the Botswana programme accreditation system?

This research sub-question was addressed at the semi-summative evaluation stage, the main purpose of which was to conclude the study by finding out how much improvement could be made to the Botswana programme accreditation system by applying the findings that have been generated. Assessing the amount of improvement was not possible because there was no baseline on which the amount of improvement could be measured. An attempt was made to determine the baseline (Table 6.3) but this only covered what was revealed from the two phases. Another attempt was made by administering a 22-item questionnaire to 12 participants (Table 7.2), again using the findings of the study. The analysis was made through simple comparison because the numbers were small. The approach resulted in changes that could be made to the system with little disturbance and less expenditure, presented under short-term achievable changes which the TEC could implement within a year (Box 7.1), and long-term achievable changes which would require consultation with other key stakeholders and might take longer than a year (Box 7.2). These suggestions are presented in Sub-section 8.3.6 as characteristics of an effective programme accreditation system.

Implementation of the suggested changes is expected to improve on the programme accreditation system by making it internationally comparable, since the research included a comparative study (Section 6.3). Ensuring that the programme accreditation process was carried out by people who were conversant with the whole process, using current tools, and having the mandate to pronounce the accreditation decision would go a long way in impacting on the current system (Sections 3.2, 5.3, and 6.7). The expectation from the public, employers,

and the graduates is that programme accreditation will provide assurance that the graduates from a particular programme are competent and qualified (Murray, 2000; Ewell, 2008).

8.3.6 Features of an effective programme accreditation system

To ensure that education systems do not fall behind the economic and global education ladder, an effective programme accreditation system is paramount. Following are some of the features deduced from the study that could be used as guidelines for designing and implementing an effective programme accreditation system. Although the study identified a few core and relevant features as a basis for action and for further research the list is not exhaustive. The study was carried out within a limited timeframe and in a few accreditation systems. The list is characterised in terms of input, process and output (as per the conceptual framework in Section 3.11). The anticipation is that implementation of the following features would help to breed a quality culture and excellence within institutions, culminating in contribution to national development which could put the country in a better position to compete globally in terms of education provision. Quality education can be used as a vehicle for sound economic development.

Input

The input factors refer to the education architecture and infrastructure within the tertiary education system and the programme accreditation agency (Section 3.11). To be competitive the tertiary education institutions must have the requisite human capital and skills (Sections 5.3 and 6.5) to drive the programme accreditation system. The tertiary education sector is held accountable for the learning outcomes at the tertiary education level, taking cognisance that the products of tertiary education are expected to drive the economy. It is at this level that hard decisions for change and reforms to improve on the education system should be made. The accreditation agency (TEC) has been mandated to ensure that the education provided to the nation meets international standards (Section 2.6) and the following input factors could help to achieve this mandate:

1. There should be two programme accreditation processes for one programme (Section 7.5); the first before being offered to ensure that what goes into the system is credible and the second while running to assess the resources and quality of provision. The curriculum development and compliance issues can be addressed before the programme is introduced (Sections 5.3, 6.7, and 7.5), hence guarding against obsolete, irrelevant strategies and content that would not resolve contemporary issues such as market needs. The cost implications of the accreditation process should be absorbed by

the institution and the curriculum could be developed using development structures that could ensure a quality curriculum.

2. Assessment of the content coverage should be made against the planned curriculum and the delivered curriculum (Section 6.7).
3. Guidelines and strategies for assessment of improvement and accountability to the programme and the learners should be clearly articulated (Sections 3.5 and 3.6). It should be mandatory that areas of improvement and accountability issues are reflected in the accreditation report.
4. There should be a specialist unit that deals with accreditation matters within the accreditation agency (Section 7.5). The officers who man these could be held accountable for the success or failure of the programme accreditation process.
5. The accreditation agency should develop criteria that guide the programme reviewers in arriving at the accreditation recommendations (Sections 5.3 and 7.5). The accreditation decision should be guided by a clearly stipulated classification system and all these could be contained in an accreditation manual that will guide the accreditation process (Section 6.3). Inconsistencies in arriving at accreditation decisions could thus be minimised.
6. Assessment of provision for disadvantaged students should be conspicuous throughout the accreditation process (Sections 6.8 and 7.3). To avoid discrimination, the requirements and criteria used for assessing this should be subsumed within others.
7. The graduate profile for each programme should be clear through assessment of the curriculum and should be demanded during the accreditation process (Sections 6.5 and 7.4).

Process

The systematic and global risks within the education arena need to be kept under assiduous supervision by promoting resilience into choices of policies, priorities, and processes so as to move with the global market. Economies are dynamic, as is the education system, hence the need to keep under constant watch the technological and other developments that might impact the quality of the workforce. The following characteristics could help to facilitate the transformation that is needed within the programme accreditation system with minimal disturbance, so as to contribute to education of sterling performance:

1. Staff responsible for programme accreditation at the institution, the accreditation agency, and programme reviewers should all be trained to enable them to undertake their responsibilities effectively (Sections 5.3, 6.8, and 7.4).

2. The accreditation agency should develop evaluation criteria for the self-evaluation report. The self-evaluation report should only be given to the programme reviewers when it conforms to the set standards (Sections 6.8 and 7.3). A minimum of two weeks should be allowed for the programme reviewers to acquaint themselves with the report (Sections 6.6 and 7.5) and prepare for the validation visit such as crafting questions that could be used to gather data as well as probes that could get the institution thinking about techniques for improvement.
3. The self-evaluation report should provide an analysis of the programme content (Sections 6.8 and 7.3), indicating the skills that will be attained by offering such a programme and the various progression pathways that the graduate of the programme could follow.
4. Each programme should be accredited at all sites of delivery to ascertain uniform and sufficient provision of resources (Sections 3.4, 5.3, and 6.4). Furthermore, all modes of delivery of the programme should be accredited to enable recognition of qualifications obtained through different modes (Sections 3.4, 6.4, and 7.5).
5. Accreditation of programmes leading to professional qualifications should be done by or in close collaboration with professional bodies. Therefore, if a professional programme is accredited, it should follow that the programme would be recognised by the relevant professional body (Sections 6.3 and 7.4).
6. The accreditation agency should have panels of accreditation for various fields of study to evaluate the accreditation recommendations from the programme reviewers. The panels should have relevant members from the appropriate bodies and make recommendations to the TEC (Section 7.5).

Output

The content, quality and relevance of the education system to the labour market could help to reduce the skill's mismatches in which there are *more jobs without people because people do not qualify, or there are more people without jobs because people do not have proper qualifications*. The labour market needs are paramount, but the skills needs in the country must be determined to avoid mismatches between the output from the tertiary education sector and the labour market needs (Sections 2.7, 5.3, and 7.5). It is not only the quantity of educated people but also the quality that is important. A programme accreditation system is expected to ensure that a programme is fit for purpose, produces learners who can fit in the knowledge society, and help Botswana provide a globally competitive education (Section 3.11).

Following are some of the indicators of the output of an effective programme accreditation system:

1. The accreditation results should be published in the public domain for public consumption (Sections 6.3 and 7.5).
2. Once satisfied with the provision of quality education within the institution there should be room for self-evaluation that could lead to self-accreditation of programmes by institutions (Section 7.3).
3. Unambiguous messages should be put up so that all stakeholders could be well informed of the obligations of a programme accreditation process (Section 7.5).
4. After successful accreditation of a programme, the accreditation agency should appoint an expert in the field to monitor progress of the institution as they act on the accreditation recommendations so that improvement to the programme can be accomplished (Section 7.4).
5. Institution-wide issues should be assessed periodically. Programme accreditation should concentrate on the programme (Section 7.5).

In summation, the programme accreditation system should be designed in such a way as to ensure that decisions are based on facts, can be substantiated and are geared towards improvement of the education system and accountability to stakeholders.

8.4 Reflections on the Conceptual Framework

Programme accreditation can be seen as a discrete integration of meeting threshold standards that are benchmarked internationally; the capacity of the institution to set programme objectives in a diversifying context, and to achieve them with the given input and context variables; the ability to satisfy the demands of various stakeholders, and the drive to excellence (Hämäläinen, 2003). Thus programme accreditation is expected to provide evidence that matters, that is, “evidence that is meaningful and scientifically valid ..., that can be used by stakeholders and decision makers (Fink, 2008, p.16).

The different stakeholders in the tertiary education environment (students, parents, academics, government, employers, administrators, and support staff) are desirous that their various needs and expectations be satisfied by the training received by the tertiary education graduates. The qualification received is a resultant factor of different activities that contribute to quality education provision, teaching and learning, and resource provision, both human and physical, that take place in a typical tertiary education setting. In this light, the programme accreditation system as a quality assurance mechanism assesses a cross-section of all the

activities that contribute towards provision of quality education. The systems theory approach, taking programme accreditation as a system proved suitable for this study (Section 3.11).

The conceptual framework signifies programme accreditation as a process that is dependent upon the input factors, without which it cannot be real. The institutional environment is key to the success of the programme accreditation process; the programme, the provision of both physical and human resources, the students, and academics are all indispensable factors to the start of an accreditation process and to the provision of quality education. However, careful thought and planning is necessary to implement programme accreditation so that it is not viewed as an obstacle to academic freedom within higher education, but rather as a contributory factor to improvement of the education system. Once the institutional ambience for the programme has been ascertained, implied by the introduction of the programme, the accreditation agency comes in with accreditation processes and standards to carry out the assignment.

There should be indication that the institution is first accredited (registered) then the programme validated (initial accreditation) before it can be offered (Sections 3.4, 6.3, and 7.4) to ensure that the programme complies with the requirements of the Tertiary Education Act (Republic of Botswana, 1999) and its associated vehicles, such as the programme accreditation guidelines (TEC, 2008). The model of an effective programme accreditation system (Figure 8.1) inspired by the universal systems model that employs the Input-Process-Output (IPO) approach (Figure 3.3) and the conceptual framework for the study (Figure 3.4) is presented below.

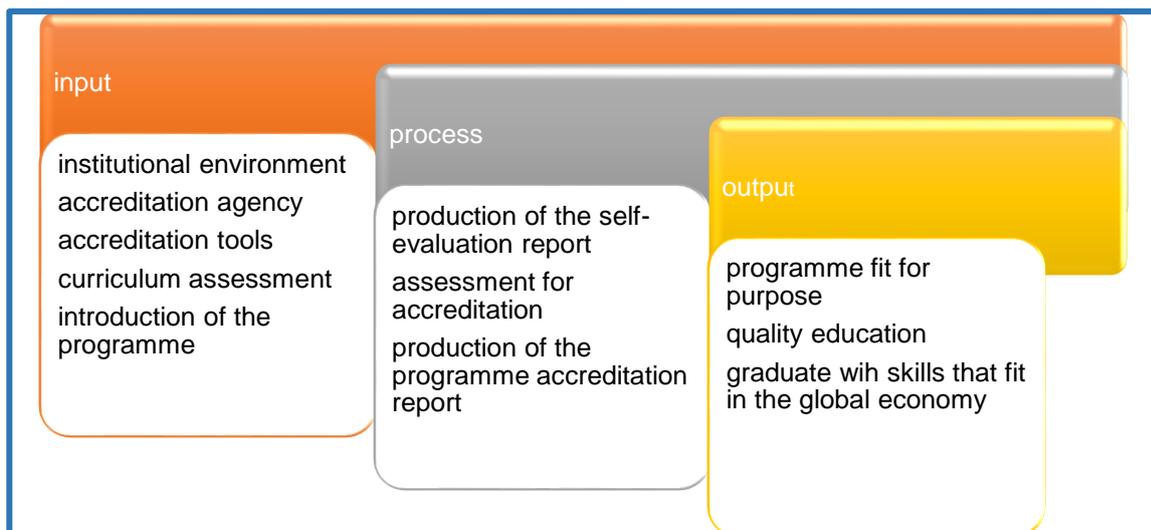


Figure 8.2: An effective programme accreditation system

A programme is accredited on the basis that it has appropriate objectives as defined by higher education, has financial, human and physical resources necessary to achieve the objectives, has evidence that it is achieving the objectives and that it will continue achieving them (Lenn, 2004). For effective delivery of the programme accreditation system, a significant amount of linkage is required between the institution and the accreditation agency, hence input. The input factors take care of the initial accreditation of the programme by assessing the curriculum. Once all the structures are in place, the process of programme accreditation takes course to determine whether the programme and its resources are fit for purpose, climaxing in accreditation decisions, commendations, and recommendations for improvement in a way that is accountable for all the resources expended. The conceptual framework considers that programme accreditation is not a flat process that culminates in accreditation decisions. It indicates that accreditation recommendations are acted upon and fed back into the accreditation system through continuous monitoring in order to achieve continuous improvement (Figure 3.4).

Educational systems change as the world around changes, by following the supply and demand principle, therefore the programme accreditation system should be structured in such a way that it adapts to the changing world. As Flood (2006, p.119) states, research can be thought of as having three main elements: “some linked ideas in a framework, a way of applying these ideas in methodology, and an application area”. Reflection on the process then contributes to adjustment in the research process, which leads to a better understanding of the system. The conceptual framework for this study inspired by the systems model met the needs of the study, therefore it was not necessary to make modifications.

8.5 Reflections on the Research Methodology

The primary aim of this study was to identify the first set of characteristics for the development of an effective programme accreditation system in Botswana. This has been operationalised through the main research question: *What are the characteristics of an effective programme accreditation system for tertiary education institutions in Botswana?* (Section 1.5). Design research was chosen as the appropriate research design to address the research question as it is a research design with the purpose to develop research-based solutions for complex problems in educational practice for which there are no how-to-do guidelines (Plomp, 2013).

In this study, with reference to Wademan’s Generic Design Research Model (Figure 4.1), both a revised programme accreditation system and design principles for such a programme accreditation system for Botswana tertiary education have been approximated through a number of phases and cycles, resulting in a version which is expected to be effective (Section

7.6). Further research will be needed to validate the findings in order to result with an effective programme accreditation system (Section 8.7). The research process followed the recommended three phases for design research (Sections 4.5 and 8.2) applying the main characteristics of design research as discussed in Section 4.5. This is illustrated below:

- ❖ *interventionist*: an intervention, namely a revision of the Botswana programme accreditation system has been designed and developed in the real life setting of tertiary education in Botswana;
- ❖ *Iterative*: research took place through repeated phases of design, implementation, evaluation, and revision;
- ❖ *process oriented*: the underlying design principles were developed and prototypes designed;
- ❖ *utility oriented*: the merit of the prototype has been assessed by establishing its practicality, whilst effectiveness can be expected (see recommendation for further research, Section 8.7);
- ❖ *theory oriented*: the design of the revised programme accreditation system is based on findings from relevant literature and a conceptual framework, whilst the systematic evaluation resulted in a number of design principles for such frameworks (McKenney, Nieveen, & van den Akker, 2006).

Stakeholders in monitoring quality of higher education and relevant practitioners from all levels in the system have been involved and have given their input. Separate groups were specifically identified to gather specific information: institutional administrators, programme reviewers, academics, students, accreditation officers, and programme accreditation experts. Eight group interviews and six individual interviews were conducted (Chapters 5 and 6). Formative evaluation through application of the quality criteria was undertaken throughout all the stages (Section 4.6). Different evaluation methods were used, such as screening, walkthrough, try-out of the prototype, and expert appraisal (Nieveen & Folmer, 2013, p.162). Four programme accreditation practitioners did screening of the design principles (Section 6.5); the try-out cycle of the first prototype was done in three institutions (Section 6.6); practitioner appraisal was done by three groups of people from different sectors who benefit from the programme accreditation system categorised into *professionals*, *benefactors*, and *recipients* through three mini workshops (Section 7.3); 12 professionals in programme accreditation responded to the questionnaire (Section 7.4); while expert appraisal was done by four programme accreditation experts (Sections 6.8 and 7.5). All these were done at different stages to assess relevancy, consistency, practicality, and expected effectiveness of

the research output. It was not possible within the framework of this study to investigate the actual effectiveness of the programme accreditation system and the related design principles, only expected effectiveness could be ascertained. However, the various evaluation methods yielded relevant results to progress with the study.

Apart from other documents that provided data for the study, twenty programme accreditation reports and their corresponding self-evaluation reports were analysed. The major hurdle was lack of feedback from three international experts who were contacted through electronic mail and telephone calls. However, some of the local practitioners contacted had international experience which was able to compensate for this challenge. Furthermore, the latest literature provided much needed information therefore the output of the study was not seriously affected, granted, the international experts might have enhanced the study.

Although the process of accreditation involved both academic and support staff members, and both are critical to the success of a programme, the interviews focussed on academics, except during the two group interviews on staff, when finance people and supplies people were included (Section 5.2). Upon reflection, it might have been helpful to interview support staff such as technicians where possible, because they give support to academics such as preparing laboratory equipment. However, literature and comparison of the Botswana accreditation system with others helped to address possible bias.

Collecting data from a variety of sources such as documents and interview participants, using various data collection methods such as questionnaires, interviews, and document analysis at different phases assisted to strengthen the research data and findings. The iterative nature of design research assisted to close any gaps that might have occurred at one data collection cycle in addition to strengthening the research findings. Despite challenges experienced throughout the research, such as not getting international experts' input, the research has resulted in valid and relevant findings.

Design research "is not so much an approach as it is a series of approaches, with the intent of producing new theories, artefacts, and practices that account for and potentially impact learning and teaching in naturalistic setting" (Barab and Squire 2004, p.2). I had multiple roles in this study; a researcher, a designer, a developer, assessor, and implementer. These multiple roles dictated that I had to be alert throughout and be conscious of interpersonal ethics, research ethics, and social ethics to avoid unintended outcomes (Rowan, 2006), such as conflict between the researcher and the researched. The lived experience of both the researcher and the researched were important in this research, therefore self-awareness, sensitivity, and confidence were critical throughout the research process (Wolff, 2002).

McKenney, Nieveen and van den Akker (2006; in Plomp, 2013, p.42) have discussed these challenges and provide suggestions for addressing the potential conflicts of interests, by having a careful research design, taking the role of designer and developer in the early stages but withdrawing in the last stage into the role of critical researcher using practitioners and other researchers to review the quality of Prototype 2.

The intent of the research process was to develop (improve) the programme accreditation system therefore there was no conflict of interest that might have arisen by my working in the same accreditation system. In retrospect, educational design research was an appropriate choice for this study because it allowed for the research to be undertaken in real life settings and resulted in proposed solutions to some problems in the first round of the Botswana programme accreditation system. In addition, this research provides room for further research to make improvements to the realised prototype (Section 8.7).

8.6 Main Conclusions

Programme accreditation refers to the set of procedures adopted by tertiary education institutions, national education systems and international agencies through which quality is maintained, monitored, and enhanced. UNESCO states that the social function of higher education is guided by the pursuit for excellence in teaching, training, research, and institutional performance, and the relevance of services offered by higher education (Sub-section 1.2.4). UNICEF advocates a holistic approach to education (Section 3.2). Quality education must be considered in light of contextual shifts in higher education to produce a quality workforce that can meet the challenges of the 21st century since graduates are expected to contribute towards new areas, such as innovation (Hénard, n.d.). It is a truism that an institution that offers fully accredited programmes would enjoy enhanced credibility, better stature, and better patronage from key stakeholders and members of the public (Section 5.3) and the accreditation status of a programme can impact the graduate's professional future. The study has resulted in valid, practical, and effective *characteristics of an effective programme accreditation system*. This study is the first in the Botswana tertiary education system and would therefore provide unique guidance to improvement of the current system, and those yet to be developed. Following this train of thought, the following conclusions resulted from the study.

1. The research has resulted in a prototype of a relevant, practical, and valid programme accreditation system that is appropriate for use in the tertiary education institutions in Botswana.

A prototype of the programme accreditation system resulted from the findings of the study (Section 7.6). The prototype was evaluated by stakeholders who use the programme accreditation system or benefit from the programme accreditation system (Sections 7.3 and 7.4) with improvements made along following the design research principles (Chapter 7) to ascertain its relevancy, consistency, practicality, and expected effectiveness (Table 4.2). The prototype starts with preliminary considerations to give an introduction to the accreditation system and explains the three levels of accreditation: approved programme; accredited programme; and provisionally accredited programme followed by the programme accreditation process. The accreditation standard outlines the conditions for accreditation; requirements and criteria for accreditation presents the accreditation criteria for new programmes and for existing programmes. Guidance on the production of both the self-evaluation report and the programme review report with particular reference to activities that should be carried out during the site visit would assist both the institution and the programme reviewers to produce quality reports that would contribute towards improvement of the programme being guided by the COL RIM model (Section 3.9). The accreditation schedule was designed to guide the programme reviewers during the accreditation process. The prototype of the accreditation system recommends that there should be a programme accreditation manual that gives guidance to both the institution and the programme reviewers. The accreditation manual came through the research findings as one of the vital instruments for programme accreditation, however, it was not developed at this stage, but recommended for development. The prototype has addressed most of the shortcomings that the research revealed in the Botswana programme accreditation system, therefore if the above guidance is followed, the Botswana programme accreditation system would be effective; programmes would be assessed and accredited properly and timeously with accreditation results made known to the institution within reasonable time, which is important for the impact of an accreditation system.

2. The key characteristics of an effective programme accreditation system are relevancy, transparency, inclusiveness, and responsiveness.

The tertiary education system is dynamic and broad in that programmes are different, modes of delivery are different, recipients of education cover a broad spectrum requiring a diverse means of offering education, and it contributes towards addressing the needs of the economy.

An effective programme accreditation system should therefore be relevant to the environment in which it is operationalised and to the mode of delivery of the programme such as online provision and face to face. In this way, the accreditation system would include all learners (Section 6.3) and different types of programmes; assess both planned and enacted curricular; the impact of teaching and learning; the availability and proper use of resources; and come up with recommendations whose impact would be visible. Clear guidelines for assessment of each type of programme should be available so that all stakeholders are aware of the requirements for accreditation. UNESCO states that the social function of higher education is guided by the pursuit for excellence in teaching, training, research, and institutional performance, and the relevance of services offered by higher education (Sub-section 1.2). UNICEF advocates a holistic approach to education (Section 3.2). Quality education must be considered in light of contextual shifts in higher education to produce a quality workforce that can meet the challenges of the 21st century since graduates are expected to contribute towards new areas, such as innovation (Hénard, n.d.).

Programme accreditation encompasses assessment of fitness for purpose, value for money, sustainability, effectiveness, efficiency, excellence (Seychelles Qualifications Authority, 2011), meeting threshold standards, improvement, accountability, global competitiveness, empowerment, and fitting in the knowledge society (Figure 3.2, Section 3.10). Assessment for accreditation of a programme considers input indicators, process indicators, and output indicators (Section 3.11) using standards, requirements and criteria (Sections 3.8, 5.4, and 6.6) and therefore contributes towards the provision of quality education. The accreditation status is closely dependent on academic management that is based on the principles of efficiency, academic and scientific performance, as well as competitiveness (Harvey & Newton, 2004) and is inherent to the institutional culture Vlăsceanu, Grünberg, and Pârlea (2007). Such a culture generates the necessary motivation and ensures competence in implementing quality assurance mechanisms (Hopkin, 2004; Lemaitre, 2004) and thus responds to contemporary issues in the society and in education.

3. Proper implementation of an effective programme accreditation system requires sufficient resources and autonomy.

The programme accreditation process employs different resources, both human and physical such as academics, programme reviewers, students, the accreditation agency's staff, funding and the programme resources. Assessment for accreditation of a programme considers input indicators, process indicators, and output indicators. Input indicators refer to both physical and financial resources, student, and staff profiles; process indicators assesses the internal efficiency of the programme by checking the relationship between the planned (the curriculum)

and actual; while output indicators denote the success of the student through the knowledge gained which could be reflected in formative evaluation of the students (Section 3.11, the conceptual framework). These factors are partly measured using programme accreditation standards and criteria (Sections 3.8, 5.4, and 6.6). Literature reviewed indicate that programme accreditation in education is conducted for improvement, accountability and economic purposes (Pile & Teixeira, 1997; Harvey & Newton 2004; Brunnetto & Farr-Wharton, 2005) (Sections 3.4 and 3.6). The findings of this study attests to this, however, the accreditation process does not explicitly provide indicators for improvement and accountability. A checklist that indicates assessment of improvement status and accountability (Section 6.7 and 7.3), who to account to and using what, should be provided.

The study revealed that it is important to engage well-versed personnel from the production of the self-evaluation report to the production of the programme accreditation report and interpretation of the results (Section 5.1). The programme reviewers come in to approve or disapprove, with facts, the claims made by the institution in the self-evaluation report in addition to their own assessment (Section 3.11). The programme review teams should consist of trained and credible experts who are able to apply rigorous evaluation methods (Sections 5.3, 5.4, and 6.6.3). Where resources permit, international panel members should be included (Section 6.4). The TEC should lead the programme accreditation process with credibility by being knowledgeable in the area of programme accreditation (Section 5.3) and engaging people with relevant expertise. The adage, albeit clichéd, ‘knowledge is power’ comes to life in this instance.

Supposedly, well-informed workforces in the area of the programme accreditation process could help to minimise, if not alleviate, hints of power struggle between academics and the accrediting bodies (Cheng, 2009). The power struggles contribute to tensions around programme content and delivery. Further, Cheng (2009) deduced that academics preferred that programme reviewers concentrate on essential core content and leave pedagogical and andragogical approaches, as well as the arrangement of curricular content to the institution. In this way, the accreditation agency and the institution could concentrate their efforts to achieving a common goal of improving the quality of educational services and extending graduate competitiveness (Ilieve, 2007). However, as Mishra (2007, p.13) postulates, to achieve quality, the “product or service must undergo certain processes and conform to procedural requirements”, therefore the prerequisites for programme accreditation could not be avoided while institutional autonomy and accreditation agency’s autonomy should be recognised.

4. An effective programme accreditation system assesses key areas of the education system that contribute towards quality education.

A tertiary education institution is made up of different stakeholders, activities and documentation, all of which contribute to the effectiveness of a programme. The curriculum forms the basis of the programme and it is important that the delivered curriculum is assessed against the planned one. Data from various sources, such as interviews, document analysis and observations, should be collected and triangulated to arrive at an accreditation decision (Sections 5.3, 6.5 and 6.7). Students' views, as key stakeholders in the programme, should be included, either through class observations, interviews or analysis of their performance (Section 6.7). Lodge and Bosanquet (2014) state that it is important to integrate different methods of research to assess quality educational experiences in tertiary education and develop useful and defensible evidence underpinning measures of quality learning outcomes. However, Harvey (2004) cautioned that some educators were not comfortable with programme accreditation because there seemed to be a few benefits to institutions as compared to the huge documentation produced and a plethora of negative effects. Norcini and Banda (2011) contend that some of the programme accreditation processes are prescriptive and consequently they are a barrier to improvement, offering no evidence of effectiveness. It is in this train of thought that conscientious people could assist to minimise the challenges experienced in the Botswana programme accreditation system such as delayed accreditation results (Section 1.3).

It is crucial that the types of accreditation decisions made could be defended, hence transparent guidelines on arriving at accreditation pronouncements should be drawn up (Sections 5.3 and 7.4). TEC should develop key evaluation tools such as evaluation questions, performance indicators and performance criteria descriptors to guide the programme reviewers in collecting data (Sections 6.4 and 7.6). The evaluation tools could assist the programme reviewers to collect vital data, such as infusion of emerging issues within the programmes, and to reach a reliable recommendation in a transparent manner.

It would be advisable to grade the recommendations so that it is clear how the team reached its final ones. Core criteria which might adversely affect the quality of the programme when not met should be given a higher grading than others (Sections 6.4 and 7.3). The findings of the study indicate that the programme reviewers depended upon their expertise to decide on the accreditation recommendations (Sections 5.2 and 7.5). Institutions need to be provided with performance indicators to assist them in establishing whether the objectives of the programme have or have not been met (Olubosoye, 2008; Stuart, 1995). In this case, transparency could be exercised and institutions encouraged to carry out regular internal self-

evaluations for their own consumption, which would lead to improvement in the delivery of the programme (Figure 3.2).

The basis for programme accreditation is a self-evaluation report produced by the institution after an analysis of the processes, procedures, and produce of the programme (Section 6.4 and 6.5). The institution is expected to dissect and analyse a programme in order to get a cross-section of and make impressions about the quality of the programme provision. The programme reviewers validate the self-evaluation report and produce an accreditation report (Section 7.4). Both reports are a result of an analysis of institutional documentation and observations. The study confirmed that programme accreditation upholds the ideals of the provision of quality education. Different approaches to quality are expected to meet the goals of quality education, and thus the goals of programme accreditation as a quality assurance mechanism. The programme reviewers follow a set-out process which should be documented for easy access and reference and make the processes used for the accreditation comprehensive, authentic, transparent, robust, and focused on the relevant areas (Sections 5.3, 6.4, and 7.6). Kis (2005) stated that commonalities in mechanisms relating to level and scope of quality review, key stakeholders involved in the process, methods and instruments, and the consequences of quality monitoring are present in quality assurance activities, despite the commonalities.

Strategies to develop personal qualities of a learner, such as basic competencies, and cross-cutting issues, should be incorporated within the system. Requirements for infusing skills and habits of learners, such as graduate profile, entrepreneurial skills, leadership skills, embedding professional practice or apprenticeship within the programme /curriculum, skills to adopt innovation, pro-activeness, and language skills should be highlighted.

The self- evaluation report should reflect the transition rate of students, the current status of employability in the programme, and if it had graduates present tracer studies to show the marketability of the students. The staff turnover for management, support staff, and academics should also be included because these are important actors in the quality of education provided. Guidance of students in both employment and progression pathways for the graduate of the programme, vision underlying the programme, programme goals and how the structure and substance of the programme is expected to realise these goals, are important. Just as Hopkin (1995) postulates, internal conditions of institutions such as teaching-learning, institutional procedures, resource allocation, and role allocation should be a key focus when considering change in an institution through the introduction of programme accreditation.

5. The programme accreditation system should not be restricted to private tertiary education institutions but should include public institutions.

Programme accreditation is a relatively new demand in the tertiary education sector in Botswana, introduced in 2008 (Republic of Botswana, 2008). The Tertiary Education Act (Republic of Botswana, 1999) restricts programme accreditation to private tertiary education institutions only. The 2010/2011 institutional census demonstrates that the enrolment ratio between public institutions and private institutions was 65:35, suggesting that not more than 35% of the learners graduated from programmes accredited by the TEC. The programme accreditation system is not implemented before introduction of new programmes, but rather after a year of running (Republic of Botswana 1999, Section 2.6) which is contrary to international best practice. On realising this loophole, the TEC introduced a system of programme review for private institutions before the programme can be introduced into the system (Section 2.7). Public institutions continued to offer programmes without prior assessment under the concept that there was no law that could be used to back up programme review for public institutions (Section 2.4 and 5.2) while for private institutions it was put under the umbrella of programme accreditation (Section 2.7). The basis for programme accreditation is a self-evaluation report produced by the institution after an analysis of the processes, procedures, and produce of the programme (Sections 2.6, 3.2, 6.4 and 6.5). The process forces institutions to assess provision for individual programmes thereby contributing towards the provision of quality education.

8.7 Recommendations

The recommendations from this study are discussed under policy, practice and research.

8.7.1 Policy

The fundamental aim of quality assurance within tertiary education is to embed the culture of continuous improvement within institutions, which Vlăsceanu, Grünberg, and Pârlea (2004, p.49) call the “development of a solid quality culture”. An institutional solid quality culture in this context refers to inculcation of the values of a high-performing institution evidenced by quality service and delivery to fulfil the mission and vision of the education system. Each programme accreditation process should have evidence of evaluation of the programme content covered against the curriculum, the students’ work, and the resources available. At least one set of the programme focus portfolio per semester should be evaluated to assess students’ attainment. The TEC should encourage all institutions to carry out periodic self-evaluation of their programmes, to conduct formative evaluation, and identify both strengths

and areas that need improvement, in a way to assist them to gain evidence of their own effectiveness in providing quality education (Figure 3.2, Section 3.2, and 5.3) and account to stakeholders. Strategies to develop personal qualities of a learner, such as basic competencies, and cross-cutting issues (Sections 1.3, 6.3, 6.5, 6.7 and 7.4) should be incorporated within the system. Requirements for infusing skills and habits of learners, such as graduate profile, entrepreneurial skills, leadership skills, embedding professional practice or apprenticeship within the programme /curriculum, skills to adopt innovation, language skills should be highlighted (Sections 1.2, 3.4, 3.11, and 5.3). Professional bodies for specialised professions such as health, engineering and law programmes should be consulted to provide guidance for the development and application of accreditation standards so that the objectives and guiding principles for the profession are met.

By going through the accreditation process, and accepting the accreditation recognition status, an institution renders itself to close monitoring. On the other hand, an institution offering unaccredited programmes would render itself irrelevant and may end up removing itself from the tertiary education sector. Institutions should set up internal quality assurance structures with clear mandates over programme accreditation. It might be worthwhile for government to publish accredited programmes and their corresponding institutions. In the same vein, government should not sponsor students into unaccredited programmes. This might act as a deterrent to illegal operators because then the market forces will come into play.

8.7.2 Practice

The study revealed that it is important to engage well-versed personnel from the production of the self-evaluation report to the production of the programme accreditation report and interpretation of the results (Sections 3.2 and 5.1). The programme reviewers come in to approve or disapprove, with facts, the claims made by the institution in the self-evaluation report in addition to their own assessment (Section 3.11). The programme review teams should consist of trained and credible experts who are able to apply rigorous evaluation methods (Sections 5.3, 5.4, and 6.6). Where resources permit, international panel members should be included (Section 6.4).

Education is described as a rich and powerful tool to fuel positive change within the employment sector. The graduate work ethic and attitude could contribute to their success or devastation in the employment sector. As a catalyst to the development of a professional, there should be included within the programme evaluation standards and criteria assessment of soft skills, which could help to prepare the graduate for job readiness. The ability to collaborate, create, and think critically are amongst the soft skills employers are seeking.

The TEC should encourage institutions to appreciate programme accreditation through concentrating on instilling a solid quality culture and constructive spirit of enquiry into the processes and procedures that are employed in the programme delivery and provision, with an open mind to improvement (Section 3.5 and 5.3). Lack of synchronisation and incompatible documentation within the agency itself should be avoided (Section 6.7). There is need for cohesion within the institution or, compatibility between the quality strategy and the programme accreditation process, and action on the accreditation recommendations should be taken so as to reap the benefits of the accreditation process.

It is crucial that the types of accreditation decisions made can be defended, hence transparent guidelines on arriving at accreditation pronouncements should be drawn up (Sections 5.3 and 7.4). TEC should develop key evaluation tools such as evaluation questions, performance indicators and performance criteria descriptors to guide the programme reviewers in collecting data (Sections 6.4 and 7.6). The evaluation tools should be used together with the accreditation standards (Sections 3.8 and 5.3) and would assist the programme reviewers to collect vital data, such as infusion of emerging issues within the programmes, and to reach a reliable recommendation in a transparent manner. Each data should be collected at the relevant site of delivery (Section 5.3).

The accreditation agency should develop a grading system that could be used to arrive at the accreditation recommendations so that it is clear how the team reached its final ones (Section 5.3). Core criteria, which might adversely affect the quality of the programme when not met, should be given a higher grading than others (Sections 6.4, 6.5, and 7.3). The findings of the study indicate that the programme reviewers depended upon their expertise to decide on the accreditation recommendations (Sections 5.2, 7.3, 6.5, and 7.5). Institutions need to be provided with performance indicators to assist them in establishing whether the objectives of the programme have or have not been met (Olubosoye, 2008; Stuart, 1995). In this case, transparency could be exercised and institutions encouraged to carry out regular internal self-evaluations for their own consumption, which would lead to improvement in the delivery of the programme (Figure 3.2).

It would therefore be prudent to pronounce the results of the accreditation process immediately after the process to activate improvement, with the knowledge that classroom time for students does not wait for the bureaucracy in decision-making (Sections 5.2, 6.5, and 6.6).

8.7.3 Research

It was not possible to investigate the actual effectiveness of the developed programme accreditation system within the framework of this study. The next round of research would be needed to find out whether the developed programme accreditation system is actually effective. In addition, more research to investigate whether the findings are also valid in other contexts such as in other accreditation agencies to ensure a broader international coverage (data collection) and widen the domain of validity would be needed so as to recommend the characteristics of an effective programme accreditation system from an extensive perspective.

So far, there are no studies available in Botswana that attribute programme improvement to programme accreditation, therefore it would be vital to assess if programme accreditation helps to improve quality in higher education. The answers could be attained through researching the impact of programme accreditation since its inception in private tertiary education institutions in Botswana. This could be partly done through evaluation of the extent to which institutions acted on the recommendations that resulted from the accreditation process and the changes that have been realised. This might be a long term project which could also be used to assess the impact of implementing programme accreditation in private tertiary education institutions and not in public tertiary education institutions

One of the conclusions from the study is that programme accreditation should be carried out in both private institutions and public institutions (Section 8.6) because programme accreditation assists institutions to improve (Section 3.5), therefore it is unfair to leave out public institutions (Section 5.3). An assessment of the quality of provision within both private and public institutions could be made by analysing the input-throughput rate with consideration to the repeat and discontinue rate of each programme. In this way, answers would be sought as to whether programme accreditation should be made in selected programmes, in a sample of programmes within each institution, or all programmes should go through accreditation in every cycle. Whichever way, 'quality is expensive' in terms of academic standing of the programme reviewers and financial burdens but academic programmes should be assessed for quality.

Botswana aspires to reduce reliance on natural resource and develop the human capital in order to fit in the global society. In this regard, internationalisation whereby Botswana also exports education to other countries ought to be considered. The long-term goal of the output of this research is that the designed characteristics of the developed programme accreditation system should be applicable not only to tertiary education level but also to the whole education system, and should be internationally applicable so that other programme accreditation

systems, both emerging and maturing, could benefit. It would be prudent to recommend a tried and tested programme accreditation system to such education systems.



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APPENDICES

Appendix A - University of Pretoria Clearance Certificate



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
 Faculty of Education

RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE

CLEARANCE NUMBER :

SM 12/01/04

DEGREE AND PROJECT

PhD

Development of a programme accreditation system to address quality in tertiary education institutions in Botswana

INVESTIGATOR(S)

Phetolo Modiega

DEPARTMENT

Science, Mathematics and Technology Education

DATE CONSIDERED

8 September 2014

DECISION OF THE COMMITTEE

APPROVED

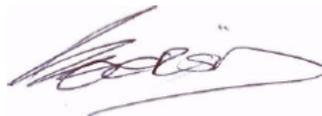
Please note:

For Masters applications, ethical clearance is valid for 2 years

For PhD applications, ethical clearance is valid for 3 years.

**CHAIRPERSON OF ETHICS
COMMITTEE**

Prof Liesel Ebersöhn



DATE

8 September 2014

CC

Jeannie Beukes
Liesel Ebersöhn
Prof SJ Howie
Prof T Plomp

This ethical clearance certificate is issued subject to the following condition:

1. It remains the students' responsibility to ensure that all the necessary forms for informed consent are kept for future queries.

Please quote the clearance number in all enquiries.

Appendix B - Clearance Letter from Botswana

TELEPHONE: 3655469
TELEX: 2944 THUTO BD
FAX: 3185167



REPUBLIC OF BOTSWANA

MINISTRY OF EDUCATION
AND SKILLS DEVELOPMENT
PRIVATE BAG 005
GABORONE

REFERENCE : E1/20/2 XVII (5)

28th March 2012

Phetolo Setlhare
P Box 2834
Gaborone

Dear Madam/Sir

RE: REQUEST FOR A PERMIT TO CONDUCT A RESEARCH STUDY

We would like to acknowledge receipt of your application for research permit to conduct a study. This serves to grant you permission to conduct your study in the sampled areas in Botswana to address the following research objectives/question/topic:

Characteristics Of An Effective Programme Accreditation System To Answer Quality In Tertiary Institutions In Botswana: Informing Today, Transforming Tomorrow.

It is of paramount importance to seek **Assent and Consent** from Tertiary Education Council and BA ISAGO University College that you are going to collect data from. The interviews/administration of questionnaires to students should be done in the afternoon to avoid students missing lessons. We hope that you will conduct your study as stated in your proposal and that you will adhere to research ethics. Failure to comply with the above stated, will result in immediate termination of the research permit. The validity of the permit is from **28th March 2012 to 27th March 2013**.

You are requested to submit a copy of your final report of the study to the Ministry of Education and Skills Development, in the Department of Educational Planning and Research Services, Botswana.

Thank you.

A handwritten signature in black ink, appearing to read 'Kaaya Koruyezu'.

Kaaya Koruyezu
For / Permanent Secretary

Appendix C - Interview Schedule for Academics

Development of a programme accreditation system to address quality in tertiary education institutions in Botswana

Name of researcher: Phetolo Modiega

Institution:-----

Number of academics: Male----- Female-----

Programme	Number of academics	Qualifications

Date: -----Starting time: ----- Ending time: -----

Introductions and Purpose:

Good morning and thank you very much for hosting me. My name is Phetolo Setlhare, working in the quality assurance section of TEC. I am studying for a PhD degree with the University of Pretoria doing 2nd year and at a data collection stage. The tile of my study is: **Development of a programme accreditation system to address quality in tertiary education institutions in Botswana.**

My interest in this is to improve the programme accreditation process.

So once more, thank you for hosting me. I request that instead of writing, I record our conversation and this is strictly for the purposes of this study. I would then transcribe and bring the copy of the interview for your sanction. Is there any objection to my recording?

Would you like to comment before we get on with the discussions?

Can we start?

You have been sampled for this interview because you participated in the programme accreditation process of TEC in 2009, is this correct? Can we proceed?

1. What is programme accreditation?
 - Is it necessary?
 - Why should institutions go through the programme accreditation process?
2. How did you participate during the whole programme accreditation process?
 - Preparation and writing of the self-self-valuation report
 - Site visit of programme reviewers
 - reading the report from the reviewers
 - and responding to the comments
3. How did participating in the programme accreditation process benefit you?
4. What was the impact of the programme accreditation process on your programme?
 - What were the benefits?
 - Were there any disturbances?
 - What can be done to maximise its benefits and reduce time wasters?
 - Did it benefits the students?
 - How were the students involved?
5. What is your overall impression about the programme accreditation process?
 - What are the weaknesses?
 - What are the strengths?
 - What can be done to improve?
6. Key in the accreditation process are the standards. What are your comments regarding the accreditation standards? (take them out for discussion)
7. What do you think should be done to programmes that do not satisfy the standards?
8. Some programmes were put on deferred status, what were your experiences with the quality of these programmes?
 - According to your judgement, did the findings warrant a defer status?
 - What could be done to avoid the defer status?
 - What did you do where you had programmes on deferred?
 - What was your general reaction?
9. Given a chance to run the process, what changes would you make?
 - Why would you make the changes?

- What would stay the same and why
10. Do you have any more suggestions/ comments?

Appendix D - Interview Schedule for Programme Reviewers (Phase 1)

Development of a programme accreditation system to address quality in tertiary education institutions in Botswana

Name of Researcher: Phetolo Modiega

Programme reviewer: -----Location-----

Qualifications-----Gender-----

Employment Details: -----

Programme reviewed: -----Institution: -----

Date of review: ----- Draft report done? Yes/No

Date: -----Starting time: ----- Ending time: -----

Introductions and Purpose:

Questions:

1. You carried out the programme accreditation process in one institution. In preparation for the process, a workshop was held. How did the workshop prepare you for the process?

- a) Was the preparation sufficient?
- b) What are the major factors that you found beneficial to the assignment?
- c) What are the major factors that were left out during the preparation and how did it affect your level of productivity?
- d) What needs to be done to improve on the process?
- e) Some institutions complained about the level of expertise of the programme reviewers, were you comfortable with the assignment?
- f) How did your team manage the assignment?
- g) What training do you think should be done to make the reviewers more comfortable?

2. The self- evaluation report plays a key role in programme accreditation. Was there any relationship between your findings and the self-evaluation report?

- a) How focussed on the programme was the self- evaluation report focus?
- b) Was there ever a time when you felt you were not sure whether you were doing programme accreditation or institutional accreditation?
- c) What recommendations can you make regarding the quality of the self- evaluation report?

3. The programme accreditation process is guided by standards. You went through all the standards. Did you find all the standards relevant?

a) You assessed specialised programmes and the standards that are used are generic, how did this affect the quality of your assessment?

b) Some agencies use descriptors when preparing the standards, were the guidelines sufficient for your assessment?

c) What important factors do you think are not catered for in the standards?

5. Do you think the implementation of the accreditation system is in line with the accreditation framework's design and the policy intent?

(a) To what extent is the accreditation process focusing on “the right things” to influence and improve valued outcomes for learners and stakeholders?

(b) To what extent is TEC utilising the most effective range of policy levers to influence and improve valued outcomes for learners and stakeholders through programme accreditation?

(c) Does the system evaluate the quality of the programme?

(d) What positives have you identified?

(e) What weaknesses have you identified?

6) You worked as a team. Did you complement each other?

- All in all, what factors should be taken into consideration when choosing the programme review team?

7. What can you say about the institution's preparedness for and during the accreditation process?

- How cooperative were they?
- What general observations did you make?

8. Given a chance to run the process, where will you make the changes?

Once more, thank you very much for your contribution towards my PhD.

Appendix E - Programme Accreditation Reports Document Analysis Checklist

Programme accreditation reports document analysis guidelines and summary of the data collected.

A semi structured guideline was prepared to guide document analysis to gather data from the accreditation reports. The accreditation guidelines were read and compared to the accreditation reports. Document analysis was guided by the following norms:

Initial considerations:

- a) The name of the institution
- b) The name of the programme
- c) The date of the programme accreditation visit
- d) The date of the report

The analysis:

	Observations	comments
Cover page	Standard with name of institution and programme. Evidence of some guideline in the presentation.	A few reports did not follow the standard procedure
Table of contents	uniform	The reporting structure was provided to all teams
Content of the executive summary	Most did not really present a summary of the report but commendations and recommendations lifted from the body of the report and listed Some comprehensive with references to the body of the report (per standard).	This was observed as a general trend of presenting the summary
Accreditation recommendation	No consistency in the use of terms. The standard terms were accredit, provisionally accredit, defer, or reject accreditation. Some recommendations were: we can't make a conclusion, limited accreditation which was not the norm for an accreditation recommendation.	Need to stick to nomenclature
General presentation	Report done per standard concluded with commendations and recommendations. Recommendations classified under required, advisable and desirable.	There was evidence of inconsistency throughout the reports in grading the recommendations. A more detailed guideline would be appropriate.
Analysis per standard		
Governance	Most reports were on the governance of the institution, not of the programme	The anomaly was evident throughout indicative of lack of clarity.
Community engagement	There seemed to be lack of clarity regarding this standard.	Some reports left out the standard. It need to be clarified that it is engagement in relation to the programme

	Observations	comments
Design and development of programmes	The reports did not elaborate on the design and development of the programme. The content was not satisfactory. Most reports indicated that there was no evidence that needs assessment was conducted prior to establishment of the program, making it difficult to determine whether the products of the program have a place in the current market.	The programme reviewers should insist on getting the curriculum and its development and approval process
Funding	The institutions did not have cost centers per programme therefore the reports did not tell whether the programmes were well provided for or not.	None of the reports indicated a budget analysis
Staffing	Mainly it was the number of faculty members, qualifications, experience, student: lecturer ratio were not reported, which is critical for the analysis of staffing adequacy	
Resourcing	The reports indicated that the institutions resourced the programmes but the degree of such was not reported.	
Delivery and management of programmes	Delivery strategies were just stated without much guidance on how institutions can improve	
Assessment of learner attainment	The reports did not provide much information on how the learners were assessed. A few sentences stating that	
Student services		
Certification and reporting	No information. Some reports left this standard out.	
Reporting learner attainment and progression	The reports talked about the storage of the documents, not really the analysis of learner attainment.	Learner attainment should be analysed to assess the impact of teaching and learning.
Impact of programmes	Most reports left out this standard because the programmes were still new hence o tracer studies to inform the impact in industry.	Institutions should be encouraged to keep a track record of their graduates until they get at least the first employment
General issues and conclusions	A few reports had this section and it proved to be helpful because they reported on the general school ethos which could impact on the quality of the programme delivery.	
appendices	Not available	

Appendix F - Interview Schedule for Programme Reviewers (Phase 2)

AUGUST 2013

Development of a programme accreditation system to address quality in tertiary education institutions in Botswana

Name of Researcher: Phetolo Modiega

Programme reviewer: -----**Location**-----

Qualifications-----**Gender**-----

Employment Details: -----

Programme reviewed: ----- **Institution:** -----

Date of review: ----- **Draft report done? Yes/No**

Date: ----- **Starting time:** ----- **Ending time:** -----

Introductions

Good morning and thank you very much for hosting me. My name is Phetolo Modiega, working in the QA section of TEC. I am studying for a PhD degree with the University of Pretoria doing 3rd year and at a data collection stage. I am using design research so I collect data in cycles. This is my second cycle.

The title of my study is: Characteristics of an Effective Programme Accreditation System to Answer Quality in Tertiary Education Institutions in Botswana: Informing Today, Transforming Tomorrow. My interest is to improve the programme accreditation process, to identify the critical components that should be present in a programme accreditation system and make recommendations. I can only manage this through interaction with people who are hands on, hence my request to hold an interview with you.

So once more, thank you for hosting me. Please note that I will be recording our conversation, however, this is strictly for the purposes of this study. Would you like to comment before we get on to the discussions?

Can we start?

1. You carried out the programme accreditation process in one institution. In preparation for the process, a workshop was held. Did the workshop adequately prepare you for the process?

- a) What are the major factors that were left out during the preparation and how did it affect your level of productivity?
- b) What needs to be done to improve on the process?
- c) Some institutions complained about the level of expertise of the programme reviewers, were you comfortable with the assignment?
- d) What training do you think should be done to make the reviewers more comfortable?

2. The self- evaluation report plays a key role in Programme accreditation. Was there any relationship between your findings and the self- evaluation report?

- d) Did the self- evaluation report focus on the programme or in the institution?
- e) Was there ever a time when you felt you were not sure whether you were doing programme accreditation or institutional accreditation?
- f) What recommendations can you make regarding the quality of the self- evaluation report?

3. The programme accreditation process is guided by standards. You went through all the standards. Did you find all the standards relevant?

a) You assessed specialised programmes and the standards that are used are generic, how did this affect the quality of your assessment?

b) Some agencies use descriptors when preparing the standards, were the guidelines sufficient for your assessment?

c) What important factors do you think are not catered for in the standards?

5...Do you think the implementation of the accreditation system is in line with the framework's design and the policy intent?

- (f) To what extent is the accreditation process focusing on “the right things” to influence and improve valued outcomes for learners and stakeholders?
 - (g) To what extent is TEC utilising the most effective range of policy levers to influence and improve valued outcomes for learners and stakeholders through programme accreditation?
 - (h) Does the system evaluate the quality of the programme?
 - (i) What positives have you identified?
 - (j) What weaknesses have you identified?
6. You worked as a team. How was team work?
- Did you complement each other?
 - All in all, what factors should be taken into consideration when choosing the panel?
7. What were your observations regarding the institution’s reception during the process?
- Was the institution cooperative enough during the process?
 - Was there any sign of uneasiness or comfort?
 - Did you get the information that you needed?
8. Given a chance the run the process, where will you make the changes

Appendix G - Format of the Self-Evaluation Report and Accreditation Criteria

Table of contents for the self-evaluation report	Programme accreditation requirements and criteria
1.0 Governance 2.0 Design and Development of Programme 3.0 Funding 4.0 Staffing 5.0 Resourcing 6.0 Delivery and Management 7.0 Assessment of Learner attainment 8.0 Certification and reporting 9.0 Reporting learner attainment and progression 10.0 Impact 11.0 Student Services	1.Design and development of programmes 2.Funding of programmes 3.Staffing of programmes 4. Resourcing of programmes 5.Delivery and management of programmes 6. Assessment of learner attainment 7. Certification and reporting 8. Reporting learner attainment and progression. 9. Impact of programmes 10. Degree-level programmes

Appendix H - Format of the Programme Accreditation Report

Introduction

Summary

Commendations

Recommendations

Background

Standard 1 – Governance of the Programme

Commendations

Recommendations

Standard 2 – Community Engagement

Commendations

Recommendations

Standard 3 – Design and Development of Programmes

Commendations

Recommendations

Standard 4 – Funding of Programmes

Commendations

Recommendations

Standard 5 – Staffing of Programmes

Commendations

Recommendations

Standard 6 – Resourcing of Programmes

Commendations

Recommendations

Standard 7 – Delivery and Management of Programmes

Standard 8 – Assessment of Learner Attainment

Commendations

Recommendations

Standard 9 – Student Services

Commendations

Recommendations

Standard 10 – Certification and Reporting

Standard 11 – Reporting Learner Attainment and Progression

Commendations

Recommendations

Standard 12 – Impact of Programmes

Commendations

Recommendations

General Issues and Conclusions

Appendix I - Interview Schedule for Students

Development of a programme accreditation system to address quality in tertiary education institutions in Botswana

Name of Researcher: Phetolo Modiega

Date:-----

Institution:-----

Number of students: Male----- Female-----

Programme of study:-----Year of study-----

Starting time:----- Ending time:-----

Introductions and Purpose:

Questions

1. What do you know about programme accreditation?
2. How did you know that there will be programme accreditation in your institution?
 - Who informed you?
 - How were you informed?
 - Were you told the programme(s) that were to be accredited?
 - When were you told?
 - What were you told?
3. How did you prepare for the accreditation process?
 - What did you do?
 - Who guided you through the preparations?
 - When did you start the preparations?
4. What role did you play during the site visit by programme reviewers?
 - Please explain how you participated.
 - How were you involved?
5. What observations did you make during the programme accreditation process?
 - Did you learn anything new about your programme that you were not aware of?
 - What interested you most during the accreditation process?

- Is there anything that you did not like during the accreditation process?
 - What can be done to avoid such occurrences?
6. Did the programme reviewers visit one of your lessons?
- What did the programme reviewers do?
 - Were any students interviewed?
 - Did they assess any of your books?
 - Were you satisfied with the assessment by programme reviewers?
7. How else can students be involved in the programme accreditation process?
8. What suggestions do you have towards improving the programme accreditation process?
9. What are the benefits of programme accreditation?
- To students?
 - To lecturers?
 - To the institutions?
10. What suggestions do you have for improvement to the programme accreditation process?

Appendix J - Interview Schedule for Institutional Administrators (Phase 2)

Cycle 2: July 2013

PROGRAMME ACCREDITATION SYSTEM –PHASE 2

Appendix J - interview schedule for institutional administrators

Date: ----- Time start: ----- Time finish: -----Institution: -----
venue: -----

Participants:

interviewee	Level of responsibility	Years of experience	Programme accreditation experience	Gender

1. You experienced programme accreditation process in your institution, you started with the preparation of the self-evaluation report. What was your experience?

- a) How were you guided on the preparation of the self-evaluation report?
- b) What was your experience during the production of the self-evaluation report?
- c) What did you benefit during the preparation of the self-evaluation report?
- d) What did the self- evaluation report cover?
- e) What can be done to improve on the quality of the production of the self-evaluation report?
- f) In your view, what is the difference between programme accreditation and institutional accreditation?
- g) What improvements can be done on the process?

2. What can you say about the standards used for programme accreditation?

3. Some institutions are not happy with the standard on “funding of programmes”, what was your experience about this standard?

- what is the best way of addressing the funding standard

4. Do you think the implementation of the accreditation system is in line with the framework's design and the policy intent?

- (k) To what extent is the accreditation process focusing on “the right things” to influence and improve valued outcomes for learners and stakeholders?
- (l) To what extent is TEC utilising the most effective range of policy levers to influence and improve valued outcomes for learners and stakeholders through programme accreditation?
- (m) Does the system evaluate the quality of the programme?
- (n) What positives have you identified?
- (o) What weaknesses have you identified?
- (p) What can be done to improve on the system?

5. What method can you recommend for deciding on an accreditation decision?

6. What were your observations regarding the programme review panel?

7. What can be done so that the process of programme accreditation does not interfere with the autonomy of the institution and at the same time not affect the legitimacy and integrity of the accreditation process?

8. In your opinion who should make and pronounce the programme accreditation decisions?

9. Given a chance to run the process, where will you make the changes?

Once more, thank you very much for your contribution towards my PhD.

Appendix K - Prototype 2 of the Programme Accreditation System

PROTOTYPE 2- Programme Accreditation System

PROGRAMME ACCREDITATION SYSTEM FOR TERTIARY EDUCATION INSTITUTIONS IN BOTSWANA

Prepared by Phetolo Modiega

PhD Project. University of Pretoria

Disclaimer:

This prototype was developed as a result of the study of the Botswana tertiary education institution's programme accreditation system. The main intention was to make improvements to the system. I cannot warrant a perfect system, but as per the design research process methodology, and as stated in chapter 8, further development to the system is inevitable. The system mainly comprises improvement to the system as per the findings of the study.

Most of the material on standards and criteria have been re-crafted from the existing Botswana programme accreditation system regulations. Other inputs came from the output of the study. The Accreditation standard (Part B) has been copied as is, with minor modifications where necessary.

Phetolo Modiega

November 2014.

INTRODUCTION

The different stakeholders in the tertiary education environment (students, parents, academics, government, employers, administrators, and support staff) are desirous that their various needs and expectations be satisfied by the training received by the tertiary education graduates. The qualification received is a resultant factor of different activities that contribute towards quality education provision, teaching and learning and resource provision, both human and physical, that take place in a typical tertiary education setting. In this light, the programme accreditation system as a quality assurance mechanism assesses a cross-section of all the activities that contribute towards provision of quality education as demonstrated in the following model:

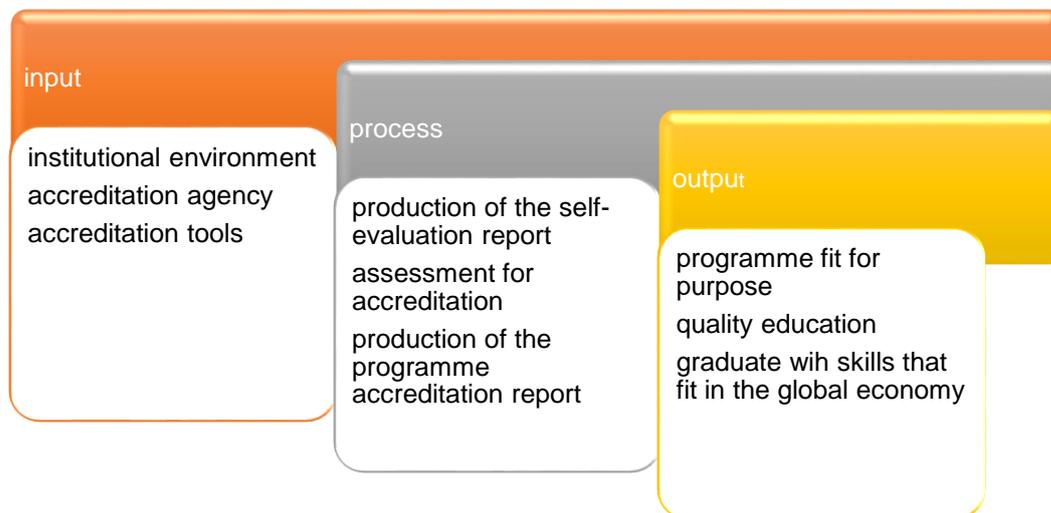


Figure 1: Assessment of provision for quality education

The model signifies programme accreditation as a process that is dependent upon the input factors, without which it cannot be real. The institutional environment is key to the success of the programme accreditation process; the programme, the provision of both physical and human resources, the students, and academics are all indispensable factors to the start of an accreditation process and to the provision of quality education. Once the institutional ambience for the programme has been ascertained, implied by the introduction of the programme, the accreditation agency comes in with accreditation processes and standards to carry out the assignment.

For effective delivery of the programme accreditation system, a significant amount of linkage is required between the institution and the accreditation agency, hence input. It is significant

to point out that there should be a specialist unit that deals with accreditation matters within the accreditation agency. Once all the structures are in place, then the process of programme accreditation takes course to determine whether the programme and its resources are fit for purpose, climaxing in accreditation decisions, commendations, and recommendations for improvement in a way being accountable for all the resources expended.

This programme accreditation system should be used in accordance with regulatory requirements as set out by the accreditation agency and other policy documents related to education. The guidance notes are divided into 6 Parts, labelled Part A to Part F presenting the following:

PART A: Preliminary Considerations give an introduction to the accreditation system and explains the 3 levels of accreditation: approved programme; accredited programme; and provisionally accredited programme. A statement about significant changes to the programme that should be reported is made. The programme accreditation process is presented.

PART B: The accreditation standard outlines the conditions for accreditation.

PART C: Requirements and criteria for accreditation presents the accreditation criteria for new programmes and for existing programmes.

1.0 *Criteria for evaluation of a new programme seeks to establish the design and development process of the programme and uses the following lead points:*

- 1.1 Curriculum design
- 1.2 Programme instruction requirements
- 1.3 Programme resources
- 1.4 Articulation requirements
- 1.5 Institutional approval
- 1.6 Market survey

2.0 *Criteria for existing programmes evaluate programmes in the system and uses the following lead points:*

- 2.1 Delivery and management of the programme
- 2.2 Assessment of learner attainment
- 2.3 Learner records
- 2.4 Resourcing of the programme

2.5 Staffing of the programme

2.6 Funding of the programme

2.7 Impact of programmes

2.8 Qualification titles

2.9 Certification

2.10 Accreditation decisions

2.11 Accreditation fees

PART D The self-evaluation report gives guidance on the production of the self-evaluation report.

PART E: The programme review report gives guidance on activities to be carried out during the site visit and the production of the programme accreditation report.

PART F: The accreditation schedule gives guidance on the schedule to be followed

Capacity building for the institution and the programme reviewers will be carried out as and when the need arises. The accreditation criteria will be used as a basis for the training.

THE PROGRAMME ACCREDITATION SYSTEM

PART A

PRELIMINARY CONSIDERATIONS

The institutions are the main custodians of quality within their institutions. Much as it is the responsibility of the quality assurance agency to safeguard the public interest in sound standards of education qualifications, institutions have the primary responsibility for the quality of their programmes and their assurance. The national quality assurance system complements institutional quality assurance systems by setting national requirements for programme quality, and by monitoring achievement of these requirements through its activities. Programme accreditation as a quality assurance process is carried out in registered institutions to ensure that the programme is well supplied for in terms of both physical and human resources. Programmes should be accredited at all sites of delivery and through all modes of delivery. All programmes in the tertiary education system should have a valid programme accreditation certificate as determined by the accreditation agency.

This programme accreditation system emphasises three levels of programme accreditation:

1. Approved programme

A curriculum that has satisfied the programme approval standards according to the grading system would result in the programme being approved.

- a) A curriculum is assessed before introduction into the system and given an approval status to start running. The institution/applicant would be given two chances only for programme approval. Failure to meet the threshold approval standards would render the curriculum unsuitable to enter the tertiary education system.
- b) The institution/applicant could submit an improved curricular, with evidence of improvement, only after two years of failed approval.
- c) Application for the accreditation status should be done within six months of the start of the programme in preparation for the development of the self-evaluation report which would be used as the basis for programme accreditation.

2. Accredited programme

A programme that has satisfied the programme accreditation standards according to the grading system would be accredited.

- a) The institution should submit a self-evaluation report in accordance with Part D of this accreditation system.
- b) A programme is assessed while running to determine whether the planned curriculum, the delivered curriculum and the assessed curriculum are in concert.
- c) Programmes that have been accredited before and are due for re-assessment for accreditation should submit an application within six months of the expiry date of accreditation.

3. Provisionally accredited programme

A programme that has not satisfied the programme accreditation standards according to the grading system, but can be allowed to continue while improvements are made would be provisionally accredited.

- a) The accreditation agency would set the time within which the anomalies should be corrected, otherwise the programme would be considered unaccredited therefore could not be allowed to continue.
- b) **Provisionally accredited programmes that failed to be accredited:** Existing programmes that were provisionally accredited but failed to be accredited during re-assessment for accreditation, depending on the gravity of the deficiencies guided by the accreditation grading system, will not be allowed to continue running. In such instances, the institution would be expected to make relevant arrangements to assist the students to continue with their education. Such arrangements can be:
 - transfer to an equivalent institution offering the same programme.
 - transfer to a different programme within the same institution
 - teach the students out of the programme under close monitoring by the accreditation agency.

4. Significant changes to the programme

As the world around changes, there might be need to make some changes to the programme such as making modifications to the curriculum. Any curriculum content that has changed more than 30% becomes a new curriculum and should be subjected to provisional accreditation procedures. Though the institution is expected to regularly assess its policies and procedures and make changes where necessary, significant changes should come into force at the beginning of the following academic year or, with effect from the next cohort of

students. Where changes are made to an academic programme while a group of students is still pursuing the same programme, care should be taken not to disadvantage the students. Relevant processes should be put in place so that students get minimal disturbance.

5. The programme accreditation process

The programme accreditation system would follow the following process:

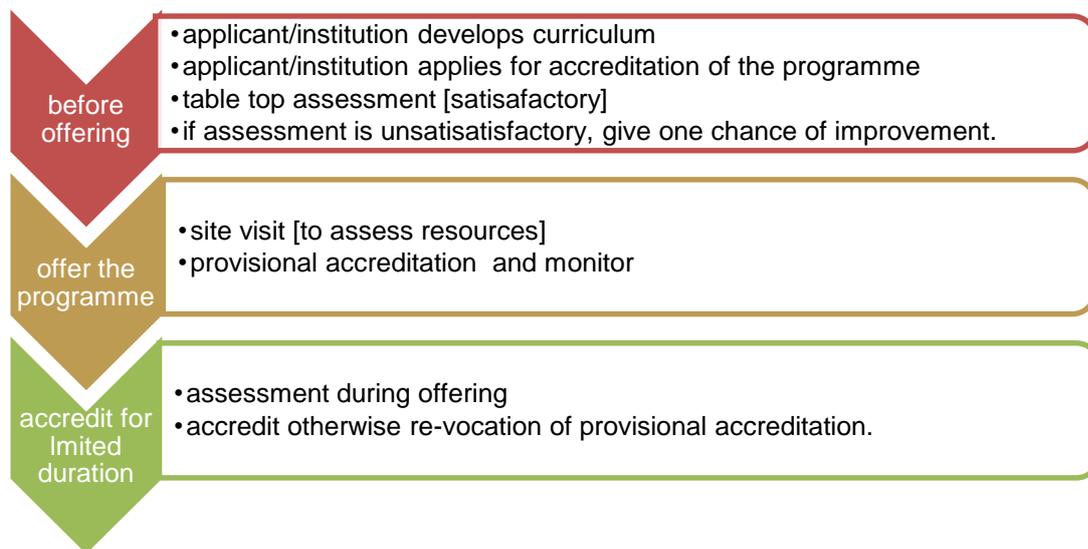


Figure 2: The programme accreditation process

Programmes should be accredited in accordance with the accreditation standard following the criteria and guidelines set for accreditation. The accreditation process starts with the development of a self-evaluation report. The self-evaluation report should provide an analysis of the programme content indicating the skills that will be attained by offering such a programme and the various progression pathways that the graduate of the programme could follow. Once the self-evaluation report conforms to the set standards, it should be given to the programme reviewers to study. A minimum of two weeks should be allowed for the programme reviewers to acquaint themselves with the report and prepare for the validation visit such as crafting questions that could be used to gather data as well as probes that could get the institution thinking about techniques for improvement.

Where possible, standing panels of accreditation for various fields of study to evaluate the accreditation recommendations from the programme reviewers would be set up. The panels would have relevant members from the appropriate bodies. Accreditation of programmes

leading to professional qualifications would be done by or in close collaboration with professional bodies to avoid duplication of assessment for recognition. The composition of the programme review team would be determined by the accreditation agency being guided by the type of programme.

Each programme should be accredited at all sites of delivery to ascertain uniform and sufficient provision of resources. Furthermore, all modes of delivery of the programme should be accredited to enable recognition of qualifications obtained through different modes. After successful accreditation of a programme, an expert in the field should be appointed to monitor progress of the institution as they act on the accreditation recommendations so that improvement to the programme can be accomplished. The accreditation decision would be guided by a stipulated classification system which could be updated from time to time. The classification system would be provided in the accreditation manual produced by the accreditation agency.

The accreditation results would be published in the public domain for public consumption.

PART B

THE ACCREDITATION STANDARD

Accreditation shall be granted to institutions for named programmes where, in addition to ongoing compliance with the requirements for the Registration of Tertiary Education Institutions:

1. Design and development processes are applied that have actively utilised stakeholder input to create relevant programmes comparable to those offered by similar institutions authorised to operate in Botswana.
2. Funding of programmes is of sufficient assured and sustained levels to ensure the ongoing and enhanced quality of the programme as designed.
3. Staffing of the programme is provided for, managed and developed to ensure the ongoing and enhanced quality as planned.
4. Physical premises, facilities and equipment are provided for, managed and developed to ensure the ongoing and enhanced quality of the programme as planned.
5. The programme is delivered in accordance with internally and externally approved proposals and processes and are subject to ongoing evaluation and review utilising and incorporating the views of learners and relevant stakeholders and interested parties.
6. Internal and external assessment arrangements are structured and integrated with learning, utilise judgements of performance against transparent criteria, and are verified

as being fair, valid, reliable and consistent through internal and, where available, external moderation of assessment processes.

7. Certification of attainment through the award of a qualification describes the outcomes of learning and standards of attainment reached in a meaningful manner and are of a comparable and equivalent merit to similar qualifications offered in and by other tertiary education institutions, both locally and internationally.
8. Programmes result in their planned impact for learner achievement and relevance to stated educational, technological, economic and/or socio-cultural needs of Botswana and Batswana.
9. Degree-level and post-graduate programmes, where applicable to the application for accreditation, reflect, develop, utilise and encourage the skills of advanced study and ethical research that advance learning and/or the global well-being of the Botswana economy, and
10. All deposits, fees, costs and additional charges relevant to the consideration and processing of the application for accreditation have been paid.

The accreditation standard should be applied to all modes of delivery- face to face (in-class), on-line, distance, part time, flexible-delivery, computer assisted, or a combination of these and others not mentioned here. In addition, quality education should be delivered to all learners without discrimination. Each programme should have room for disadvantaged learners such as learners with disabilities. It should be evident throughout the programme that these learners are catered for and the accreditation process should ascertain such. To avoid discrimination, assessment for provision of learners with disabilities is integrated within standards. The institution and the programme reviewers should clearly pronounce how learners with special needs are catered for.

The specific requirements and criteria for the above components of the Accreditation Standard are elaborated in the following sections. There is a schedule for new programmes and schedule for existing programmes. The programme reviewers should ensure that they apply the relevant schedule.

PART C

REQUIREMENTS AND CRITERIA FOR ACCREDITATION

Academic programmes should be of acceptable quality. Only those programmes which satisfy threshold quality requirements will be allowed to enter and remain in the education system. The primary responsibility for programme quality rests with the institution. The institution should seek to establish and sustain effective mechanisms that facilitate programme quality and yield reliable information for internal programme-related planning and self-evaluation, external evaluation, and public reporting. The responsibility of the accreditation agency is to establish a value-adding external system of programme accreditation that can validate institutional information about the effectiveness of arrangements for ensuring the quality of academic programmes. The institutions should undertake a continuous review of its programmes, resources, services and facilities to ensure that there is continuous quality improvement and enhancement of the programmes.

1.0 CRITERIA FOR EVALUATION OF A NEW PROGRAMME

All new programmes should be subjected to assessment before introduction into the system. No programme should be introduced before approval. The following criteria will be used to evaluate the quality of the curriculum.

DESIGN AND DEVELOPMENT OF THE PROGRAMME

Design and development of the programme seeks to verify that the institution/applicant utilises its own policies and procedures to design and develop programmes that are relevant to identified outcomes of learning required in and for Botswana's economy and society, and that franchised programmes are legally localised to reflect needs in Botswana. The institution/applicant should provide proof on each of the following:

1.1 Curriculum design

- i) The programme resulted from a robust conceptualisation and design process and is an integral part of the institution's mission and planning.
- ii) The designed programme meets substantiated national, regional or local economic, social, cultural, and/or technological needs and align with international standards or benchmarks. Where international curricula linked to external examinations formed the basis of the programme, localisation was legally carried out and retains the integrity of the host curriculum.
- iii) The programme fits within an overall curriculum that represents increasing breadth and depth of learning demand for the learner, and articulates with other programmes available at the institution or partner institutions.
- iv) Written agreements between the parties detail the objectives of the agreement; responsibilities of either party (inclusive of health and safety; monitoring and support of learners); accountabilities and standards for the provision of any instruction or the conduct of any assessment and contacts of all parties; and the duration of any agreement.

1.2 Programme instruction requirements

- i) Provide programme statements (syllabi/curriculum) statements that detail and substantiate how teaching and learning will be promoted.
- ii) The expression of outcomes of learning that represent a balance of theoretical, practical and experiential learning aligned with the defined purpose and that builds personal

development, learning preparedness and technical capacity of and for the learners and proof that these are consistent with the intellectual challenge and value of similar programmes at the same and other institutions.

- iii) The expression of pedagogical approaches and weightings for the delivery of the programme that are appropriate to the knowledge and skills to be developed and the characteristics of the learner cohort.
- iv) Programme sequence, individual unit/module prescriptions, and lesson plans that guide the development and facilitation of learning.
- v) Demonstrate how planned teaching, learning and assessment would be coordinated and monitored.
- vi) Off-site and/or workplace components have a sound educational rationale linked to the learning outcomes of the relevant programmes.
- vii) Broad descriptions of assessment methodologies, weightings, and timetables.
- viii) Descriptions of the review and evaluation procedures and schedules that would be used to measure the effectiveness of the programme and guide the quest for improvement.

1.3 Programme resources

The applicant should provide proof that the human, physical, teaching and learner resources required for the programme have been stipulated and are current and relevant. The resources should be accessible to all learners, including learners with special needs. The following should be determined:

- i) Teaching and learner resources that would be required for the programme
- ii) Teaching and learner resources have been subject to a rigorous evaluation and have been confirmed as aligning with programme goals, learner characteristics, and the Botswana context.
- iii) Reproduction and/or adaptation of materials does not breach laws pertaining to copyright and protection of intellectual property.
- iv) Financial resources for the programme
- v) Physical resources
- vi) Specialised teaching, demonstration and learning resources.

State how learners with special needs are catered for.

1.4 Articulation requirements

- i) The graduates of the programme would be able to articulate to higher level qualifications (where applicable).
- ii) Articulation and cross-crediting arrangements between courses within the institution and with those of any other institution would enhance the progression of learners.
- iii) Articulation and cross-crediting arrangements are consistent with the content, delivery and attainment requirements of the relevant course.

1.5 Institutional approval

The programme was approved using established processes by the relevant institutional structures (e.g., academic board, senate) as fitting the mission and strategic position of the institution and as meeting the institutions own academic standards.

1.6 Market survey

The applicant should provide a justification of the knowledge and skills needs and standards to be achieved through the programme and substantiate the following:

- i) Programme design and/or adaptation/adoption procedures demonstrate a clear and effective synergy between the provider and potential future 'employers 'of any graduates, and were inclusive of stakeholder input and consultation.
- ii) There is evidence that stakeholder views and other external benchmark documents (where relevant) were incorporated into the programme designed.
- iii) The decision to offer or develop a new qualification was inclusive of the meaningful involvement of relevant stakeholders and social partners, and those stakeholders and social partners support, and preferably endorse, the qualification's coverage and structure.
- iv) There is a demonstrable need for the qualification awarded in terms of identified recognition needs in Botswana by industry, the professions, or other education and training institutions.

2.0 CRITERIA FOR EXISTING PROGRAMES

Existing programmes should be subjected to accreditation process within a year of running. Programmes that have been running before the start of these regulations would be subjected to the accreditation agencies' choice of assessment or non-assessment.

This section presents guidelines for assessment of programmes that are already in the system. The institution should provide the certificate that allowed introduction of the programme (approval accreditation certificate) to ensure that they were allowed to offer the programme, or in the case of a subsequent accreditation, a preceding accreditation certificate.

The criteria is meant to guide the programme reviewers in the assessment of the programme. If, through the professional eye, the programme reviewers considers any point relevant, they should report on it.

The criteria is divided into ten quality areas.

2.1 Delivery and management of the programme

This section seeks to verify that the programme is being taught in accordance with the pedagogical approach put in place and in accordance with the planned sequence of developing stated knowledge, understanding, skills and personal attributes. Evidence should be provided that each programme is being comprehensively reviewed and enhanced through the adoption of identified strategies for improvement. Further, the organisation and implementation of teaching, learning and guidance/support opportunities models socially appropriate and ethical behaviours that complement and amplify the outcomes of learning for the taught curriculum.

Institutions must provide evidence that:

(a) Effective teaching and facilitation of learning is being offered for the programme.

- i) Teaching staff are aware of and responsive to the different learning styles of their learners, with a variety of learning and teaching techniques being used to meet the different needs of learners.
- ii) Lessons or learning activities are well organised and prepared by individual academics.
- iii) Teaching staff are flexible in their approach to teaching and learning and are able to respond to different situations and contingencies as they arise.
- iv) Teaching aids used are functional, interesting, and relevant to the application of the learning in the outside world.

b) Programmes are being coordinated and managed.

- i) Administrative services provide reliable information on the allocation and availability of venues and staff for each programme.
- ii) Coordination ensures the academic coherence and integrity of each programme.

- iii) Management and oversight ensures the conditions for delivery of each programme are met by all staff.
 - iv) Coordination ensures that off-site learning and/or assessment is integrated into the on-site activities.
 - (v) Coordination ensures that obligations and responsibilities to franchise partners, external examination authorities, and other collaborative partnerships are complied with.
 - (vi) Coordination ensures that the institution's administrative and teaching performance and the provision of learning and learner resources, guidance and support represents a holistic learning experience consistent with the institution's mission and values and the nation's tertiary education strategies.
- c) Programmes are being continuously enhanced.
- i) There is evidence that feedback from learners, staff, external bodies and relevant stakeholders gathered through planned evaluation processes for each programme has been incorporated into revisions, updates and enhancements to each programme and its relevant lesson plans, resources and teaching practice.
 - ii) Contracts for off-site, franchise, external examination authorities, and/or collaborative partners are updated in accordance with agreed schedules and processes.

2.2 Assessment of learner attainment

This section seeks to verify that internal and external, formative and summative assessment practices are well structured and planned in a manner that reflects good practice principles in assessment and, where applicable, comply fully with procedures and requirements specified by external examination bodies. All assessment should be, as a minimum, subject to regular and robust internal moderation (verification) practices.

Institutions must provide proof that:

- (a) Assessment is well planned and supported with clear documentation of relevant instruments. Assessment uses methodologies that are appropriate to the abilities being assessed fair to all candidates and do not disadvantage, hinder, or otherwise limit opportunities for candidates to demonstrate or provide evidence of their ability integrated into learning, training, or workplace activities, and manageable, straightforward, readily arranged, cost effective and unobtrusive (where possible) to other activities. The assessment methodologies should be consistent with the meanings of and requirements for the awarding of grades and any required aggregation of

marks, consistent over time, and across assessors faced with the same evidence. The following should be ascertained:

- i) Assessment processes are systematic, with planning and recording being of sufficient rigour to enhance and promote fairness to all candidates.
 - ii) Assessment processes are open and transparent.
 - iii) Assessment processes are consistently applied by all assessors and over time, and are secure and free from undesired outside influences.
 - iv) Assessment plans and associated instruments are subject to internal and, where necessary, external review and moderation before use.
 - v) Assessment plans and associated instruments (e.g. tests, marking schemes) are developed for the programme.
 - vi) Assessment plans and associated instruments are, where issued by an examination authority beyond Botswana, localised where necessary without compromising the integrity of the assessment outcomes.
 - vii) Assessment plans clearly detail the assessment process and methodologies to be used; and dates of assessment and other related regulations regarding the conduct of the assessment.
 - viii) Assessment processes indicate the criteria to be used to determine 'success' or 'failure'.
 - ix) Learners are advised of their attainments.
 - x) Monitoring of learner performance leads to the early identification of at-risk and/or non-active students and the implementation of strategies to advise learners of opportunities to improve their chances of success.
 - xi) Reported results clearly and fully reflect each candidate's achievements in relation to the outcomes of learning and associated awarding criteria for each programme enrolled in.
 - xii) Reporting of attainment results respects the privacy rights of the learner.
 - xiii) Appeals procedures are stipulated.
 - xiv) Assessment materials are updated as a result of internal moderation findings.
- b) Where an external assessment/examination body manages assessment, assessment requirements are complied with.
- (i) External moderation activities and responsibilities are fully complied with.
 - (ii) Sufficient resources and financial allocations are made available to ensure obligations to external moderation requirements are met.

(iii) Systems are in place to ensure that any candidate work or other assessment materials required for external moderation purposes is secured until required, thereafter it is returned to the candidate or otherwise disposed of.

(iv) Findings from external moderation activities are used to enhance assessment process and practice.

- a) Recognition of Prior Learning (RPL) or Current Competence (RCC) policies, procedures and practices are documented and require robust assessment against specific outcomes of learning and awarding criteria that are consistent with any articulation or credit requirements for current programmes and/or qualifications. Procedures are in place, and are followed, to process and report on assessments within a timeframe that allows learners to benefit from feedback prior to the next assessment task and/or proceed with their learning and/or career pathway.

Degree-level Programmes

This section seeks to verify that degree-level and post graduate programmes represent advanced study of the theoretical aspects of a discipline area(s) and the development of independent learning, thinking and expression. Such programmes should be taught by staff engaged in research and who teach and encourage the application of ethical research approaches and methodologies. The institutions must provide evidence that:

- a) “Graduate” programmes are comparable to degree-level study.
 - i) Programmes represent a systematic, well-rounded and coherent introduction to the broad knowledge, ideas, principles, concepts, key research methods and problem-solving techniques of a recognised major subject(s).
 - ii) Programmes promote the development and use of abilities in self-directed work and learning; the use of skills needed to acquire, understand and assess information from a range of sources; intellectual independence, critical thinking and analytical rigor advanced communication and collaborative skills; and aptitudes and capabilities for further advanced study, research and scholarship.
 - iii) Programmes are structured to provide sound and balanced academic progression.
 - iv) Programmes are taught by those principally engaged in research.
- b) “Post-graduate” programmes give an emphasis to the development of research competence.
 - i) Programmes, learners and assessment are managed and coordinated by a senior academic with research and supervision experience.

- ii) Programmes include training in research skills, research design and methodology, and ethics.
- iii) Research assessment is inclusive of at least one 'external examiner' competent in the discipline in which the research is undertaken.

2.3 Learner records

a) Institutions must provide proof that substantial data is kept, in a secure and easily retrievable form, of each learner's enrolment and activities within the institution.

- i) Enrolment data, including details of courses enrolled in and any file notes regarding the attendance and behaviour of the learner, is accurate and current. The data is sufficient to serve the interests of the learner in any case of voluntary or forced transfer to another provider.
- ii) Data is entered into a centralised database as soon as practicable after the data has been generated.
- iii) Data is securely stored in two separate physical locations. Computer records are regularly backed-up and a copy is stored separate from the originals.
- iv) Record-keeping, access, release and storage protects the privacy rights of the learner.
- v) Substantial data is kept, in a secure and easily retrievable form, of each learner's academic and/or course work attainments whilst enrolled in the institution's programmes.
- vi) Progressive (continuous) and final assessment results are recorded accurately and are stored securely.
- vii) Final assessment results are archived indefinitely in a safe yet easily retrievable location and format.
- viii) Systems are in place to ensure that progressive and final assessment results may only be accessed, updated or amended by authorised persons.

2.4 Resourcing of the programme

This section seeks to verify that the programme has enough resources for the provision of quality education.

a) Physical resources

Provide a descriptive inventory of the physical facilities (including land) available for the exclusive use of the programme. Are venues

- i) Sufficient and suitable for teaching and learning the nature and scale of planned activities?
- ii) Well maintained?
- iii) In line with health and safety requirements?
- iv) Accessible to all learners?

b) Library

Provide an inventory of texts and other knowledge resources readily available to learners and staff for the programme and comment on.

- i) The suitability
- ii) Currency and relevancy and level,
- iii) Volume as related to student enrolment in the programme
- iv) Accessibility of the library resources
- v) Accessibility of the library for disadvantaged learners
- vi) Evidence of continuous renewal of resources

c) Information Technology

Is there information technology (IT) hardware infrastructure and software available for the teaching, learning and administration of the programme? Is it

- i) functional, covered by sufficient and appropriate licence arrangements?
- ii) well maintained and continuously upgraded with adequate funds allocated for this purpose?
- c) Is there an asset register (inventory) of all equipment and other teaching/learning aids available to support teaching and learning of the programme?
- d) Is there evidence of upgrading inventory?

2.5 Staffing of the programme

This section seeks to verify that the programme is being taught by technically competent staff that also has appropriate pedagogical and/or assessment expertise that enables them to impart knowledge and manage the learning and progression of their learners in a manner appropriate to the characteristics of the learner cohort. The following should be provided:

(a) Academic staff list by:

- i) Qualifications (listing all that the academic has acquired)
- ii) Specialisation

- iii) Years of experience
- iv) Date of engagement in the institution
- v) Terms of employment, date of contract expiry, where applicable
- vi) Responsibility
- vii) Prior engagements
- viii) Other responsibilities

b) Support staff list by:

- i) Qualifications (listing all that the academic has acquired)
- ii) Specialisation
- iii) Years of experience
- iv) Date of engagement in the institution
- v) Responsibility
- vi) Prior engagements
- vii) Other responsibilities

Comment on the sufficiency and relevancy of the human resource

c) Recruitment strategies

- i) Recruitment and selection of new staff complies with legislative and institutional policies.
- ii) Work permits available

c) Staff complement

- i) Provide student staff ratio
- ii) The ratio of full-time: part-time staff
- iii) Assess relevancy of staff per assignment
- iv) Staff diversity within the academic staff body to ensure that learners enrolled in a specific programme are exposed to a diversity of ideas, teaching styles and approaches.

d) Where distance learning takes place, there are sufficient staff to handle specialist tasks such as registry, dispatch, management of student work record-keeping, and other matters relating to learner and learning needs to ensure a reasonable continuity of learning.

(e) Provide evidence that staff are encouraged and empowered to continue to upgrade their competence in regards to technical and specialist duties.

(f) Active and robust performance appraisal/management processes identify areas for individual staff improvement and/or development and puts in place plans to empower staff to undertake such opportunities.

(g) Budget allocations to each programme or faculty/department for staff development are reasonable and sufficient in terms of the content of past, current and projected individual and institutional development plans.

2.6 Funding of the programme

This section seeks to verify that the institution has sufficient financial resources available for its exclusive use in the development, provision, management and enhancement of the programme and that the programme management has access to the financial resources. The following should be provided:

- i) Funds allocated for exclusive use of the programme
- ii) Evidence of use of funds
- iii) Process of accessing the funds
- iv) History of the transactions
- v) Sufficiency of the funds

2.7 Impact of programmes

This section seeks to verify the need of the programme in the market. The institution must provide, for the past four years per year,

- i) total number of learners that have enrolled in the programme
- ii) Dropout rate by year, reason, and age of learner
- iii) Graduation rate per year for the past four years
- iv) Employment rate of graduates after graduation
- v) Follow-up (tracer) studies with graduates of each programme and the employer

2.8 Qualification titles

The applicant must provide proof that the full title of the qualification is in line with the qualification requirements of Botswana. The title should not be misleading as to its status, merit, or coverage and should be consistent with qualifications bearing the same name offered by other institutions. The level(s) and volumes of teaching and learning effort required by the qualification

and any component unit or module should be in accordance with the credit allocation of the proposed level. The following should be stated:

- i) The broad area(s) of learning covered by the qualification.
- ii) The outcomes of learning (competencies) that make up the qualification, where such outcomes of learning are expressed as specifically as possible so as to improve the understanding of learners and employers about the qualification accurately; describe achievement and the basis of 'successful completion'; allow meaningful comparisons to be made with other qualifications, and the identification of any significant difference between similar qualifications; and enable the transparent operation of a fair system of credit transfer between qualifications and institutions.
- iii) A statement of the rules or regulations pertaining to the attainment of the qualification, particularly where optional or elective components are made available.
- iv) The awarding criteria that are the basis for awarding the qualification and relevant to any grades awarded for components of the qualification.
- v) Statements of any credit transfer, articulation and/or recognition of prior learning arrangements.

2.9 Certification

The qualification certificates should be informative. Qualification certificates should contain sufficient security features to minimise unauthorised duplication and/or aid the identification of false copies of the certificate. Security features would include such things as the use of watermarks, invisible UV features, embossment, numbering, anti-copying format and colouring. The certificate should provide such information clearly and accurately state:

- i) the full name of the qualification,
- ii) the name of the person, inclusive of their National Identity Number, to whom the qualification has been awarded, and the date of the award,
- iii) the name, seal (where applicable), and/or coding identifier to the awarding body and/or any relevant quality assurance body; and display the signatures of relevant persons from such bodies.

2.10 Accreditation decisions

The programme reviewers make recommendations to accredit or not to accredit. The accreditation decision would be pronounced by the accreditation agency following decision

structures in place. A programme could be approved or not approved, accredited, provisionally accredited or not accredited.

The accreditation recommendation would be made following a decision making process set by the accreditation agency. Such a system should not disadvantage the institution neither should it compromise the quality of the programme. The programme should satisfy a minimum of 70% of the criteria assessed in accordance with the agency's guidelines.

2.11 Accreditation fees

Accreditation fees would be determined by the accreditation agency and revised when the need arises. The cost of the accreditation process would be borne by the applicant/institution following the agency's costing procedure.

PART D

THE SELF-EVALUATION REPORT

The self-evaluation report forms the basis of the accreditation process. The institution produces a self-evaluation report after an analysis of the programme provision against set standards. It provides results of an introspection done by the institution and should contain successes, challenges, and ways of moving forward. Information collected through self-evaluation could also be used during institutional planning and development.

The institution should nominate a strong leadership team to guide the self-evaluation process. The self-evaluation report should be a true reflection of what is happening, hence should be fact based. Evidence that supports information contained in the report should be readily available and accessible to the programme review team for verification. The process of self-evaluation should assist the institution to identify areas that need redress and these should be attended to as soon as identified (where possible) because key to the accreditation process is continuous improvement targeting the provision of quality education.

The self-evaluation report should contain the following information in addition to analysis of the provision following criteria set out in Part C of this document. The scope of accreditation can be agreed upon by the institution and the accreditation agency.

BIOGRAPHICAL INFORMATION INSTITUTION					
Name of Institution			Date registered		
Category of Institution		University	Institute	College	Registration Number
Physical Address of the Institution			Registration expiry date		
Postal Address of the Institution		Contact Details:		e-mail:	Telephone:
				Fax:	Cell phone
INFORMATION ABOUT PROGRAMME					
Name of programme					
Date first introduced		Date of curriculum approval		Any accreditation done before: YES/NO	
ENROLMENT DETAILS					
YEAR 1: Male.....Female..... YEAR 2: Male.....Female..... YEAR 3: Male.....Female..... YEAR 4: Male.....Female.....					
Age distribution:		Male	Female		
Less than 20:					
20-25					
25-30					
30+					
Students with special needs: Disability Number					
Disability Number					

The rest of the report should follow the criteria as set out in Part C.

PART E

THE PROGRAMME ACCREDITATION REPORT

The programme accreditation report is a result of an assessment of the programme provision by the programme review team. The team visits the site of delivery to verify claims made in the self-evaluation report against evidence provided. The site visit is budgeted for about three days per programme, depending on the complexity of the programme.

The accreditation report is a result of triangulation of different validation methods which are used during the site visit. These include:

- ❖ Document analysis
 - ❖ Class observations
 - ❖ Students' interviews
 - ❖ Academic staff Interviews
 - ❖ Non-academic staff interviews
 - ❖ Administration staff interviews
- ❖ Any other data collection strategy that the team deems fit.

The programme review team produces an accreditation report detailing their findings, which contains, inter alia, commendations, affirmations and recommendations. The assessment is done against the criteria stipulated in Part C of this document. Both the institution and the accreditation agency should comment on the accuracy of the report, then the final recommendation on whether to grant accreditation status is based on the weight of the recommendations in the body of the report, which then becomes the property of the agency. The agency follows the established decision-making procedures and structures to pronounce the accreditation status, which once pronounced leads to the accreditation report being published in the public domain, such as the agency's website.

Briefing sessions between the team and the institution help to clarify issues that will have emerged during the data collection process so that the reviewers can make an informed decision on what to report and what recommendations to make.

Accreditation decisions may range from grant accreditation to an outright rejection. The overall decision is based on the weight of the individual recommendations per standard. Before an accreditation decision is finalised about a programme, the accreditation agency should ensure that there is consistency with the observations and comments made by the programme reviewers.

Each accreditation decision comes with recommendations, and institutions are required to implement appropriate follow-up strategies to address them. The accreditation agency should monitor implementation of the recommendations, either the agency itself or by an appointed monitor(s). It is critical that recommendations are acted upon for improvement of the programme.

Following is a guide that can be used for accreditation.

PART F

THE ACCREDITATION SCHEDULE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
First draft of the self-evaluation report	Orange																			
Assessment of the report by TEC		Orange	Orange																	
Feedback to institution			Orange																	
Finalisation of the report, then back to TEC			Orange	Orange	Orange															
Re-assessment of the report					Orange	Orange														
Training of programme reviewers							Green													
Self-evaluation report to reviewers							Green													
Reviewers read the report							Orange	Orange												
Site visit (2-3 days)									Green											
Production of the accreditation report									Orange	Orange	Orange									
Draft accreditation report to TEC											Orange	Orange								
Feedback to reviewers												Orange	Orange							
Final report to TEC													Green	Green						
Final report to institution														Orange						
Feedback from institution														Green	Green					
Consideration of feedback by reviewers															Orange	Orange				
Approval of the report by TEC																Green				
Consideration of the report by TEC																Green	Green			
Decision making process																	Green	Green	Green	
Institution informed of decision																			Green	
Monitoring schedule and re-accreditation																				Blue

CONCLUSION

It is evident that accreditation is a demanding process, however, great care should be taken to ensure that the country benefits the fruits of this quality assurance process. Relevant systems and measures such as capacitating all people involved in the accreditation process should be put in place. The academics and administrators who produce the self-evaluation report should be trained, the programme reviewers should be trained, and the liaison officer at the accreditation agency should be well informed of the requirements of the programme accreditation process.

More information could be obtained from the relevant manuals produced by the accreditation agency, or contact the agency.

Appendix L

UNIVERSITY OF PRETORIA

DECLARATION OF ORIGINALITY

This document must be signed and submitted with every
essay, report, project, assignment, dissertation and/or thesis.

Full names of student: PHETOLU MONEGA

Student number: 10624270

Declaration

1. I understand what plagiarism is and am aware of the University's policy in this regard.
2. I declare that this THESIS (eg essay, report, project, assignment, dissertation, thesis, etc) is my own original work. Where other people's work has been used (either from a printed source, Internet or any other source), this has been properly acknowledged and referenced in accordance with departmental requirements.
3. I have not used work previously produced by another student or any other person to hand in as my own.
4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

SIGNATURE OF STUDENT: 

SIGNATURE OF SUPERVISOR: 