Southern African Development Community Regional Qualifications Framework: Analytical Review of Level Descriptors

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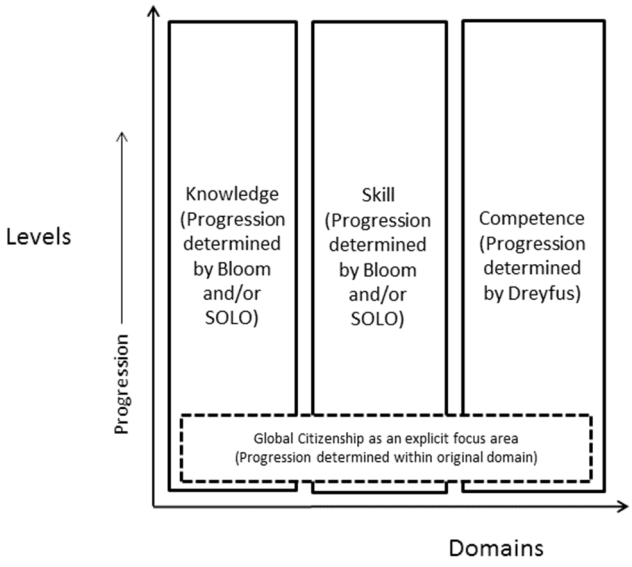
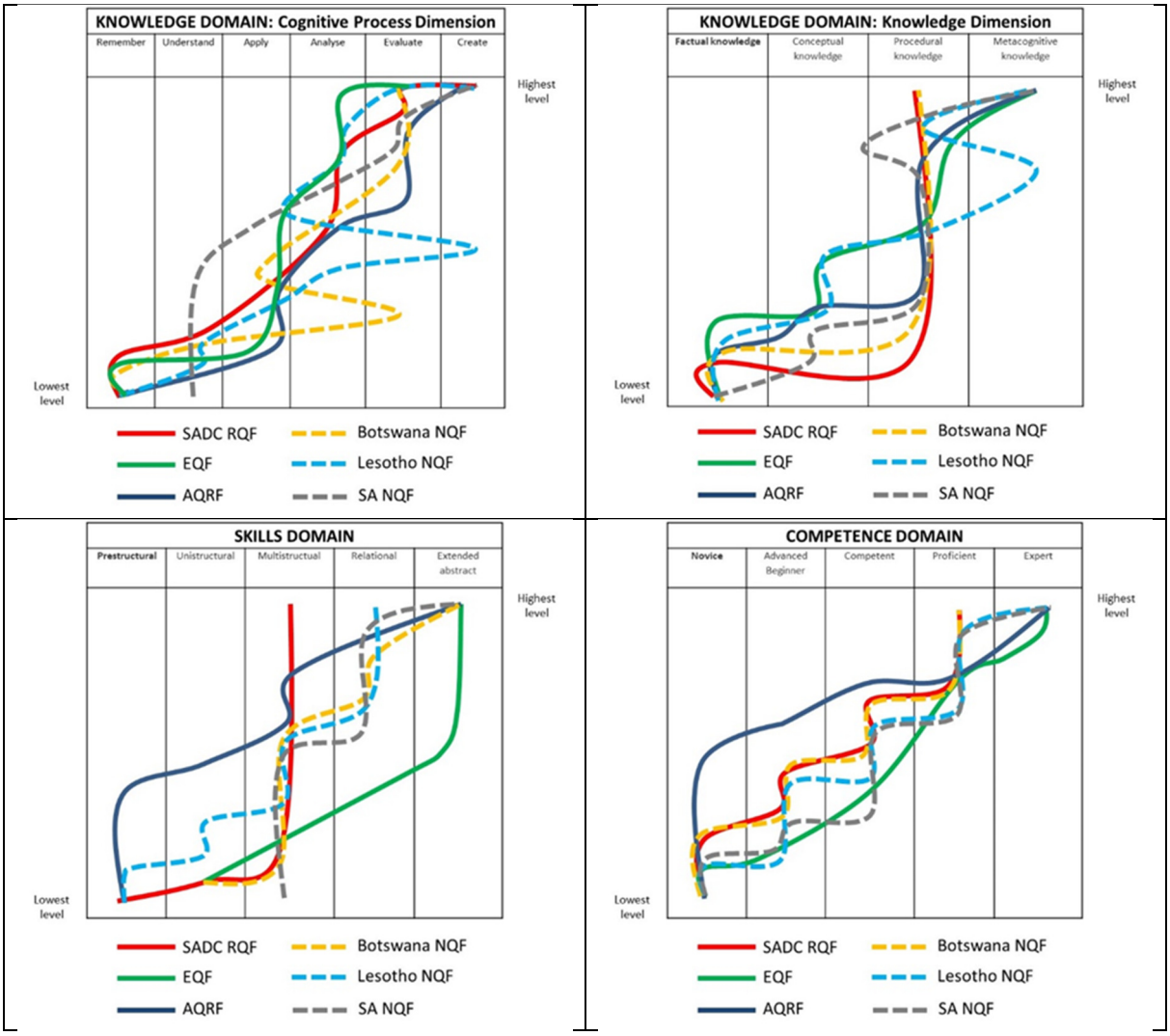
EXECUTIVE SUMMARY

The development of a regional qualifications framework is a process that involves a meaningful interrogation of existing member states' qualifications frameworks and globally recognised skills and qualifications, identifying latest trends in knowledge and skills development, and an alignment with common education priorities identified locally, regionally, and internationally. Following many years of preparatory work, beginning in fact in 1992, the Southern African Development Community (SADC) Regional Qualifications Framework (RQF) was approved by SADC Ministers of Education in 2011. The approval was provided with an understanding that there was work still needed regarding the alignment of the RQF with the qualifications frameworks of member states and also the development of level descriptors.

Only limited progress could be made between 2011 and 2016, with the main constraint being the human and financial resources necessary to undertake work of this nature. During this period other regional qualifications frameworks have matured and overtaken the SADC RQF. Two examples stand out: the European Qualifications Framework (EQF) and the Asian Qualifications Reference Framework (AQRF). In both instances, but more so in the case of the EQF, the development and implementation work is made possible through adequate resourcing and, notably, with strong conceptual capacity in through external agencies and the use of experts.

The purpose of this report is, at least in part, to provide new impetus to the SADC RQF process by progressing with the alignment and development of level descriptors. Based on the notion of "referencing" as a way to compare qualifications frameworks, the research draws on new thinking on the development and formulation of level descriptors using learning outcomes in line with an international initiative on developing world reference levels (Keevy and Chakroun, 2015). The research suggests that, based on identified international convergences, three domains can be used to categorise level descriptors, namely, knowledge, skills, and competences. A cross-cutting focus on global citizenship education (GCE) is also identified. This work forms the basis of the approach followed in analysing the SADC RQF level descriptors.





Based on application of the methodology first explored in the world reference levels process, it was found that progression varies across the frameworks included in the study. A common trend identified across many of the frameworks was the slow progression within the knowledge dimension followed by an over emphasis on procedural knowledge. Significant variations were also seen in progression in the skills domain across the different qualifications frameworks. Here, the SADC RQF requires specific attention. Progression in the competence domain was found to be more similar across the descriptors of the different qualifications frameworks.

The very weak coverage of the knowledge, skills, competences, and also values associated with GCE in the level descriptors of all the qualifications frameworks included in this study is an important finding.

The following recommendations are put forward and will be refined in consultation with the SADC Technical Committee on Certification and Accreditation (TCCA):

1. The SADC RQF descriptors need to be carefully reviewed to ensure the best possible progressing across all three domains, with notable improvements

required in the knowledge dimension of the knowledge domain and also the skills domain.

2. Referencing between the SADC RQF and NQFs in the SADC region will contribute to the strengthening of the RQF and the respective NQFs. A comparison of level descriptors is a useful point of departure, but this has to be supplemented by a consideration of substantial difference and quality assurance approaches followed in member states. Above all, the referencing process should contribute to increased mutual trust within the region. It should not be seen as a purely technical exercise.
3. Capacity to develop and implement the SADC RQF remains its main weakness. Important conceptual work, as presented in this report, has an important role to play, but this can only go so far. Political will was demonstrated when the SADC RQF was formally approved by SADC Ministers of Education in 2011. Political will without the commensurate allocation of resources leaves the SADC Secretariat and member states with very little to work with. Unless this changes, the SADC region will remain behind the rest of the world, even though much of the thinking started right here in the early 1990s.

The findings presented in this report provide a basis for more discussion and engagement on the use of level descriptors in the SADC region. Above all, while the conceptual work is important and necessary, it cannot replace the need for political will and the commensurate resources required to take the SADC RQF forward.

LIST OF ACRONYMS

AQRF	Asian Qualifications Reference Framework
CEDEFOP	European Centre for the Development of Vocational Training
DRC	Democratic Repubic of Congo
EQF	European Qualifications Framework
GATS	General Agreement on Trades and Services
GCE	Global Citizenship Education
ICT	Information and Communication Technology
ISRM	Industrialisation Strategy and Roadmap
LDs	Level Descriptors
NQF	National Qualification Framework
NVQF	National Vocational Qualifications Framework
QF	Qualifications Framework
RISDP	Regional Indicative Strategic Development Plan
RQF	Regional Qualification Framework
SADC	Southern African Development Community
SADCC	Southern African Development Coordination Conference
SANQF	South African National Qualification Framework
SDGs	Sustainable Development Goals
SOLO	Structure of the Observed Learning Outcome
STEM	Science, Technology, Engineering and Mathematics
TCCA	Technical Committee on Certification and Accreditation
TVET	Technical Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization

SECTION 1: INTRODUCTION AND CONTEXT

1.1 Locating the SADC in the broader international context

The Southern African Development Community (SADC) is a regional economic community that strives for regional integration to promote economic growth, peace, and security in the southern African region. The SADC was established in 1992 after the Heads of Government of the region agreed to transform its predecessor, the Southern African Development Coordination Conference (SADCC). The SADC aims to create common political values, systems, and institutions among its 15 member states, to build social and cultural ties, and to help alleviate poverty and enhance the standard of living among a regional population of 277 million. (SADC, n.d.)

The main purpose of the SADC is to improve economic growth and development, alleviate poverty, enhance the quality of life of the people of the region, support its socially disadvantageous areas through productive systems, and deepen cooperation and integration so that the region emerges as a competitive and effective player in international trade and the world economy. In seeking to meet both its social and economic aspirations, the SADC recognises the important role and contribution of human resources development in the political, economic, and social development of the region in order to, inter alia, facilitate industrial development, competitiveness, and regional integration, and cooperation. Thus promoting human resource development is one of the broad strategic objectives of the SADC regional integration and cooperation agenda (SADC, n.d).

The SADC region, like other regions, has established a goal in line with international declarations and agreements. The adoption of the Incheon Declaration for Education 2030 in 2015 by international representative organisations and civil society ratified the development of education as one of the 17 sustainable development goals and positioned it as priority 4 (UN, 2015). In a nutshell the objectives of the sustainable development goal for education (SDG-4) are as follows:

- to ensure access to quality education, in public formal, and non-formal education systems to children and out of school youth;
- to ensure equitable inclusion in education for everyone, with special attention to vulnerable groups who are disadvantaged by factors such as gender, poverty, conflict or disaster, geographical location, ethnicity, language, age, or disability;
- to ensure that education is of good quality, delivered by well-qualified teachers, and leads to relevant and effective knowledge and skills;
- to engender life-long learning for all (UNESCO, 2016).

1.2 The rationale behind qualifications frameworks

Qualifications frameworks are designed to facilitate progression from basic school level to further education, higher education and also technical vocational education and training (TVET) qualifications. Qualifications frameworks are level-based and are intended to facilitate mobility between the different levels of education qualifications. In addition, qualification frameworks are designed to facilitate the incorporation of non-formal and informal education into the formal qualifications framework through the recognition of prior learning. Through this process, prior learning is recognised and either awarded credit equivalent to that of a formal course or qualification or enables access to a formal course or qualification. There is a move (at varying stages of development) by many countries to integrate vocational education into their qualifications frameworks in acknowledgement of the important role TVET has in the education and employment system (Tuck, 2007).

In addition, a qualifications framework is intended to provide a means for creating pathways for students who may wish to pursue different learning pathways to achieve a qualification in a related or partially related field of study: the pathway pursued may be a linear progression, vertically up the qualifications framework, horizontally across the qualifications framework, or even diagonally up the framework. Non-linear progression whereby graduates from one field may embark on studies in another field and revert to the original field in pursuance of excellence and higher learning at a broader level is also facilitated. Qualifications frameworks are also intended to facilitate redress and accelerate equity and inclusion among disadvantaged populations. This is achieved through the development and implementation of supporting policies and legislation to enable existing and new education structures to align their priorities to the qualifications framework (SADC, 2015.

Establishing a national qualifications framework (NQF) requires a pragmatic approach. The SADC countries that have adopted the NQF approach have had to take steps to integrate fragmented education systems and gain buy-in from institutions, which meant conducting extensive advocacy in order to highlight the benefits of an NQF. It is noted that among the first generation NQF countries, the promise of redress and equity offed by the adoption of an NQF required education institutions to change and, in many cases, an adjustment to be made to the whole education system. To ensure that all key stakeholders and others working in the education sector make the adjustment required, legislation and related policies need to be aligned to the NQF and other related education developments (Tuck, 2007).

Developing and adopting an NQF is not without controversy. Critics continually emphasise the potential high costs of NQFs, the limited evidence of impact, and the need to first focus on more essential features of education and training systems. An extract from the article by Coles *et al* (2014) that looked at NQFs in the United

Kingdom, South Africa, and Australia as case studies provides a useful summary of these tensions.

> "In conclusion, we need to return to the question posed in the introduction to this report: Are we flying blind? Are NQFs being developed without the necessary evidence base for their continued existence? Here again, our answer is both yes and no. There is some indication that some countries are following the global trend without considering alternatives. Much like in South Africa in the 1990s, a feasible alternative to the challenges of globalisation is not evident and alternative ways of creating a well understood system of qualification levels are still to appear" (Coles et al, 2014:41).

The authors argue that having looked at three case studies, namely the United Kingdom, South Africa, and Australia, the empirical evidence indicates that the development of NQFs cannot be considered a failure. Instead, the NQF is the only framework that has provided a response to the complexities of the global changes in the education and training environment. NQFs not only provide frameworks for qualifications but also provide a general sense of relative progression in an individual's cognitive development and allow stakeholders to interrogate the quality of qualifications. NQFs therefore provide quality assurance mechanisms for local, regional, and international qualifications.

Coles et al (2014) caution, however, that NQFs should not be seen as a panacea, and they will remain contested and difficult to review; nevertheless they provide the best response to the increasingly complex qualifications systems and the challenges of globalisation. In addition, the authors advise that countries need to take careful account of contextual considerations when developing their NQFs and the NQF cannot be constituted as a quick fix to resolve any education related challenges experienced. The key accomplishment of NQFs is that they attempt to bring together disparate education systems and provisions within one framework and within a single quality assurance system.

1.3 SADC's integration agenda for human resource development

According to the Regional Indicative Strategic Development Plan (RISDP), which is a guiding framework for the implementation of SADC's regional integration agenda and programmes (SADC, 2003), the main goal of SADC's integration agenda in the human resources development field is to increase the availability of educated and highly skilled personnel through equivalent and harmonised education and training systems of member states. In this way, investment efficiency and competitiveness of the region in the global economy will be promoted and the quality of life of the region's population improved. The Protocol on Education and Training, which was

signed in September 1997 and came into force in July 2000, provides for seven main areas of cooperation, namely:

i) policy for education and training;
ii) basic, intermediate and higher education and training;
iii) distance education;
iv) training fund;
v) research and development;
vi) lifelong education and training; and
vii) publishing and library resources (SADC, 1997).

The Protocol seeks to promote a regionally integrated and harmonised educational system, especially with regard to issues pertaining to access, equity, relevance, and quality of education interventions. The Protocol aims to achieve its objectives over a period of twenty years (SADC, 2003:55).

The challenges in the area of education and training are largely common to all countries in the sub-region. These challenges are access, equity, quality, efficiency, relevance, and democracy in educational and training policies. Other problems faced by the sector in the region include: the negative impact of HIV and AIDS; low literacy rates; low enrolment rates, especially at secondary and higher education levels; limited provision of early childhood education; inequitable access, particularly for disadvantaged groups such as women, disabled people, and people from rural areas; limited access to TVET; mismatch between supply and demand in TVET and higher education and training; inadequate education and training facilities and equipment; shortage of teaching and learning materials; and lack of comparable standards and qualification across all training institutions and countries (SADC, 2003:55).

The RISDP includes scientific and technological human resources such as artisans, technicians, engineers, and scientists in its list of human resources shortages in the region. The shortages are exacerbated by an increase in the brain drain of qualified personnel moving to more developed countries which offer more attractive working conditions and opportunities. The poorly trained teachers and inappropriate curricula in the region also contribute to the brain drain. In addition there are gaps in the region's legislation for the protection of intellectual property rights, and there is very little cooperation in science and technology between countries in the region (SADC, 2003:66).

One of the recommendations of the RISDP was that there should be a focus on the coordination of the development, harmonisation, and standardisation of the region's qualification and accreditation systems and frameworks with a view to increasing access to education and training opportunities and promoting the comparability of the various education and training systems and their outputs. It was recommended that to arrive at this situation, all member states should by 2015 achieve universal

primary education and ensure that all children complete a full course of primary schooling (SADC, 2003:88).

A need was identified in the various policy documents for regional statistical data maintenance. This would help to keep the region abreast of developments in its member states and enable timeous statistical analysis of data in order to ascertain the obstacles to and blockages in achieving targeted goals. The establishment of a skills portal would serve as a useful start.

1.4 SADC Regional Industrialisation Strategy and Road Map

Following the SADC Summit of Heads of State in Zimbabwe in 2014 the SADC region developed and approved a Regional Industrialisation Strategy and Road Map whihc was approved at the SADC Heads of States Extra-Ordinary Meeting in April 2015. The strategy recognises industrailisation along with ttechnological advancement and modernisation as key priorities for the reiogn and emphasises skills development as one of the important enabling factors. However, skills development at the regional level is problematic since comparable standards for skills and regional recognition of qualifications in all fields are limited. In addition, there is little credit transfer taking place among training institutions within and across SADC member states. These factors restrict the mobility and portability of qualifications and hence the free movement of labour and educational services in the region.

1.5 Implications of the SADC Industrialisation Strategy and Road Map (ISRM)

Achieving the targeted industrial outputs identified in the ISRM and to ensure the region's sustainability requires increasing human resource capacity by developing greater knowledge and skills in technology-based production as well as in manufacturing. In relation to the SADC RQF, both TVET and higher education qualifications in the region need to be reviewed, mapped out and aligned to the priorities set out in the ISRM. It is noted that most of the SADC countries are engaged in producing basic goods for the consumer market. The ISRM has highlighted the need for countries to move from producing basic goods to manufacturing intermediate and capital goods which requires engineering, machine tools and high-tech production systems. The strategy suggests that education is pivotal for this to occur and for bridging the technology gap between the SADC region and its international competitors. The envisioned knowledge-based economy will require a high level of science, technology, engineering, and mathematics (STEM) training (SADC, 2015:25) and a shared qualifications framework would facilitate a shared regional approach towards achieving this goal. The ISRM further recommends that the education system should be re-shaped to ensure that young people are trained – and re-trained – to meet the demands of modern business and

public administration with specific focus on the disciplines of mathematics, science and technology and innovation.

In addition to the production of quality graduates in the STEM disciplines by tertiary education institutions, regional centres of excellence and specialisation should be identified and strengthened and new ones established where appropriate. To enhance the availability of critical human resources and productivity in the region, member states should facilitate the cross-border mobility of required skills, which include qualifications in information and communication technology (ICT), mineral beneficiation, science and technology, engineering, agriculture and agricultural production, business development, industry and economics, among others. To this effect, and in order to ascertain whether the region's knowledge and skills capacity is adequate for meeting the goals and targets set out in the strategy, there is a particular need for undertaking a skills audit at regional level and establishing mutually agreed accreditation frameworks (SADC, 2015:26). Member states would also be able to review and align their qualification matrices or NQFs in relation to the RQF.

1.6 Developing the SADC Regional Qualifications Framework

In this context, the SADC RQF, which consists of a set of agreed principles, practices, procedures, and standardised terminology, was developed as a regional mechanism for ensuring effective comparability of qualifications and credits across borders in the SADC region, facilitating mutual recognition of qualifications among member states, harmonising qualifications wherever possible, and creating acceptable regional standards where appropriate.

Developing the SADC RQF began with the establishment of the SADC Technical Committee on Certification and Accreditation (TCCA). The TCCA was established to facilitate the realisation of the objectives of the 1997 Protocol on Education and Training and was tasked with developing and recommending policy guidelines, instruments, structures, and procedures that would facilitate equating, harmonising, and eventually standardising accreditation and certification in the SADC region.

The objectives of the TCCA were thus to:

i) facilitate the development and implementation of NQFs;
ii) facilitate the harmonisation of NQFs into the development of an RQF;
iii) review and strengthen the national assessment and accreditation structures, systems, and procedures
iv) facilitate agreement on entry requirements to higher education and training.

Between 2001 and 2011 the TCCA worked towards the achievement of these objectives and, in particular, towards the establishment of the SADC RQF.

The SADC RQF is a reference framework which consists of ten level descriptors, described through outcome statements and included credits, where applicable, that are formally recognised in SADC member states and quality assurance guidelines. Despite political endorsement of the SADC RQF in 2011, the region has been unable to take the process forward due to limited resources technically and financially. It is noted that developments in the SADC region since 2011 have brought about a shift towards prioritising the RQF's development and implementation.

In 2011 it was agreed that there was a need to finalise the SADC RQF quality descriptors and qualification types and to facilitate the process by benchmarking the SADC RQF against the qualifaction frameworks developed by the Asia-Pacific, Caribbean, and European regions as well as the Trans-national Qualifications Framework for Small States of the Commonwealth. This review of the Draft SADC Regional Qualifications Framework is an attempt to carry out this process.

1.7 Reviewing the Draft SADC Regional Qualifications Framework

The approach taken in the review was to examine the SADC RQF's level descriptors in the light of recent research completed as part of the UNESCO initiative to explore a set of "world reference levels". The review made use of the referencing methods discussed in the UNESCO publication, Level Setting and the Recognition of Learning Outcomes: The Use of Level Descriptors in the 21st Century (Keevy and Chakroun, 2015). The method and taxonomies presented in the publication were used to analyse and propose improvements to the level descriptors of the SADC RQF.

In addition, the Draft SADC RQF document notes the importance of recognising the qualifications framework of each member state when developing a regional framework. Thus in order to establish the compatibility of the SADC RQF with member states' NQFs and level descriptors, the NQFs of SADC member states were also reviewed.

A detailed discussion of the methodology used and a description of the revised SADC RQF levels are provided in the following sections.

SECTION 2. METHODOLOGICAL CONSIDERATIONS

2.1 Introduction

The aim of this research was to revise the level descriptors of the SADC Regional Qualifications Framework (RQF) that was approved in 2011, taking into accont qualification types and qualification pathways. The study compared existing level descriptors at both the national (member state) and regional levels to ascertain the way the descriptors are used for defining learning outcomes and classifying qualifications.

The study was restricted to a desktop review of publications available publically, from academic sources, and from the SADC Secretariat, and was limited by the paucity of sources of information on which it could draw. As well as few academic publications, there is a lack of primary sources in a large number of SADC member states. While there appeared to be a wealth of literature on South Africa and a small amount on Mauritius and Seychelles, there was very little or none found on the other member states. In addition, some of the literature found appeared to be quite dated and it could not be established whether any newer or more recent developments have been documented.

The objectives of the research were to:

- undertake a literature review of the current status and trends in the development and implementation of national qualifications frameworks in the SADC member states and of regional qualification frameworks on the African continent and internationally;
- review the level descriptors and categorisation of existing and planned national qualifications frameworks in the SADC region;
- identify the commonalities among and differences between level descriptors and the categorisation of qualifcations in the SADC region;
- propose quality descriptors, categorisation of the draft SADC RQF, and qualifications pathways from level 1 to level 10; and
- recommend critical pillars for the effective operationalisation of the SADC RQF.

2.2 Referencing

Referencing is a methodology used to compare qualifications frameworks and, by implication, the level descriptors associated with each framework. Drawing on the methodology as employed in the European context, the referencing is defined as:

> … a process that results in the establishment of a relationship between the levels of the European meta-framework (EQF [European Qualifications Framework]) and the national qualifications framework

> (NQF) or system. Through this process, national authorities responsible for qualifications systems, in cooperation with stakeholders responsible for developing and using qualifications, define the correspondence between the national qualifications system and the eight levels of EQF. (CEDEFOP, 2011:6)

Fundamental to the referencing process is the principle of mutual trust which consists of both technical reliability and consensus amongst stakeholders and the way in which that consensus is rooted in custom and practice. The credibility of the consensus is based on agreement from role-players in charge of qualifications, certification processes, and also those using qualifications (employers, learners). There is a strong link between the methodologies employed in credential evaluation practices (which preceded qualifications frameworks by many years) and benchmarking. Two principles are of value and are discussed in more detail below: substantial difference and comparability.

The notion of substantial difference is often used during benchmarking processes. The term originates from the credential evaluation sector and is applied in relation to the function of a qualification and the purpose for which recognition is sought (European Area of Recognition, n.d.).

> Substantial differences are differences between the foreign qualification and the national qualification that are so significant, that they would most likely prevent the applicant from succeeding in the desired activity such as further study, research activities or employment. (Keevy and Chakroun, 2015; 128).

Importantly, the burden of proof lies with the competent recognition authority to show that the difference between two qualifications (each from a different country) is substantial (Hunt *et al* 2009). According to the recommended procedure for the assessment of foreign qualifications developed by the Lisbon Recognition Convention Committee, assessments should seek to answer the following questions:

- Are the differences in (targeted or achieved) learning outcomes so substantial that the foreign qualification cannot be fully recognised? If so, is it possible to grant alternative or partial recognition?
- Are the differences in the further activities for which the foreign and the home country qualifications prepare so substantial that full recognition is not possible? If so, is alternative or partial recognition possible?
- are the differences in key elements of the programme leading to the qualification so substantial in relation to similar programmes in the host country that full recognition cannot be granted in view of the purpose for which recognition is sought? If so, is alternative or partial recognition possible?

- Is the quality of the programme or the institution at which the qualification was earned so different from similar programmes or institutions in the host country that full recognition is not possible? If so, is alternative or partial recognition possible? (Council of Europe, Europe, 2005:98).

The referencing of qualification frameworks represents a critically important point in the development of a qualifications framework (see Hart 2009), as it entails the practical application of models that up to that point may have remained abstract and amorphous. It is at this point that the strengths and weaknesses of a framework become more obvious; it is also the stage at which the development of trust between countries and regions is solidified. For this reason referencing should be understood as going beyond a simple technical exercise of matching levels, credits, and qualification types; it is, rather, a social process wherein different stakeholders are able to participate and that allows for the objective and external scrutiny of national systems that in the past may have been closely guarded and protected by each country.

Referencing national qualifications to regional qualifications requires the support of a regional accrediting body that is recognised and respected by the affiliated countries. The process must be transparent and consistent if member states are expected to buy into the process. Establishing clear criteria for the referencing process will assist in establishing the trust that is required to enable countries to follow through. In instances in which referencing criteria may not suffice, alternative means of referencing such as considering the types of qualifications offered or the learning outcomes stipulated within a qualification level need to be prioritised.

Keevy and Jaftha (2016) describe three types of referencing: “upward referencing”, referring to countries referencing their national qualifications framework to the regional qualifications framework, “peer referencing”, where countries reference their frameworks with each other, and “downward referencing”, which is the referencing of a more comprehensive qualifications framework with a less comprehensive qualifications framework, for example, referencing the National Qualifications Framework to a TVET qualifications framework.

Referencing may appear to be a fairly straightforward process, entailing comparisons between qualifications frameworks based on key indicators or levels that are comparable. However, due to differences in qualifications systems, it has been found that it is impossible to utilise one single referencing model. Countries opt for “best-fit” in order to overcome the fact that a “perfect-fit” is not possible. Comparing frameworks that have a varying number of levels, for example, comparing the EQF which has eight qualification levels with the SADC RQF which has ten qualification levels, also poses a problem. An alternative approach would be to compare the outcomes of the qualifications instead of the levels and then to reference the qualifications. However, this is much more complicated and could lead to

disadvantaging one or the other framework. This is where clear referencing criteria and rigorous quality assurance to ensure that decisions made are consistent and reliable come in to play.

A further complication is that TVET qualifications are not necessarily described in the qualifications framework level descriptors. It is thus also necessary to consider models that have referenced TVET qualifications in relation to higher education, occupational, and employment related qualifications across different regions and within regions. Since TVET is gaining in prominence, it may be necessary to recognise TVET and related qualifications on the main-frame of qualifications frameworks. Additional qualifications that need to be reviewed within the TVET qualifications framework are those relating to global citizenship education and lifelong learning.

Improved understanding of the use of learning outcomes and the domains of learning used in level descriptors offer an avenue to deepen referencing processes between countries and also between an RQF and NQFs. The section below explores this idea in more detail.

2.3 Description of analytical tools utilised

In addition to the above-mentioned processes, the domains and sub-domains of learning, seen as a progression towards an end-point of higher learning, provided a useful tool for the analysis of the SADC RQF level descriptors. This approach was explored in the UNESCO world reference level process (Keevy and Chakroun 2015). The following table provides an overview of the proposed domains based on a review of the level descriptors used in both national and regional qualifications frameworks internationally.

Table 1: Domains and sub-domains of level descriptors

Domain	Defined as…	Sub-domain	Defined as/comments…
Knowledge	The ability to recall and present information	No explicit sub-domains are proposed	The existing categorisations and forms of knowledge can be accommodated in the broad domain as is the current practice; this decision could be reviewed at a later stage
Skill	The ability to do in context	**Foundation**	Skills which emphasise literacy and numeracy
		Transferable	The application of universal knowledge and skills across a range of social, work, and geographical settings. This domain may at a later stage be further developed into a separate domain
		Technical and vocational	The specific technical know-how to do a job
Competence	The application of knowledge and skills in context	**Applied competence**	Includes foundational competence that focuses on intellectual/academic skills of knowledge; practical competence that focuses on the operational context; and reflexive competence that focuses on learner autonomy
		Affective competence	Personal, behavioural and attitudes competences that include a specific focus on those competences that may be best assessed collectively

Analysis of the SADC RQF level descriptors using the methodologies suggested in Keevy and Chakroun (2015) involved unpacking each level descriptor as per the description in Table 1 above and considering the various sub-domains and whether they apply at each level. In addition, the expected outcomes at each level were reviewed to ascertain the progression from level 1 up to level 10 and how the different levels relate to each other.

Level descriptors assume that learning outcomes are cumulative by level. This assumption, that knowledge, skills, and competences at one level include those at lower levels, means that domains must be read together to give a true picture of a level (Coles, 2014). In line with the world reference levels research, the review of the SADC RQF level descriptors therefore considered progression within each of the three domains, although the RQF does not clearly articulate nor adequately conceptualise this concept.

2.3.1 Revised Bloom's Taxonomy

The tool used for describing the knowledge domain in the SADC RQF was the Revised Bloom's Taxonomy, a hierarchical taxonomy with six major categories situated across two dimensions. The learning progression is from simple to complex and from concrete to abstract. It is argued that the learning domains of the SADC RQF level descriptors can be levelled in accordance with this taxonomy: The knowledge domain in the RQF progresses from factual knowledge to metacognitive knowledge; and the cognitive process domain progresses from simple recall to the more complex activities of understanding, applying, analysing, evaluating and creating. The table below provides the template for the Revised Bloom's Taxonomy.

Table 2: Revised Bloom's Taxonomy

The knowledge dimension	**The cognitive process dimension**					
	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual knowledge						
Conceptual knowledge						
Procedural knowledge						
Metacognitive knowledge						

Source: Anderson et al, 2001.

The cognitive processes are defined as follows (Anderson *et al* 2001:67-68):

- Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing, and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organising, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

The taxonomy assumes that thinking functions in a hierarchical manner, progressing from the lower to the higher level of thinking. The cognitive process dimension in the

revised taxonomy replaces the "cumulative hierarchy" assumed in the original taxonomy developed by Bloom. The second change is the shift from the content to the types of knowledge dimension (Anderson, 2005). The types of knowledge are defined as:

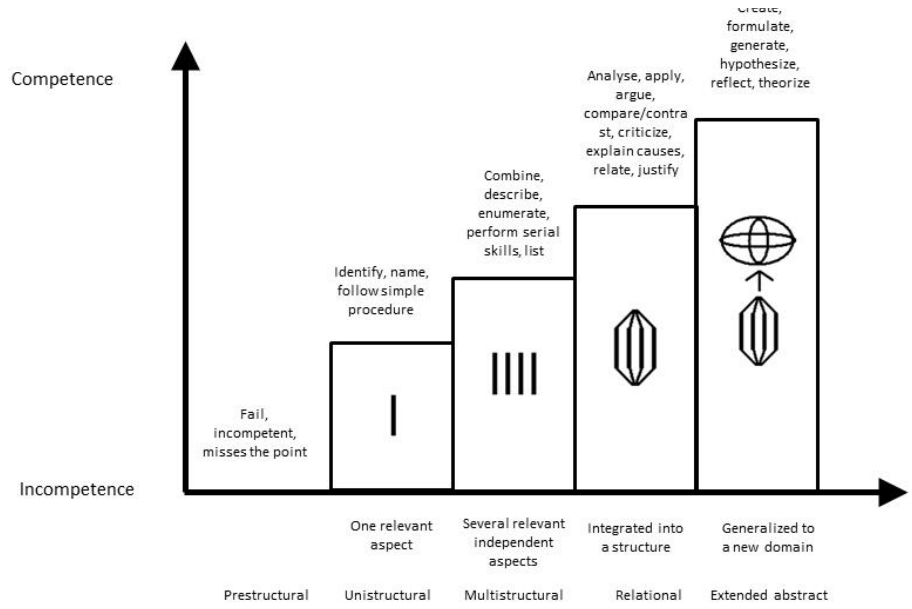
- Factual knowledge: the basic elements students must know to be acquainted with a discipline or solve problems in it.
- Conceptual knowledge: the interrelationships among the basic elements within a larger structure that enable them to function together.
- Procedural knowledge: how to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.
- Metacognitive knowledge: knowledge of cognition in general as well as awareness of one's own cognition.

2.3.2 Structure of the Observed Learning Outcome (SOLO)

The tool used for describing the skills domain in the SADC RQF was the Structure of the Observed Learning Outcome (SOLO). SOLO does not interpret the outcome as the end-product of the learning process, but rather focuses on the 'underlying structures of thought that give rise to the product' (Keevy and Chakroun, 2015:36). Progression within the SOLO Taxonomy is based on levels of understanding ranging from unistructural (one relevant aspect) to multistructual (several relevant independent aspects), to relational (integration into a structure), and to extended abstraction (generalisation to a new domain). (Keevy and Chakroun, 2015).

The following diagram captures the SOLO progression in more detail.

Figure 1: SOLO Taxonomy with sample verbs indicating level of understanding



Source: Biggs, 2014.

The SOLO Taxonomy focuses on the progression of learning from incompetent to competent. In reviewing the SADC RQF level descriptors, attempts were made to identify the competences expected at each level, and to link them to the SOLO Taxonomy. It is hoped that this process will provide a more informative picture of the level of learning expected at each level in the SADC RQF level descriptors. It is acknowledged, however, that the application of the SOLO Taxonomy to the formulation of learning outcomes and, by implication, level descriptors, is not well developed internationally. More work will have to be done to test this idea, but in principle it does open a new approach wherein the hierarchy in the competence domain is understood differently from those in the knowledge and skills domains. (Keevy and Chakroun, 2015).

2.3.3 Dreyfus Model of Skills Acquisition

The third domain considered in the RQF review was competence. The competence domain differs from the knowledge and skills domains in that competence entails the *application* of knowledge and skills in context. Progression in the competence domain is seen in terms of levels of specialisation rather than levels of understanding (as in the SOLO Taxonomy) or the classification of thinking behaviours (as in Bloom's Taxonomy). As in the case of the knowledge and skills domains, there is a widely used model for describing the competency domain, namely the Dreyfus Model of Skills Acquisition (Dreyfus and Dreyfus 1986). The model differs from the Bloom's and SOLO taxonomies in that it focuses on the *acquisition* of skills through a hierarchy ranging from novice to expert.

According the Dreyfus model there are six levels of progression ranging from a novice to an expert (Lester 2005):

- Novice: Has an incomplete understanding, approaches tasks mechanistically and needs supervision to complete them.
- Advanced beginner: Has a working understanding, tends to see actions as a series of steps, can complete simpler tasks without supervision.
- Competent: Has a good working and background understanding, sees actions at least partly in context, able to complete work independently to a standard that is acceptable though it may lack refinement.
- Proficient: Has a deep understanding, sees actions holistically, can achieve a high standard routinely.
- Expert: Has an authoritative or deep holistic understanding, deals with routine matters intuitively, able to go beyond existing interpretations, achieves excellence with ease.

Table 3: Dreyfus Model of Skills Acquisition

Level of progression	Descriptors
Novice	Rigid adherence to taught rules or plans Little situational perception No discretionary judgement Without reference to context
Advanced beginner	Guidelines for action based on attributes or aspects (aspects are global characteristics of situations recognisable only after some prior experience) Situational perception still limited All attributes and aspects are treated separately and given equal importance
Competent	Coping with crowdedness Now sees actions at least partially in terms of longer-term goals Conscious, deliberate planning Standardised and routinised procedures Analytical
Proficient	Sees situations holistically rather than in terms of aspects Sees what is most important in a situation Perceives deviations from the normal pattern Decision-making less laboured Uses maxims for guidance, whose meanings vary according to the situation Rational
Expert	No longer relies on rules, guidelines or maxims Intuitive grasp of situations based on deep tacit understanding Analytic approaches used only in novel situations or when problems occur Vision of what is possible

Source: Dreyfus and Dreyfus, 1986.

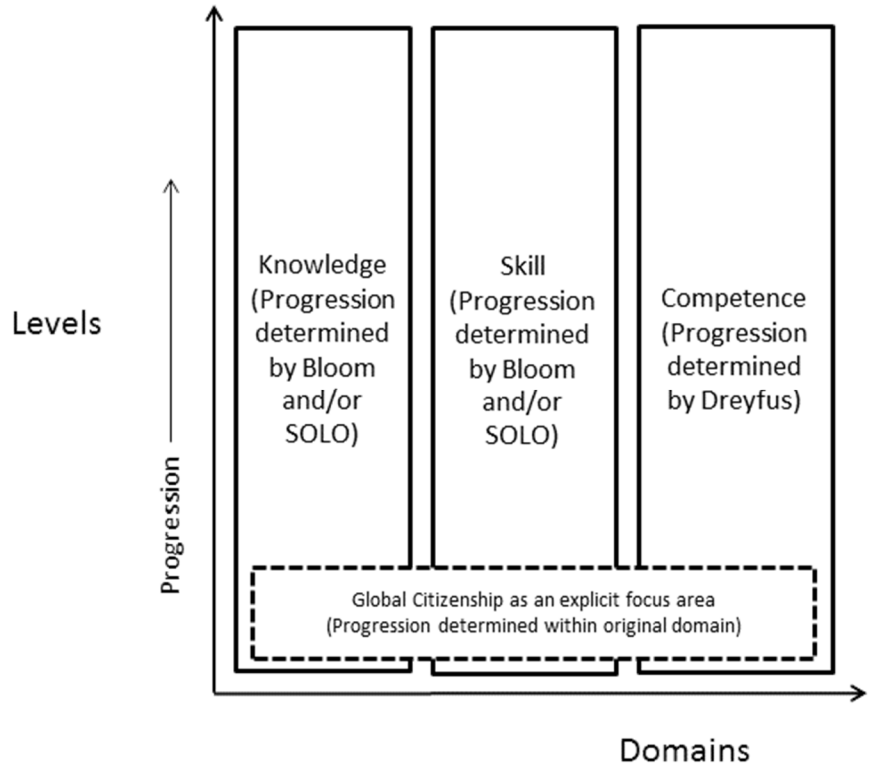
2.3.4 Global citizenship education

In addition to the knowledge, skills, and competence domains, a further cross-cutting dimension is proposed, namely global citizenship. Global citizenship may be defined as a unique set of cross-cutting knowledge, skills, and competences that enables an individual to act collaboratively and responsibly, to find global solutions to global challenges, and to strive for the collective good.

Considering the fact that the SADC RQF level descriptors are applicable across countries and hence have an international dimension, it is useful to also review the current set of descriptors through the lens of global citizenship.

The progression within each of the three domains together with progression in global citizenship is illustrated in the figure that follows.

Figure 2: Progression within and across domains



Global citizenship education (GCE) is fairly a new concept, particularly in Southern Africa. However, it is a fundamental concept which the SADC member states should consider including in their education policies and systems. In their report on research undertaken for UNESCO, Keevy and Matlala (2015) emphasise the importance of recognising that values, attitudes, and communication skills are critical GCE competences required by individuals to be able to function effectively as global citizens. Keevy and Matlala further indicate that the education community is paying increasing attention to the function of education in understanding social, political, cultural, and global issues, and the resolving of conflict. Education is seen as having a role to play in supporting peace, human rights, equity, acceptance of diversity, and sustainable development (Keevy and Matlala, 2015:6). The following table illustrates the abilities associated with GCE.

Table 4: Abilities associated with GCE

Domain	Description of domain	Competence
Knowledge	Ability to recall and present information	• understand global issues and universal values such as justice, equality, dignity, and respect • understand global challenges and problems • languages • use of internet and modern ways of communication
Skills	Ability to do	• actively contribute to civic activities • actively contribute to pro-environmental behaviours
Competences	Application of knowledge and skills in context	• knowledge, understanding, and critical thinking about global issues and the interconnectedness and interdependency of countries and different populations • understanding of collective identity • act collaboratively and responsibly to find global solutions to global challenges and to strive for the collective good • act responsibly at local, national, and global levels for a more peaceful and sustainable world
Values	Principles or standards of behaviour	• global identity and openness • willingness to help others • acceptance of universal human rights and equality • commitment to sustainable development • anti-fatalistic attitudes • respect for diversity • global empathy • sense of solidarity (belongingness to common humanity)

The SADC as the regional block has a role to play in ensuring that learners are taught about global issues and this should be reflected in the SADC RQF level descriptors. Based on the table above, the current SADC RQF level descriptors do not explicitly reflect GCE competences.

2.4 Description of the analytical process followed in this study

This study utilised the referencing approach outlined above to analyse the SADC RQF level descriptors, specifically to determine the compatibility and differences in level descriptors among all SADC member states. The process included a comparison of the level descriptors of the SADC RQF with other regional qualifications frameworks such as the EQF and AQRF. In addition, the SADC RQF level descriptors were compared with a sample of the national level descriptors of SADC member states to ascertain compatibility. A matrix was used to map the level

descriptors within the three domains (knowledge, skills, and competence) and across the progression in each of the domains.

The assumptions and also the limitations of the analytical process need to be noted up-front. The following assumptions are important to note:

- The categorisation of the learning outcomes used in level descriptors is limited to the three dimensions – this is based on the extensive review of level descriptors internationally (Keevy and Chakroun, 2015).
- Progression within each of the three domains (knowledge, skills, and competence) is mapped using the three approaches identified: the Revised Bloom's Taxonomy for the knowledge domain; the SOLO Taxonomy for the skills domain; and the Dreyfus Model of Skills Acquisition for the competence domain.

The following limitations are noted:

- The level descriptors used in this study (from the SADC RQF, EQF, AQRF, Botswana NQF, Lesotho NQF and the South African NQF) do not all follow the three domains. In the few cases where the domains are not explicit, the descriptors were regrouped and/or more than one of the progression approaches were applied.
- The number of levels of the qualifications frameworks included varied between 8 and 10. Some scaling was required to allow comparison across level descriptors originating from qualifications frameworks with a different number of levels.
- The main limitation of the study is that the methodology is new. Application of the three progression approaches to level descriptors has not been done before as far as the researchers could determine. A peer review process in which the interpretations can be tested for consistency and validity is therefore necessary. A first round will take place with the SADC TCCA.
- Related to the point above, the application of the methodology requires a value judgement based on an interpretation of the level descriptors combined with an interpretation of the progression levels. This can be refined as the methodology is improved, but will be a weakness in this version of the report.

In spite of the very real limitations of this study, the researchers are of the view that it represents new thinking that will over time provide the basis for a more scientific approach to the analysis and development of level descriptors. We do not claim to have achieved this yet.

SECTION 3. REVIEW OF THE SADC LEVEL DESCRIPTORS

3.1 Introduction

The review of the SADC RQF level descriptors is provided in this section. This includes a comparison of the SADC RQF level descriptors with those of the EQF and AQRF. This section also provides a check on the compatibility between the SADC level descriptors and the level descriptors of the NQFs in three selected SADC member states, namely South Africa, Botswana, and Lesotho. Finally, this section provides a consolidation and synthesis of the use of level descriptors by and the information provided for each SADC member state.

As indicated in Section 1 of this report, all SADC member states are at different stages of developing and implementing NQFs. As a result, the use of level descriptors is common across almost all member states, although not all have fully developed NQFs.

According to a study conducted by the European Centre for the Development of Vocational Training (2013:5), "the added value of NQFs depends on their ability to specify levels of learning outcomes". As a result, these levels provide a baseline according to which qualifications can be mapped; this approach also eliminates bias as it emphasises the content and profile of qualifications rather than the awarding institution. In addition, the transparency of qualifications and overall education systems increases, thus facilitating mobility and lifelong learning (European Centre for the Development of Vocational Training, 2013).

3.2 Level descriptors defined

According to UNESCO,

> Level descriptors are statements that provide a broad indication of learning appropriate to attainment at a particular level, describing the characteristics and context of learning expected at that level. They are designed to support the reviewing of specified learning outcomes and assessment criteria in order to develop particular modules and units and to assign credits at the appropriate level. (Vlãsceanu *et al.*, 2007:52)

To further deepen the understanding of learning outcomes, the European Centre for the Development of Vocational Training (CEDEFOP) posits that "learning outcomes-based descriptors for qualifications frameworks cannot be treated as a purely technical issue" and further suggests that despite the importance of terminology, clarity, and consistency of outcome based descriptors, "the role played by level descriptors depends on their ability to act as an agreed and credible reference point

for all stakeholders in education and training, lifelong learning and the labour market" (CEDEFOP, 2013:5). According to CEDEFOP, some of the features and functions include:

- Being sufficiently detailed and multidimensional to capture the institutional complexities of the national qualification system;
- Being sufficiently general to accommodate different parts of education and training systems;
- Being able to mirror the way qualifications are valued by economy and society;
- Being able to reflect how knowledge, skills and competences increase in breadth, depth, and complexity when moving from lower to higher levels (CEDEFOP, 2013:5)

The latter section focused on providing an introduction and some explanation of level descriptors and their use in defining learning outcomes. The following sections will focus on a more technical analysis of the use of level descriptors in the SADC region as well and other regional blocks.

3.3 Analysis of the level descriptors of the SADC RQF

This section presents the SADC RQF level descriptors reviewed through the lens of progression within the three learning domains, knowledge, skills, and competence, as described in Section 2 above.

- The knowledge domain was reviewed using the revised Bloom's taxonomy and accordingly was seen as having two dimensions, namely the knowledge dimension and the cognitive process dimension.
- The skills domain was reviewed using the SOLO Taxonomy.
- While the SADC RQF acknowledges three domains it does not explicitly refer to a "competence" domain; instead it refers to the "autonomy and responsibility" domain – this domain was reviewed using the Dreyfus Model of Skills Acquisition.

A grid was developed for each domain (two for the knowledge domain) and a smooth line was fitted to each of the grids as depicted in the following figures.

Figure 3: Mapping of knowledge, skills and competence domains: SADC RQF

SADC RQF: Knowledge Domain – Knowledge Dimension		The knowledge dimension[1]			
		Factual knowledge	Conceptual knowledge	Procedural knowledge	Metacognitive knowledge
10	Makes a substantial and original contribution to knowledge in the field of study through research and scholarship			X	
9	Demonstrates mastery of theoretically sophisticated subject matter, showing critical awareness of current problems and new insights at the forefront of the discipline area			X	
8	Demonstrates critical understanding of the principles, theories, methodologies, current research and literature of the discipline			X	
7	Demonstrates knowledge of a major discipline with possible areas of specialisation, including command of the ideas, principles, concepts, chief research methods and problem-solving techniques of the recognised discipline			X	
6	Demonstrate specialist knowledge in more than one area and ability to collate, analyse and synthesise a wide range of technical information			X	
5	Demonstrate a broad knowledge base with substantial depth in some areas, ability to analyse information and construct a coherent argument			X	
4	Demonstrates a broad knowledge base, incorporating some abstract and technical concepts, and ability to analyse information and make informed judgements			X	
3	Demonstrates basic operational and theoretical knowledge and ability to interpret information	X			
2	Demonstrates recall and a narrow range of knowledge and cognitive skills	X			
1	Demonstrates basic general knowledge and numeracy and literacy for everyday purposes				

- [1] Factual knowledge: the basic elements students must know to be acquainted with a discipline or solve problems in it.
- Conceptual knowledge: the interrelationships among the basic elements within a larger structure that enable them to function together.
- Procedural knowledge: how to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.
- Metacognitive knowledge: knowledge of cognition in general as well as awareness of one's own cognition.

SADC RQF: Knowledge Domain – Cognitive Dimension		The cognitive process dimension[2]					
		Remember	Understand	Apply	Analyse	Evaluate	Create
10	Makes a substantial and original contribution to knowledge in the field of study through research and scholarship					X	
9	Demonstrates mastery of theoretically sophisticated subject matter, showing critical awareness of current problems and new insights at the forefront of the discipline area					X	
8	Demonstrates critical understanding of the principles, theories, methodologies, current research and literature of the discipline				X		
7	Demonstrates knowledge of a major discipline with possible areas of specialisation, including command of the ideas, principles, concepts, chief research methods and problem-solving techniques of the recognised discipline				X		
6	Demonstrates specialist knowledge in more than one area and ability to collate, analyse and synthesise a wide range of technical information				X		
5	Demonstrates a broad knowledge base with substantial depth in some areas, ability to analyse information and construct a coherent argument			X			
4	Demonstrates a broad knowledge base, incorporating some abstract and technical concepts and ability to analyse information and make informed judgements		X	X			
3	Demonstrates basic operational and theoretical knowledge and ability to interpret information		X				
2	Demonstrates recall and a narrow range of knowledge and cognitive skills	X					
1	Demonstrates basic general knowledge and numeracy and literacy for everyday purposes						

- [2]Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organising, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

SADC RQF: Skills Domain		SOLO levels[3]				
		Prestructural	Unistructural	Multistructual	Relational	Extended abstract
10	Conducts original research which is evaluated by independent experts against international standards. Demonstrates problem solving ability and critical evaluation of research findings for academic discussion			X		
9	Conducts original research deploying appropriate research methods and processes primary and secondary source information using rigorous intellectual analysis and independent thinking and applies knowledge in new situations; and demonstrates independent thinking, problem solving, critical evaluation of research findings and ability to make judgements based on knowledge and evidence.			X		
8	Demonstrates capacity to use a coherent and critical understanding of the principles, theories and methodologies of a particular discipline. Selects and applies appropriate research methods and techniques and critical analysis and independent evaluation of information			X		
7	Demonstrates intellectual independence, critical thinking and analytical rigour and advanced communication and collaborative skills in complex and variable contexts			X		
6	Demonstrates ability to apply specialist knowledge and skills in highly variable contexts and formulate responses to concrete and abstract problems			X		
5	Applies a wide range of technical and/or scholastic skills in variable contexts using standard and non standard procedures, often in combination			X		
4	Applies a moderate range of technical and/or scholastic skills which are transferable in familiar and unfamiliar contexts, using routine and non routine procedures			X		
3	Demonstrates a range of well developed skills and ability to apply known solutions to familiar problems			X		
2	Can carry out processes that are limited in range, repetitive and familiar		X			
1	Can follow simple instructions and perform actions required to carry out simple concrete tasks requiring no special skills	X				

- [3]Pre-structural (no relevance): Fail, incompetent, misses the point.
- Unistructural (one relevant aspect): Identify, name, follow simple procedure.
- Multistructual (several relevant independent aspects): Combine, describe, enumerate, perform serial skills, list.
- Relational (integration into a structure): Analyse, apply, argue, compare/contrast, criticise, explain causes, relate, justify.
- Extended abstract (generalisation to a new domain): Create, formulate, generate, hypothesise, reflect, theorise.

SADC RQF: Autonomy and Responsibility Domain		Dreyfus levels[4]				
		Novice	Advanced Beginner	Competent	Proficient	Expert
10	Demonstrates full responsibility and accountability for all aspects of advanced research work				X	
9	Shows independence, initiative and originality and the ability to manage own and group outcomes in complex and unpredictable situations				X	
8	Operates within the context of a strategic plan with complete accountability for management of resources and supervision of others				X	
7	Designs and manages processes and works with broad accountability for determining, achieving and evaluating personal and group outcomes			X		
6	Manages processes and works with complete accountability for personal and group outcomes			X		
5	Works independently under broad guidance and can take some responsibility for supervising the work of others and group outcomes		X			
4	Shows ability for self-direction requiring little supervision, and complete responsibility for own outcomes and some responsibility for group outcomes		X			
3	Works under general supervision with some responsibility for quality and quantity of output	X				
2	Applied in directed activity under close supervision	X				
1	Works under close supervision in familiar situations and structured contexts	X				

- [4]Novice: Has an incomplete understanding, approaches tasks mechanistically and needs supervision to complete them.
- Advanced Beginner: Has a working understanding, tends to see actions as a series of steps, can complete simpler tasks without supervision.
- Competent: Has a good working and background understanding, sees actions at least partly in context, able to complete work independently to a standard that is acceptable, though it may lack refinement.
- Proficient: Has a deep understanding, sees actions holistically, can achieve a high standard routinely.
- Expert: Has an authoritative or deep holistic understanding, deals with routine matters intuitively, able to go beyond existing interpretations, achieves excellence with ease.

Figure 3 on the previous pages demonstrates the progression within each of the three domains. Ideally the progression should be on the diagonal, but as can be seen in all four of the diagrams, this is not always the case.

Keeping in mind that Figure 3 represents a first application of the methodology that needs to be refined, specifically through interaction with the SADC TCCA, it is nonetheless useful to make some initial observations that stand out from the diagrams:

- In the knowledge domain, progression in the cognitive dimension is well developed; this is not the case for the knowledge dimension where a strong vertical trend is seen that includes mainly procedural knowledge. The absence of metacognitive knowledge in the SADC level descriptors is a weakness.
- The skills domain shows a similar problematic trend, as the level descriptors are unable to progress to the relational and extended abstract levels.
- The competence domain shows good progression, although very limited evidence of descriptors on the expert level could be found.

3.4 Comparison of the level descriptors of the SADC RQF with the level descriptors of the EQF and AQRF

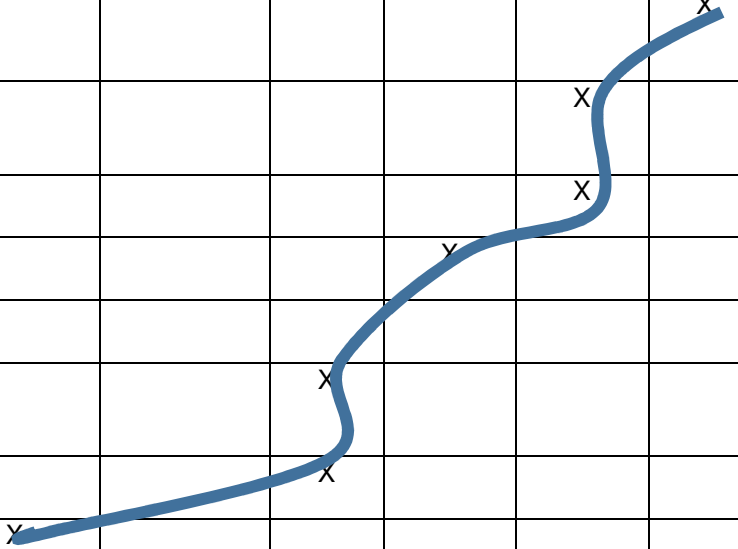
This section of the report provides a comparison of selected regional frameworks with the SADC framework. The three learning domains were used to determine similarities and differences between the EQF and the AQRF and a selection of level descriptors from the SADC RQF. Domain related comparison and the leveling were evaluated against each of the specified levels and all three domains were critically analysed in relation to each other. Although the terminology used differs in the various frameworks, the report accommodated the differences; for example, the AQRF combines both the knowledge and skills domain and refers to the third domain as “application and responsibility”, rather than competency. While the SADC acknowledges three domains, it also does not explicitly refer to a competence domain. Instead, it refers to the “autonomy and responsibility” domain. The SADC domains are explicitly expressed as knowledge, skills, and autonomy and responsibility. Figure 4 on the following pages demonstrates the progression within each of the three domains in the SADC RQF, the AQRF, and the EQF.

Figure 4: Mapping of knowledge, skills and competence domains: SADC RQF, AQRF, and EQF

SADC RQF: Knowledge Domain – Cognitive Dimension		The cognitive process dimension[5]					
		Remember	Understand	Apply	Analyse	Evaluate	Create
10	Makes a substantial and original contribution to knowledge in the field of study through research and scholarship					X	
9	Demonstrates mastery of theoretically sophisticated subject matter, showing critical awareness of current problems and new insights at the forefront of the discipline area					X	
8	Demonstrates critical understanding of the principles, theories, methodologies, current research and literature of the discipline				X		
7	Demonstrates knowledge of a major discipline with possible areas of specialisation, including command of the ideas, principles, concepts, chief research methods and problem-solving techniques of the recognised discipline				X		
6	Demonstrates specialist knowledge in more than one area and ability to collate, analyse and synthesise a wide range of technical information				X		
5	Demonstrates a broad knowledge base with substantial depth in some areas, ability to analyse information and construct a coherent argument			X			
4	Demonstrates a broad knowledge base, incorporating some abstract and technical concepts, and ability to analyse information and make informed judgements		X	X			
3	Demonstrates basic operational and theoretical knowledge and ability to interpret information		X				
2	Demonstrates recall and a narrow range of knowledge and cognitive skills	X					
1	Demonstrates basic general knowledge and numeracy and literacy for everyday purposes						

- [5]Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing, and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organising, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

AQRF: Knowledge & Skills Domain – Cognitive Dimension		The cognitive process dimension[6]					
		Remember	Understand	Apply	Analyse	Evaluate	Create
8	At the most advanced and specialised level and at the frontier of a field Involves independent and original thinking and research, resulting in the creation of new knowledge or practice						X
7	At the forefront of a field and shows mastery of a body of knowledge Involves critical and independent thinking as the basis for research to extend or redefine knowledge or practice					X	
6	Specialised technically and theoretically within a specific field Involves critical and analytical thinking					X	
5	Has detailed technical and theoretical knowledge of a general field Involves analytical thinking				X		
4	Technical and theoretical knowledge of general coverage of a field Involves adapting processes						
3	Includes general principles and some conceptual aspects Involves selecting and applying basic methods, tools, materials and information			X			
2	General and factual Involves use of standard actions			X			
1	Basic general Involves simple, straightforward and routine actions	X					



- [6] Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing, and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organising, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

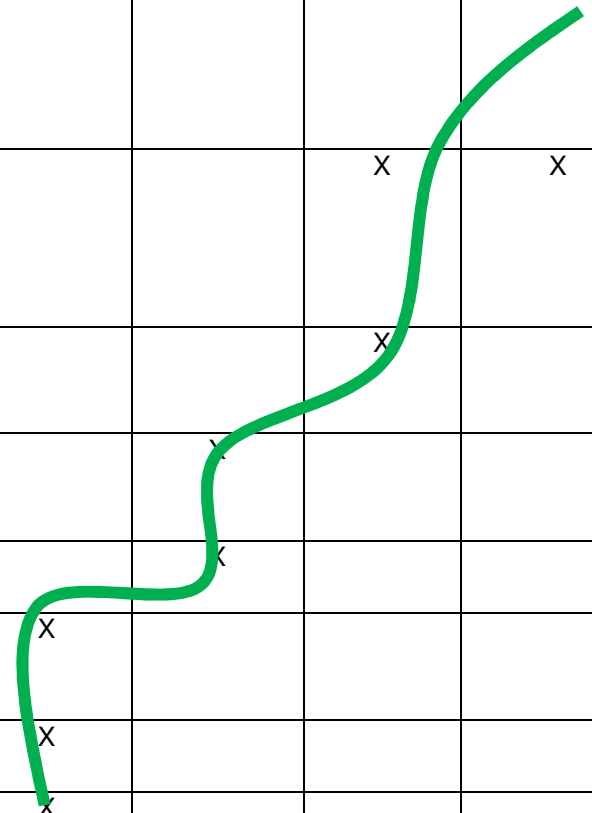
EQF: Knowledge Domain – Cognitive Dimension		The cognitive process dimension[7]					
		Remember	Understand	Apply	Analyse	Evaluate	Create
8	Uses specialised knowledge to critically analyse, evaluate and synthesise new and complex ideas that are at the most advanced frontier of a field Extends or redefines existing knowledge and/or professional practice within a field or at the interface between fields				X	X	
7	Uses specialised theoretical and practical knowledge, some of which is at the forefront of knowledge in the field. This knowledge forms the basis for originality in developing and/or applying ideas Demonstrate critical awareness of knowledge issues in the field and at the interface between different fields				X		
6	Uses detailed theoretical and practical knowledge of a field. Some knowledge is at the forefront of the field and will involve a critical understanding of theories and principles			X			
5	Uses broad theoretical and practical knowledge that is often specialised within a field and show awareness of limits to knowledge base			X			
4	Uses a wide range of field-specific practical and theoretical knowledge			X			
3	Applies knowledge of a field that includes processes, techniques, materials, instruments, equipment, terminology and some theoretical ideas			X			
2	Recalls and comprehend basic knowledge of a field, the range of knowledge involved is limited to facts and main ideas	X					
1	Recalls basic general knowledge	X					

- [7]Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing, and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organising, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

SADC RQF: Knowledge Domain – Knowledge Dimension		The knowledge dimension[8]			
		Factual knowledge	Conceptual knowledge	Procedural knowledge	Metacognitive knowledge
10	Makes a substantial and original contribution to knowledge in the field of study through research and scholarship			X	
9	Demonstrates mastery of theoretically sophisticated subject matter, showing critical awareness of current problems and new insights at the forefront of the discipline area			X	
8	Demonstrates critical understanding of the principles, theories, methodologies, current research and literature of the discipline			X	
7	Demonstrates knowledge of a major discipline with possible areas of specialisation, including command of the ideas, principles, concepts, chief research methods and problem-solving techniques of the recognised discipline			X	
6	Demonstrates specialist knowledge in more than one area and ability to collate, analyse and synthesise a wide range of technical information			X	
5	Demonstrates a broad knowledge base with substantial depth in some areas, ability to analyse information and construct a coherent argument			X	
4	Demonstrates a broad knowledge base, incorporating some abstract and technical concepts, and ability to analyse information and make informed judgements			X	
3	Demonstrates basic operational and theoretical knowledge and ability to interpret information	X			
2	Demonstrates recall and a narrow range of knowledge and cognitive skills	X			
1	Demonstrates basic general knowledge and numeracy and literacy for everyday purposes				

- [8]Factual knowledge: The basic elements students must know to be acquainted with a discipline or solve problems in it.
- Conceptual knowledge: The interrelationships among the basic elements within a larger structure that enable them to function together.
- Procedural knowledge: How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques and methods.
- Metacognitive knowledge: Knowledge of cognition in general as well as awareness of one's own cognition.

EQF: Knowledge Domain – Knowledge Dimension		The knowledge dimension[9]			
		Factual knowledge	Conceptual knowledge	Procedural knowledge	Metacognitive knowledge
8	Uses specialised knowledge to critically analyse, evaluate and synthesise new and complex ideas that are at the most advanced frontier of a field Extends or redefines existing knowledge and/or professional practice within a field or at the interface between fields			X	X
7	Uses specialised theoretical and practical knowledge some of which is at the forefront of knowledge in the field. This knowledge forms the basis for originality in developing and/or applying ideas Demonstrates critical awareness of knowledge issues in the field and at the interface between different fields			X	X
6	Uses detailed theoretical and practical knowledge of a field. Some knowledge is at the forefront of the field and will involve a critical understanding of theories and principles			X	
5	Uses broad theoretical and practical knowledge that is often specialised within a field and show awareness of limits to knowledge base		X		
4	Uses a wide range of field-specific practical and theoretical knowledge		X		
3	Applies knowledge of a field that includes processes, techniques, materials, instruments, equipment, terminology and some theoretical ideas	X			
2	Recalls and comprehends basic knowledge of a field, the range of knowledge involved is limited to facts and main ideas	X			
1	Recalls basic general knowledge	X			



- [9]Factual knowledge: The basic elements students must know to be acquainted with a discipline or solve problems in it.
- Conceptual knowledge: The interrelationships among the basic elements within a larger structure that enable them to function together.
- Procedural knowledge: How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.
- Metacognitive knowledge: Knowledge of cognition in general as well as awareness of one's own cognition.

SADC RQF: Knowledge Domain – Cognitive Dimension		The cognitive process dimension[10]					
		Remember	Understand	Apply	Analyse	Evaluate	Create
10	Makes a substantial and original contribution to knowledge in the field of study through research and scholarship					X	
9	Demonstrates mastery of theoretically sophisticated subject matter, showing critical awareness of current problems and new insights at the forefront of the discipline area					X	
8	Demonstrates critical understanding of the principles, theories, methodologies, current research and literature of the discipline				X		
7	Demonstrates knowledge of a major discipline with possible areas of specialisation, including command of the ideas, principles, concepts, chief research methods and problem-solving techniques of the recognised discipline				X		
6	Demonstrates specialist knowledge in more than one area and ability to collate, analyse and synthesise a wide range of technical information				X		
5	Demonstrates a broad knowledge base with substantial depth in some areas, ability to analyse information and construct a coherent argument			X			
4	Demonstrates a broad knowledge base, incorporating some abstract and technical concepts, and ability to analyse information and make informed judgements		X	X			
3	Demonstrates basic operational and theoretical knowledge and ability to interpret information		X				
2	Demonstrates recall and a narrow range of knowledge and cognitive skills	X					
1	Demonstrates basic general knowledge and numeracy and literacy for everyday purposes						

- [10]Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing, and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organising, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

AQRF: Knowledge & Skills Domain – Knowledge Dimension		The knowledge dimension[11]			
		Factual knowledge	Conceptual knowledge	Procedural knowledge	Metacognitive knowledge
8	At the most advanced and specialised level and at the frontier of a field Involves independent and original thinking and research, resulting in the creation of new knowledge or practice				X
7	At the forefront of a field and shows mastery of a body of knowledge Involves critical and independent thinking as the basis for research to extend or redefine knowledge or practice			X	
6	Specialised technically and theoretically within a specific field Involves critical and analytical thinking			X	
5	Has detailed technical and theoretical knowledge of a general field Involves analytical thinking			X	
4	Technical and theoretical knowledge with general coverage of a field Involves adapting processes			X	
3	Includes general principles and some conceptual aspects Involves selecting and applying basic methods, tools, materials and information		X		
2	General and factual Involves use of standard actions	X			
1	Basic general Involves simple, straightforward and routine actions	X			

- [11] Factual knowledge: The basic elements students must know to be acquainted with a discipline or solve problems in it.
- Conceptual knowledge: The interrelationships among the basic elements within a larger structure that enable them to function together.
- Procedural knowledge: How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.
- Metacognitive knowledge: Knowledge of cognition in general as well as awareness of one's own cognition.

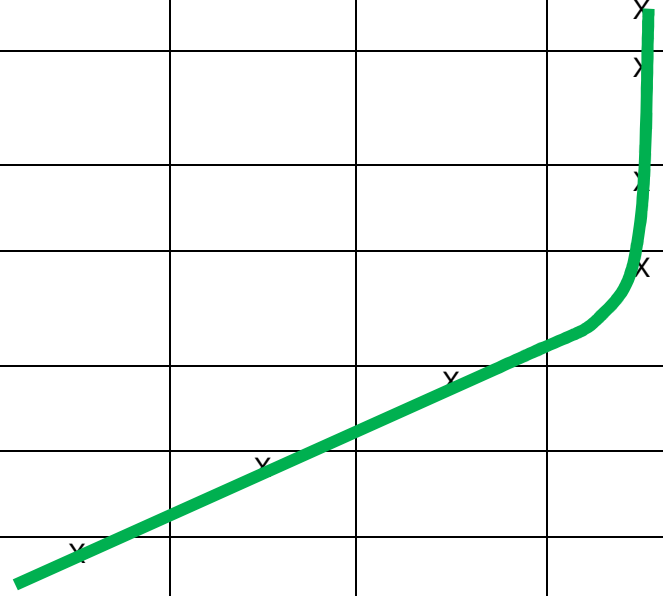
EQF: Knowledge Domain – Knowledge Dimension		The knowledge dimension[12]			
		Factual knowledge	Conceptual knowledge	Procedural knowledge	Metacognitive knowledge
8	Uses specialised knowledge to critically analyse, evaluate and synthesise new and complex ideas that are at the most advanced frontier of a field Extends or redefines existing knowledge and/or professional practice within a field or at the interface between fields			X	X
7	Uses specialised theoretical and practical knowledge some of which is at the forefront of knowledge in the field. This knowledge forms the basis for originality in developing and/or applying ideas Demonstrates critical awareness of knowledge issues in the field and at the interface between different fields			X	X
6	Uses detailed theoretical and practical knowledge of a field. Some knowledge is at the forefront of the field and will involve a critical Understands theories and principles			X	
5	Uses broad theoretical and practical knowledge that is often specialised within a field and show awareness of limits to knowledge base		X		
4	Uses a wide range of field-specific practical and theoretical knowledge		X		
3	Applies knowledge of a field that includes processes, techniques, materials, instruments, equipment, terminology and some theoretical ideas	X			
2	Recalls and comprehends basic knowledge of a field, the range of knowledge involved is limited to facts and main ideas	X			
1	Recalls basic general knowledge	X			

- [12]Factual knowledge: The basic elements students must know to be acquainted with a discipline or solve problems in it.
- Conceptual knowledge: The interrelationships among the basic elements within a larger structure that enable them to function together.
- Procedural knowledge: How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.
- Metacognitive knowledge: Knowledge of cognition in general as well as awareness of one's own cognition.

SADC RQF: Skills Domain		SOLO levels[13]				
		Prestructural	Unistructural	Multistructual	Relational	Extended abstract
10	Conducts original research which is evaluated by independent experts against international standards. Demonstrates problem solving ability and critical evaluation of research findings for academic discussion			X		
9	Conducts original research deploying appropriate research methods and processes primary and secondary source information using rigorous intellectual analysis and independent thinking and applies knowledge in new situations; and demonstrates independent thinking, problem solving, critical evaluation of research findings and ability to make judgements based on knowledge and evidence.			X		
8	Demonstrates capacity to use a coherent and critical understanding of the principles, theories and methodologies of a particular discipline. Selects and applies appropriate research methods and techniques, and critical analysis and independent evaluation of information			X		
7	Demonstrates intellectual independence, critical thinking and analytical rigour, and advanced communication and collaborative skills in complex and variable contexts			X		
6	Demonstrates ability to apply specialist knowledge and skills in highly variable contexts and formulate responses to concrete and abstract problems			X		
5	Applies a wide range of technical and/or scholastic skills in variable contexts using standard and non standard procedures, often in combination			X		
4	Applies a moderate range of technical and/or scholastic skills which are transferable in familiar and unfamiliar contexts, using routine and non routine procedures			X		
3	Demonstrates a range of well developed skills and ability to apply known solutions to familiar problems			X		
2	Can carry out processes that are limited in range, repetitive and familiar		X			
1	Can follow simple instructions and perform actions required to carry out simple concrete tasks requiring no special skills	X				

- [13]Pre-structural (no relevance): Fail, incompetent, misses the point.
- Unistructural (one relevant aspect): Identify, name, follow simple procedure.
- Multistructual (several relevant independent aspects): Combine, describe, enumerate, perform serial skills, list.
- Relational (integration into a structure): Analyse, apply, argue, compare/contrast, criticise, explain causes, relate, justify.
- Extended abstract (generalisation to a new domain): Create, formulate, generate, hypothesise, reflect, theorise.

EQF: Skills Domain		SOLO levels[14]				
		Prestructural	Unistructural	Multistructual	Relational	Extended abstract
8	Research, conceive, design, implement and adapt projects that lead to new knowledge and new procedural solutions					X
7	Create a research based diagnosis to problems by integrating knowledge from new or inter disciplinary fields and make judgements with incomplete or limited information Develop new skills in response to emerging knowledge and techniques					X
6	Demonstrate mastery of methods and tools in a complex and specialised field and demonstrate Innovation in terms of methods used Devise and sustain arguments to solve problems					X
5	Develop strategic and creative responses in researching solutions to well defined concrete and abstract problems Demonstrate transfer of theoretical and practical knowledge in creating solutions to problems					X
4	Develop strategic approaches to tasks that arise in work or study by applying specialist knowledge and using expert sources of information Evaluate outcomes in terms of strategic approach used				X	
3	Use a range of field-specific skills to carry out tasks and show personal interpretation through selection and adjustment of methods, tools and materials Evaluate different approaches to tasks			X		
2	Use skills and key competences to carry out tasks where action is governed by rules defining routines and strategies Select and apply basic methods, tools and materials		X			
1	Use basic skills to carry out simple tasks					



- [14]Pre-structural (no relevance): Fail, incompetent, misses the point.
- Unistructural (one relevant aspect): Identify, name, follow simple procedure.
- Multistructual (several relevant independent aspects): Combine, describe, enumerate, perform serial skills, list.
- Relational (integration into a structure): Analyse, apply, argue, compare/contrast, criticise, explain causes, relate, justify.
- Extended abstract (generalisation to a new domain): Create, formulate, generate, hypothesise, reflect, theorise.

AQRF: Application and Responsibility Domain		SOLO levels[15]				
		Prestructural	Unistructural	Multistructual	Relational	Extended abstract
8	Are highly specialised and complex involving the development and testing of new theories and new solutions to resolve complex, abstract issues Require authoritative and expert judgement with a sustained commitment to management of research and significant responsibility for extending professional knowledge and practice and creation of new ideas and or processes. High levels of management and leadership					X
7	Are complex and unpredictable and involve the development and testing of innovative solutions to resolve issues Require expert judgement and significant responsibility for professional knowledge, practice and management			X		
6	Are complex and changing Require initiative and adaptability as well as strategies to improve activities and to solve complex and abstract issues			X		
5	Are often subject to change Involve independent evaluation of activities to resolve complex and sometimes abstract issues		X			
4	Are generally predictable but subject to change Involve broad guidance requiring some self direction, and coordination to resolve unfamiliar issues	X				
3	Are stable with some aspects subject to change Involve general guidance and require judgement and planning to resolve some issues independently	X				
2	Involve structured processes Involve supervision and some discretion for judgement on resolving familiar issues	X				
1	Involve structured routine processes Involve close levels of support and supervision	X				

- [15]Pre-structural (no relevance): Fail, incompetent, misses the point.
- Unistructural (one relevant aspect): Identify, name, follow simple procedure.
- Multistructual (several relevant independent aspects): Combine, describe, enumerate, perform serial skills, list.
- Relational (integration into a structure): Analyse, apply, argue, compare/contrast, criticise, explain causes, relate, justify.
- Extended abstract (generalisation to a new domain): Create, formulate, generate, hypothesise, reflect, theorise.

SADC RQF: Autonomy and Responsibility Domain		Dreyfus levels[16]				
		Novice	Advanced Beginner	Competent	Proficient	Expert
10	Demonstrates full responsibility and accountability for all aspects of advanced research work				X	
9	Shows independence, initiative and originality and the ability to manage own and group outcomes in complex and unpredictable situations				X	
8	Operates within the context of a strategic plan with complete accountability for management of resources and supervision of others				X	
7	Designs and manages processes and works with broad accountability for determining, achieving and evaluating personal and group outcomes			X		
6	Manages processes and works with complete accountability for personal and group outcomes			X		
5	Works independently under broad guidance and can take some responsibility for supervising the work of others and group outcomes		X			
4	Shows ability for self-direction, requiring little supervision, and complete responsibility for own outcomes and some responsibility for group outcomes		X			
3	Works under general supervision with some responsibility for quality and quantity of output	X				
2	Applied in directed activity under close supervision	X				
1	Works under close supervision in familiar situations and structured contexts	X				

- [16]Novice: Has an incomplete understanding, approaches tasks mechanistically and needs supervision to complete them.
- Advanced Beginner: Has a working understanding, tends to see actions as a series of steps, can complete simpler tasks without supervision.
- Competent: Has a good working and background understanding, sees actions at least partly in context, able to complete work independently to a standard that is acceptable though it may lack refinement.
- Proficient: Has a deep understanding, sees actions holistically, can achieve a high standard routinely.
- Expert: Has an authoritative or deep holistic understanding, deals with routine matters intuitively, able to go beyond existing interpretations, achieves excellence with ease.

EQF: Autonomy and Responsibility Domain		Dreyfus levels[17]				
		Novice	Advanced Beginner	Competent	Proficient	Expert
8	Demonstrates substantial leadership, innovation and autonomy in work and study contexts that are novel and require the solving of problems that involve many interacting factors					X
7	Demonstrates leadership and innovation in work and study contexts that are unfamiliar, complex and unpredictable and that require solving problems involving many interacting factors Reviews strategic performance of teams					X
6	Demonstrates administrative design, resource and team management responsibilities in work and study contexts that are unpredictable and require that complex problems are solved where there are many interacting factors Shows creativity in developing projects and shows initiative in management processes that includes the training of others to develop team performance				X	
5	Manages projects independently that require problem solving where there are many factors, some of which interact and lead to unpredictable change Shows creativity in developing projects Manages people and reviews performance of self and others. Trains others and develops team performance					
4	Manages role under guidance in work or study contexts that are usually predictable and where there are many factors involved that cause change and where some factors are interrelated Makes suggestions for improvement to outcomes Supervises routine work of others and takes some responsibility for training of others			X		
3	Takes responsibility for completion of tasks and demonstrates some independence in role in work or study where contexts are generally stable but where some factors change		X			
2	Takes limited responsibility for improvement in performance in work or study in simple and stable contexts and within familiar, homogeneous groups	X				
1	Completes work or study tasks under direct supervision and demonstrates personal effectiveness in simple and stable contexts	X				

- [17]Novice: Has an incomplete understanding, approaches tasks mechanistically and needs supervision to complete them.
- Advanced Beginner: Has a working understanding, tends to see actions as a series of steps, can complete simpler tasks without supervision.
- Competent: Has a good working and background understanding, sees actions at least partly in context, able to complete work independently to a standard that is acceptable though it may lack refinement.
- Proficient: Has a deep understanding, sees actions holistically, can achieve a high standard routinely.
- Expert: Has an authoritative or deep holistic understanding, deals with routine matters intuitively, able to go beyond existing interpretations, achieves excellence with ease.

AQRF: Application and Responsibility Domain		Dreyfus levels[18]				
		Novice	Advanced Beginner	Competent	Proficient	Expert
8	Are highly specialised and complex involving the development and testing of new theories and new solutions to resolve complex, abstract issues Require authoritative and expert judgement with a sustained commitment to management of research and significant responsibility for extending professional knowledge and practice and creation of new ideas and or processes. High levels of management and leadership					X
7	Are complex and unpredictable and involve the development and testing of innovative solutions to resolve issues Require expert judgement and significant responsibility for professional knowledge, practice and management			X	X	
6	Are complex and changing Require initiative and adaptability as well as strategies to improve activities and to solve complex and abstract issues		X			
5	Are often subject to change Involve independent evaluation of activities to resolve complex and sometimes abstract issues	X				
4	Are generally predictable but subject to change Involve broad guidance requiring some self direction, and coordination to resolve unfamiliar issues	X				
3	Are stable with some aspects subject to change Involve general guidance and require judgement and planning to resolve some issues independently.	X				
2	Involve structured processes Involve supervision and some discretion for judgement on resolving familiar issues	X				
1	Involve structured routine processes Involve close levels of support and supervision	X				

- [18]Novice: Has an incomplete understanding, approaches tasks mechanistically and needs supervision to complete them.
- Advanced Beginner: Has a working understanding, tends to see actions as a series of steps, can complete simpler tasks without supervision.
- Competent: Has a good working and background understanding, sees actions at least partly in context, able to complete work independently to a standard that is acceptable though it may lack refinement.
- Proficient: Has a deep understanding, sees actions holistically, can achieve a high standard routinely.
- Expert: Has an authoritative or deep holistic understanding, deals with routine matters intuitively, able to go beyond existing interpretations, achieves excellence with ease.

As previously mentioned, Figure 4 represents a first application of the methodology that needs to be refined, specifically through interaction with the SADC TCCA; it is nonetheless useful to make some initial observations that stand out from the diagrams:

- In the knowledge domain, progression in the cognitive dimension is very similar across the SADC RQF, EQF, and AQRF. This is clearly the best understood and applied domain. In the case of the knowledge dimension, both the EQF and AQRF seem to be reasonably well conceptualised, whereas the SADC RQF shows a strong vertical trend focusing on procedural knowledge.
- The skills domain shows a similar problematic trend for the SADC RQF, as the level descriptors are unable to progress to the relational and extended abstract levels. The EQF seems to be better conceptualised, although evidence of the lowest level (prestructural skills) is limited. The AQRF level descriptors are probably the best developed in terms of the skills domain.
- In the competence domain, the SADC RQF level descriptors show very limited evidence of descriptors on the expert level, while the descriptors of both the EQF and AQRF show better progression. The AQRF descriptors do, however, tend to remain focused on the novice level for too long.

3.5 Compatibility of the level descriptors of the SADC RQF with the level descriptors of NQFs in SADC member states

In order to determine how level descriptors are used by member states in the SADC region, a mapping of level descriptors as used in the various countries was conducted. The table below provides an overview of the elements of level descriptors amongst the SADC member states. It was observed from this information obtained from documents available in the public domain that member states use different terminologies for their level descriptors. Four member states do not have either full or sub-frameworks in place; as a result, the extent of their use of level descriptors could not be determined at this stage. It was also noted that there is a lack of explicit description of progression in the frameworks. The table that follows indicates that there is a very low level of explicit articulation in the existing models.

Table 5: Mapping of level descriptors in the SADC Region

Country	Domains				
	Knowledge	Skills	Competences	Other	Levels
SADC	Yes	Yes	Not explicit	Autonomy and Responsibility	1 to 10
Angola	Not explicit	Not explicit	Not explicit		1 to 10
Botswana	Yes	Yes	Yes		1 to 10
DRC	No Framework				
Lesotho	Yes	Yes	Not explicit	Knowledge and skills application	1 to 10
Madagascar	No framework				
Malawi (TVET)	Not explicit	Not explicit	Not explicit		1 to 8
Mauritius	Not explicit	Yes	Not explicit		1 to 10
Mozambique (TVET)	Yes	Yes	Not explicit	Degree of independence	1 to 5
Namibia	Yes	Not explicit	Not explicit		1 to 10
Seychelles	Not explicit	Not explicit	Not explicit		1 to 10 (Not explicit)
South Africa	Yes (Not explicit)	Not explicit	Yes		1 to 10
Swaziland	Waiting for NQF document to be approved by cabinet				
Tanzania	Not explicit	Not explicit	Yes		1 to 10
Zambia	Not explicit	Not explicit	Yes		1 to 10
Zimbabwe	No framework yet				

As shown in the table above, Angola has developed level descriptors which consist of levels 1 to 10 for its education system. The domains (knowledge, skills, and competences) are not explicitly expressed.

- Botswana is the only member state in the SADC region which explicitly expresses the three main elements of level descriptors in its framework which has levels 1 to 10.
- Lesotho has a 10-level framework. Two domains (knowledge and skills) are explicitly expressed as noted in the table above which lists a description of knowledge and skills application.
- Malawi does not have a full NQF. However, it has a sectoral framework which has levels 1 to 8. As a result, the levels descriptors reported here are those of TVET, but the domains are not explicitly expressed.
- The Mauritian NQF has levels 1 to 10. It appears only one domain (skills) is explicitly expressed, while the other two domains (knowledge and competency) are not explicit.
- Mozambique does not have a full NQF. However, it has a sectoral framework which has levels 1 to 5. As a result, the levels descriptors reported here are

those of the NVQF. Three domains are explicitly expressed: knowledge, skills, and degree of independency.

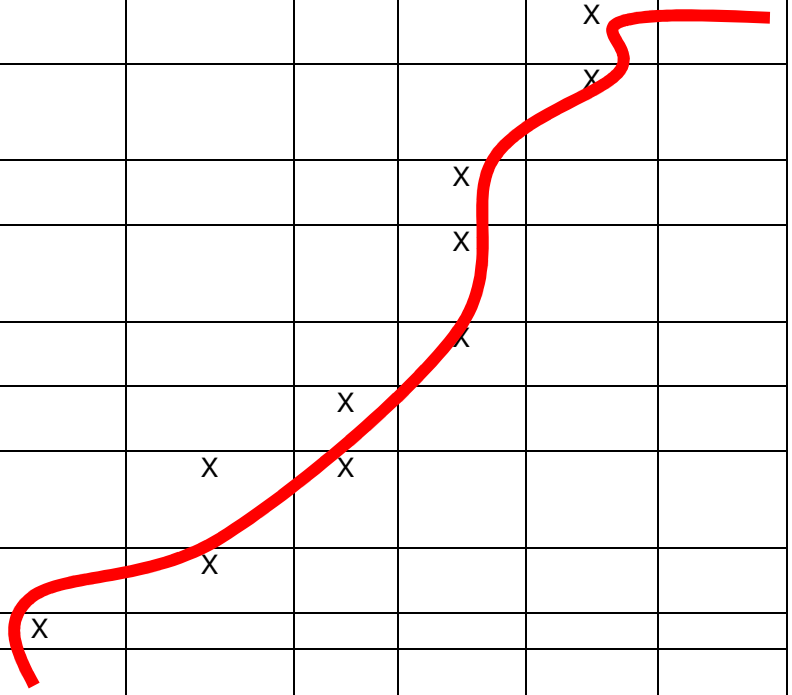
- Namibia has one of the most advanced NQFs in the SADC region, although only the skills domain is explicitly expressed.
- The Seychelles framework does not explicitly express domains in the manner discussed above, but has levels 1 to 10.
- The South African NQF (SANQF) has only one domain expressed explicitly across a number of sub-domains that include: scope of knowledge, knowledge literacy, method and procedure, problem solving, ethics and professional practice, accessing, processing and managing information, producing and communicating information, context and systems, and management of learning and accountability. The SANQF has levels 1 to 10.
- The United Republic of Tanzania's framework has only one domain (competence) with levels 1 to 10.
- The qualifications framework of Zambia appears to have only one domain (competence) explicitly expressed and has levels 1 to 10.
- The Democratic Republic of Congo, Madagascar, Swaziland and Zimbabwe do not have NQF systems in place yet. As such, there was no information gathered with regards to the level descriptors in those member states. Even the progression of the qualifications could not be determined at this stage.

The following part the report provides a comparison of selected NQFs, namely the SANQF[19], the NQF of Botswana NQF and the NQF of Lesotho with the SADC RQF. These three countries were chosen on the basis that their NQFs span the three generations of NQF development as categorised by Tuck (Tuck, 2007): 1st (late 1980s to mid-1990s; 2nd (late 1990s to early 2000s); and 3rd (currently under construction). The three domains were used to determine the similarities and differences in levels 10, 9, 2, and 1 respectively. Domain related comparisons and the leveling were evaluated against each of the above-mentioned levels.

[19] To allow for comparison, the level descriptors of the South African NQF have not all been listed in the diagrams below as they contain more text than could be accommodated.

Figure 5: Mapping of knowledge, skills, and competence domains: SADC RQF, Botswana NQF, Lesotho NQF and SANQF

SADC RQF: Knowledge Domain – Cognitive Dimension		The cognitive process dimension[20]					
		Remember	Understand	Apply	Analyse	Evaluate	Create
10	Makes a substantial and original contribution to knowledge in the field of study through research and scholarship					X	
9	Demonstrates mastery of theoretically sophisticated subject matter, showing critical awareness of current problems and new insights at the forefront of the discipline area					X	
8	Demonstrates critical understanding of the principles, theories, methodologies, current research and literature of the discipline				X		
7	Demonstrates knowledge of a major discipline with possible areas of specialisation, including command of the ideas, principles, concepts, chief research methods and problem-solving techniques of the recognised discipline				X		
6	Demonstrates specialist knowledge in more than one area and ability to collate, analyse and synthesise a wide range of technical information				X		
5	Demonstrates a broad knowledge base with substantial depth in some areas, ability to analyse information and construct a coherent argument			X			
4	Demonstrates a broad knowledge base, incorporating some abstract and technical concepts, and ability to analyse information and make informed judgements		X	X			
3	Demonstrates basic operational and theoretical knowledge and ability to interpret information		X				
2	Demonstrates recall and a narrow range of knowledge and cognitive skills	X					
1	Demonstrates basic general knowledge and numeracy and literacy for everyday purposes						



- [20]Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing, and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organising, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

Botswana NQF: Knowledge Domain – Cognitive Dimension		The cognitive process dimension[21]					
		Remember	Understand	Apply	Analyse	Evaluate	Create
10	Most advanced knowledge at the frontier of a field of work or study, Advancement of frontiers of existing knowledge or professional practice in a discipline, professional and/or interdisciplinary discourse through research and high level reflective practice.					X	
9	Advanced knowledge at the frontier of a specialised discipline or cross-disciplinary fields. Capable of contributing towards development of professional practice through research or reviewing existing knowledge.					X	
8	Highly specialised knowledge in a discipline or profession involving critical analysis and independent evaluation of qualitative and quantitative data. Grounded understanding of contemporary theories, principles and concepts that can form the basis for professional judgment and/or research.					X	
7	Specialised knowledge in a field of work or study including understanding of methods of enquiry and established codes of practice and capacity for critical analysis and interpretation of information.				X		
6	Advanced knowledge of a field of work or study involving understanding of theories and principles.			X			
5	Broad technical knowledge and understanding of underlying concepts and principles as well as standard codes of practice within a field of work or study.			X			
4	Broad knowledge of practical concepts and processes and capacity to interpret information to make informed judgments of concrete, abstract and often unfamiliar problems.					X	
3	Basic operational and theoretical knowledge of a field of work or study and ability to interpret basic information.		X				
2	Basic factual knowledge and capacity to interpret basic information.	X					
1	Elementary knowledge associated with literacy, numeracy and cognitive faculties required to carry out simple tasks	X					

- [21]Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing, and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organising, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

Lesotho NQF: Knowledge Domain – Cognitive Dimension		The cognitive process dimension[22]					
		Remember	Understand	Apply	Analyse	Evaluate	Create
10	Knowledge contributed through research that is judged by independent experts applying international standards					X	X
9	Knowledge and understanding which is in the forefront of a field of learning				X		
8	Broad knowledge that encourages innovation and provision of systematic, coherent account of the key principles of the subject area and abstract thinking				X		
7	Highly specialised knowledge of a major discipline; knowledge of methods of inquiry			X			
6	Specialised, in-depth knowledge						X
5	Broad knowledge with substantive depth applicable in a wide range of familiar and unfamiliar contexts				X		
4	Moderate knowledge base, employable in a range of familiar and unfamiliar contexts			X			
3	Low volume of theoretical knowledge in specific fields		X				
2	Basic operational knowledge requiring use of readily available information		X				
1	Elementary knowledge demonstrable by mainly recall I recognition	X					

- [22]Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing, and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organising, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

SA NQF: Knowledge Domain – Cognitive Dimension

		The cognitive process dimension[23]					
		Remember	Understand	Apply	Analyse	Evaluate	Create
10	a. Scope of knowledge, in respect of which a learner is able to demonstrate expertise and critical knowledge in an area at the forefront of a field, discipline or practice; and the ability to conceptualise new research initiatives and create new knowledge or practice. b. Knowledge literacy, in respect of which a learner is able to demonstrate the ability to contribute to scholarly debates around theories of knowledge and processes of knowledge production in an area of study or practice.						X
9	a. Scope of knowledge, in respect of which a learner is able to demonstrate specialist knowledge to enable engagement with and critique of current research or practices, as well as advanced scholarship or research in a particular field, discipline or practice. b. Knowledge literacy, in respect of which a learner is able to demonstrate the ability to evaluate current processes of knowledge production, and to choose an appropriate process of enquiry for the area of study or practice.					X	
8	a. Scope of knowledge, in respect of which a learner is able to demonstrate knowledge of and engagement in an area at the forefront of a field, discipline or practice; an understanding of the theories, research methodologies, methods and techniques relevant to the field, discipline or practice; and an understanding of how to apply such knowledge in a particular context. b. Knowledge literacy, in respect of which a learner is able to demonstrate the ability to interrogate multiple sources of knowledge in an area of specialisation and to evaluate knowledge and processes of knowledge production.				X	X	
7	a. Scope of knowledge, in respect of which a learner is able to demonstrate integrated knowledge of the central areas of one or more fields, disciplines or practices, including an understanding of and the ability to apply and evaluate the key terms, concepts, facts, principles, rules and theories of that field, discipline or practice; and detailed knowledge of an area or areas of specialisation and how that knowledge relates to other fields, disciplines or practices. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding of knowledge as contested and the ability to evaluate types of knowledge and explanations typical within the area of study or practice.			X	X	X	
6	a. Scope of knowledge, in respect of which a learner is able to demonstrate: detailed knowledge of the main areas of one or more fields, disciplines or practices, including an understanding of and the ability to apply the key terms, concepts, facts, principles, rules and theories of that field, discipline or practice to unfamiliar but relevant contexts; and knowledge of an area or areas of specialisation and how that knowledge relates to other fields, disciplines or practices. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding of different forms of knowledge, schools of thought and forms of explanation within an area of study, operation or practice, and awareness of knowledge production processes.			X	X		
5	a. Scope of knowledge, in respect of which a learner is able to demonstrate an informed understanding of the core areas of one or more fields, disciplines or practices, and an informed understanding of the key terms, concepts, facts, general principles, rules and theories of that field, discipline or practice. b. Knowledge literacy, in respect of which a learner is able to demonstrate the awareness of how knowledge or a knowledge system develops and evolves within the area of study or operation.		X				
4	a. Scope of knowledge, in respect of which a learner is able to demonstrate a fundamental knowledge base of the most important areas of one or more fields or disciplines, in addition to the fundamental areas of study, and a fundamental understanding of the key terms, rules, concepts, established principles and theories in one or more fields or disciplines. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding that knowledge in one field can be applied to related fields.		X				
3	a. Scope of knowledge, in respect of which a learner is able to demonstrate a basic understanding of the key concepts and knowledge of one or more fields or disciplines, in addition to the fundamental areas of study. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding that knowledge in a field can only be applied if the knowledge, as well as its relationship to other relevant information in related fields, is understood.		X				
2	a. Scope of knowledge, in respect of which a learner is able to demonstrate a basic operational knowledge of one or more areas or fields of study, in addition to the fundamental areas of study. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding that one's own knowledge of a particular field or system develops through active participation in relevant activities.		X				
1	a. Scope of knowledge, in respect of which a learner is able to demonstrate a general knowledge of one or more areas or fields of study, in addition to the fundamental areas of study. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding that knowledge in a particular field develops over a period of time through the efforts of a number of people, and often through the synthesis of information from a variety of related sources and fields.		X				

- [23]Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing, and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organising, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

SADC RQF: Knowledge Domain – Knowledge Dimension		The knowledge dimension[24]			
		Factual knowledge	Conceptual knowledge	Procedural knowledge	Metacognitive knowledge
10	Makes a substantial and original contribution to knowledge in the field of study through research and scholarship			X	
9	Demonstrates mastery of theoretically sophisticated subject matter, showing critical awareness of current problems and new insights at the forefront of the discipline area			X	
8	Demonstrates critical understanding of the principles, theories, methodologies, current research and literature of the discipline			X	
7	Demonstrates knowledge of a major discipline with possible areas of specialisation, including command of the ideas, principles, concepts, chief research methods and problem-solving techniques of the recognised discipline			X	
6	Demonstrates specialist knowledge in more than one area and ability to collate, analyse and synthesise a wide range of technical information			X	
5	Demonstrate a broad knowledge base with substantial depth in some areas, ability to analyse information and construct a coherent argument			X	
4	Demonstrates a broad knowledge base, incorporating some abstract and technical concepts, and ability to analyse information and make informed judgements			X	
3	Demonstrates basic operational and theoretical knowledge and ability to interpret information	X			
2	Demonstrates recall and a narrow range of knowledge and cognitive skills	X			
1	Demonstrates basic general knowledge and numeracy and literacy for everyday purposes				

- [24]Factual knowledge: The basic elements students must know to be acquainted with a discipline or solve problems in it.
- Conceptual knowledge: The interrelationships among the basic elements within a larger structure that enable them to function together.
- Procedural knowledge: How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.
- Metacognitive knowledge: Knowledge of cognition in general as well as awareness of one's own cognition.

Botswana: Knowledge Domain – Knowledge Dimension		The knowledge dimension[25]			
		Factual knowledge	Conceptual knowledge	Procedural knowledge	Metacognitive knowledge
10	Most advanced knowledge at the frontier of a field of work or study, Advancement of frontiers of existing knowledge or professional practice in a discipline, professional and/or interdisciplinary discourse through research and high level reflective practice.			X	
9	Advanced knowledge at the frontier of a specialised discipline or cross-disciplinary fields. Capable of contributing towards development of professional practice through research or reviewing existing knowledge.			X	
8	Highly specialised knowledge in a discipline or profession involving critical analysis and independent evaluation of qualitative and quantitative data. Grounded understanding of contemporary theories, principles and concepts that can form the basis for professional judgment and/or research.			X	
7	Specialised knowledge in a field of work or study including understanding of methods of enquiry and established codes of practice and capacity for critical analysis and interpretation of information.			X	
6	Advanced knowledge of a field of work or study involving understanding of theories and principles.			X	
5	Broad technical knowledge and understanding of underlying concepts and principles as well as standard codes of practice within a field of work or study.			X	
4	Broad knowledge of practical concepts and processes and capacity to interpret information to make informed judgments of concrete, abstract and often unfamiliar problems.			X	
3	Basic operational and theoretical knowledge of a field of work or study and ability to interpret basic information.	X			
2	Basic factual knowledge and capacity to interpret basic information.	X			
1	Elementary knowledge associated with literacy, numeracy and cognitive faculties required to carry out simple tasks	X			

- [25]Factual knowledge: The basic elements students must know to be acquainted with a discipline or solve problems in it.
- Conceptual knowledge: The interrelationships among the basic elements within a larger structure that enable them to function together.
- Procedural knowledge: How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.
- Metacognitive knowledge: Knowledge of cognition in general as well as awareness of one's own cognition.

Lesotho NQF: Knowledge Domain – Knowledge Dimension		The knowledge dimension[26]			
		Factual knowledge	Conceptual knowledge	Procedural knowledge	Metacognitive knowledge
10	Knowledge contributed through research that is judged by independent experts applying international standards				X
9	Knowledge and understanding which is in the forefront of a field of learning				
8	Broad knowledge that encourages innovation and provision of systematic, coherent account of the key principles of the subject area and abstract thinking				X
7	Highly specialised knowledge of a major discipline; knowledge of methods of inquiry			X	
6	Specialised, in-depth knowledge		X	X	
5	Broad knowledge with substantive depth applicable in a wide range of familiar and unfamiliar contexts		X		
4	Moderate knowledge base, employable in a range of familiar and unfamiliar contexts		X		
3	Low volume of theoretical knowledge in specific fields	X			
2	Basic operational knowledge requiring use of readily available information	X			
1	Elementary knowledge demonstrable by mainly recall I recognition	X			

- [26]Factual knowledge: The basic elements students must know to be acquainted with a discipline or solve problems in it.
- Conceptual knowledge: The interrelationships among the basic elements within a larger structure that enable them to function together.
- Procedural knowledge: How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.
- Metacognitive knowledge: Knowledge of cognition in general as well as awareness of one's own cognition.

SA NQF: Knowledge Domain – Knowledge Dimension		The knowledge dimension[27]			
		Factual knowledge	Conceptual knowledge	Procedural knowledge	Metacognitive knowledge
10	a. Scope of knowledge, in respect of which a learner is able to demonstrate expertise and critical knowledge in an area at the forefront of a field, discipline or practice; and the ability to conceptualise new research initiatives and create new knowledge or practice. b. Knowledge literacy, in respect of which a learner is able to demonstrate the ability to contribute to scholarly debates around theories of knowledge and processes of knowledge production in an area of study or practice.				X
9	a. Scope of knowledge, in respect of which a learner is able to demonstrate specialist knowledge to enable engagement with and critique of current research or practices, as well as advanced scholarship or research in a particular field, discipline or practice. b. Knowledge literacy, in respect of which a learner is able to demonstrate the ability to evaluate current processes of knowledge production, and to choose an appropriate process of enquiry for the area of study or practice.			X	
8	a. Scope of knowledge, in respect of which a learner is able to demonstrate knowledge of and engagement in an area at the forefront of a field, discipline or practice; an understanding of the theories, research methodologies, methods and techniques relevant to the field, discipline or practice; and an understanding of how to apply such knowledge in a particular context. b. Knowledge literacy, in respect of which a learner is able to demonstrate the ability to interrogate multiple sources of knowledge in an area of specialisation and to evaluate knowledge and processes of knowledge production.		X	X	
7	a. Scope of knowledge, in respect of which a learner is able to demonstrate integrated knowledge of the central areas of one or more fields, disciplines or practices, including an understanding of and the ability to apply and evaluate the key terms, concepts, facts, principles, rules and theories of that field, discipline or practice; and detailed knowledge of an area or areas of specialisation and how that knowledge relates to other fields, disciplines or practices. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding of knowledge as contested and the ability to evaluate types of knowledge and explanations typical within the area of study or practice.			X	
6	a. Scope of knowledge, in respect of which a learner is able to demonstrate: detailed knowledge of the main areas of one or more fields, disciplines or practices, including an understanding of and the ability to apply the key terms, concepts, facts, principles, rules and theories of that field, discipline or practice to unfamiliar but relevant contexts; and knowledge of an area or areas of specialisation and how that knowledge relates to other fields, disciplines or practices. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding of different forms of knowledge, schools of thought and forms of explanation within an area of study, operation or practice, and awareness of knowledge production processes.			X	
5	a. Scope of knowledge, in respect of which a learner is able to demonstrate an informed understanding of the core areas of one or more fields, disciplines or practices, and an informed understanding of the key terms, concepts, facts, general principles, rules and theories of that field, discipline or practice. b. Knowledge literacy, in respect of which a learner is able to demonstrate the awareness of how knowledge or a knowledge system develops and evolves within the area of study or operation.			X	
4	a. Scope of knowledge, in respect of which a learner is able to demonstrate a fundamental knowledge base of the most important areas of one or more fields or disciplines, in addition to the fundamental areas of study, and a fundamental understanding of the key terms, rules, concepts, established principles and theories in one or more fields or disciplines. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding that knowledge in one field can be applied to related fields.			X	
3	a. Scope of knowledge, in respect of which a learner is able to demonstrate a basic understanding of the key concepts and knowledge of one or more fields or disciplines, in addition to the fundamental areas of study. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding that knowledge in a field can only be applied if the knowledge, as well as its relationship to other relevant information in related fields, is understood.		X		
2	a. Scope of knowledge, in respect of which a learner is able to demonstrate a basic operational knowledge of one or more areas or fields of study, in addition to the fundamental areas of study. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding that one's own knowledge of a particular field or system develops through active participation in relevant activities.		X		
1	a. Scope of knowledge, in respect of which a learner is able to demonstrate a general knowledge of one or more areas or fields of study, in addition to the fundamental areas of study. b. Knowledge literacy, in respect of which a learner is able to demonstrate an understanding that knowledge in a particular field develops over a period of time through the efforts of a number of people, and often through the synthesis of information from a variety of related sources and fields.				

- [27]Factual knowledge: The basic elements students must know to be acquainted with a discipline or solve problems in it.
- Conceptual knowledge: The interrelationships among the basic elements within a larger structure that enable them to function together.
- Procedural knowledge: How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.
- Metacognitive knowledge: Knowledge of cognition in general as well as awareness of one's own cognition.

SADC RQF: Skills Domain		SOLO levels[28]				
		Prestructural	Unistructural	Multistructual	Relational	Extended abstract
10	Conducts original research which is evaluated by independent experts against international standards. Demonstrates problem solving ability and critical evaluation of research findings for academic discussion			X		
9	Conducts original research deploying appropriate research methods and processes primary and secondary source information using rigorous intellectual analysis and independent thinking and applies knowledge in new situations; and demonstrates independent thinking, problem solving, critical evaluation of research findings and ability to make judgements based on knowledge and evidence.			X		
8	Demonstrates capacity to use a coherent and critical understanding of the principles, theories and methodologies of a particular discipline. Selects and applies appropriate research methods and techniques, and critical analysis and independent evaluation of information			X		
7	Demonstrates intellectual independence, critical thinking and analytical rigour, and advanced communication and collaborative skills in complex and variable contexts			X		
6	Demonstrates ability to apply specialist knowledge and skills in highly variable contexts and formulate responses to concrete and abstract problems			X		
5	Applies a wide range of technical and/or scholastic skills in variable contexts using standard and non standard procedures, often in combination			X		
4	Applies a moderate range of technical and/or scholastic skills which are transferable in familiar and unfamiliar contexts, using routine and non routine procedures			X		
3	Demonstrates a range of well developed skills and ability to apply known solutions to familiar problems			X		
2	Can carry out processes that are limited in range, repetitive and familiar		X			
1	Can follow simple instructions and perform actions required to carry out simple concrete tasks requiring no special skills	X				

- [28]Pre-structural (no relevance): Fail, incompetent, misses the point.
- Unistructural (one relevant aspect): Identify, name, follow simple procedure.
- Multistructual (several relevant independent aspects): Combine, describe, enumerate, perform serial skills, list.
- Relational (integration into a structure): Analyse, apply, argue, compare/contrast, criticise, explain causes, relate, justify.
- Extended abstract (generalisation to a new domain): Create, formulate, generate, hypothesise, reflect, theorise.

Botswana NQF: Skills Domain		SOLO levels[29]				
		Prestructural	Unistructural	Multistructual	Relational	Extended abstract
10	Ability to undertake original and scholarly research of international standard to solve problems; Highest level of specialised skills and techniques including critical analysis, evaluation and synthesis of new and complex ideas to develop new knowledge and approaches or extend and redefine existing knowledge and professional practice; Ability to develop and implement a strategy for dissemination of research findings and defend the research work and outputs before a diverse audience.					X
9	Demonstrates a high level of mastery of the field of study or practice and capacity to retrieve, evaluate, analyse and interpret information to make propositions and judgments; critical analysis and evaluation of existing professional practice and ability to comprehend and put issues and ideas in perspective; Specialised research and capacity to develop and apply new skills and techniques to identify and solve problems in a range of professional contexts.				X	
8	Demonstrates mastery of professional practice in a particular field of work or study. Ability to manage functions and processes. Capacity to carry out basic research, critical evaluation and synthesis of ideas, issues and concepts. Capable of identifying and solving complex and unpredictable problems.				X	
7	Capacity to carry out processes that require the use of specialised basic and applied research skills to solve problems, manage processes within broad parameters for specified activities and work outputs.			X		
6	Applies advanced skills and demonstrates mastery of and innovation required to identify and solve complex and unpredictable problems in a specialised field of work or study.			X		
5	Capacity to apply a broad range of cognitive and practical skills required to solve abstract problems in a relevant occupation or profession			X		
4	Capacity to perform a significant range of practical and cognitive tasks. Ability to select and use relevant procedures and techniques to solve a variety of concrete, abstract and unfamiliar problems.			X		
3	Demonstrates a range of basic cognitive and practical skills and has capacity to perform a range of tasks or standard processes in a specific field of work or study using basic methods, tools and materials.			X		
2	Demonstrates basic cognitive and practical skills and capacity to perform basic tasks using simple tools.			X		
1	Demonstrates elementary skills required to perform simple and familiar tasks using simple tools.		X			

- [29]Pre-structural (no relevance): Fail, incompetent, misses the point.
- Unistructural (one relevant aspect): Identify, name, follow simple procedure.
- Multistructual (several relevant independent aspects): Combine, describe, enumerate, perform serial skills, list.
- Relational (integration into a structure): Analyse, apply, argue, compare/contrast, criticise, explain causes, relate, justify.
- Extended abstract (generalisation to a new domain): Create, formulate, generate, hypothesise, reflect, theorise.

Lesotho NQF: Skills Domain		SOLO levels[30]				
		Prestructural	Unistructural	Multistructual	Relational	Extended abstract
10	Specialist and transferable skills required for managing complex and unpredictable situations; ability to critique and develop organizational structures and ability to initiate change				X	
9	Ability to integrate knowledge, handle complex situations and formulate judgments; mastery of a complex and specialised area of skills				X	
8	Sound communication, analytical and research skills, comprehensive range of specialised skills				X	
7	Research skills, critical evaluation of different problem-solving approaches			X		
6	Wide range of highly specialised skills			X		
5	Broad range of practical skills that require some understanding of relevant theory			X		
4	Wide range of skills and ability to interpret information		X			
3	Functional literacy and numeric skills and ability to do relatively simple practical work		X			
2	Moderate range of practical skills	X				
1	Very basic practical skills using relevant tools	X				

- [30]Pre-structural (no relevance): Fail, incompetent, misses the point.
- Unistructural (one relevant aspect): Identify, name, follow simple procedure.
- Multistructual (several relevant independent aspects): Combine, describe, enumerate, perform serial skills, list.
- Relational (integration into a structure): Analyse, apply, argue, compare/contrast, criticise, explain causes, relate, justify.
- Extended abstract (generalisation to a new domain): Create, formulate, generate, hypothesise, reflect, theorise.

SA NQF: Skills Domain		SOLO levels[31]				
		Prestructural	Unistructural	Multistructual	Relational	Extended abstract
10	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f.Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability					X
9	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability				X	
8	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability				X	
7	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability				X	
6	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability				X	
5	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability			X		
4	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability			X		
3	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability			X		
2	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability			X		
1	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability			X		

- [31]Pre-structural (no relevance): Fail, incompetent, misses the point.
- Unistructural (one relevant aspect): Identify, name, follow simple procedure.
- Multistructual (several relevant independent aspects): Combine, describe, enumerate, perform serial skills, list.
- Relational (integration into a structure): Analyse, apply, argue, compare/contrast, criticise, explain causes, relate, justify.
- Extended abstract (generalisation to a new domain): Create, formulate, generate, hypothesise, reflect, theorise.

SADC RQF: Autonomy and Responsibility Domain		Dreyfus levels[32]				
		Novice	Advanced Beginner	Competent	Proficient	Expert
10	Demonstrates full responsibility and accountability for all aspects of advanced research work				X	
9	Shows independence, initiative and originality and the ability to manage own and group outcomes in complex and unpredictable situations				X	
8	Operates within the context of a strategic plan with complete accountability for management of resources and supervision of others				X	
7	Designs and manages processes and works with broad accountability for determining, achieving and evaluating personal and group outcomes			X		
6	Manages processes and works with complete accountability for personal and group outcomes			X		
5	Works independently under broad guidance and can take some responsibility for supervising the work of others and group outcomes		X			
4	Shows ability for self-direction, requiring little supervision, and complete responsibility for own outcomes and some responsibility for group outcomes		X			
3	Works under general supervision with some responsibility for quality and quantity of output	X				
2	Applied in directed activity under close supervision	X				
1	Works under close supervision in familiar situations and structured contexts	X				

- [32]Novice: Has an incomplete understanding, approaches tasks mechanistically and needs supervision to complete them.
- Advanced Beginner: Has a working understanding, tends to see actions as a series of steps, can complete simpler tasks without supervision.
- Competent: Has a good working and background understanding, sees actions at least partly in context, able to complete work independently to a standard that is acceptable though it may lack refinement.
- Proficient: Has a deep understanding, sees actions holistically, can achieve a high standard routinely.
- Expert: Has an authoritative or deep holistic understanding, deals with routine matters intuitively, able to go beyond existing interpretations, achieves excellence with ease.

Botswana NQF: Skills Domain		SOLO levels[33]				
		Prestructural	Unistructural	Multistructual	Relational	Extended abstract
10	Ability to undertake original and scholarly research of international standard to solve problems; Highest level of specialised skills and techniques including critical analysis, evaluation and synthesis of new and complex ideas to develop new knowledge and approaches or extend and redefine existing knowledge and professional practice; Ability to develop and implement a strategy for dissemination of research findings and defend the research work and outputs before a diverse audience.					X
9	Demonstrates a high level of mastery of the field of study or practice and capacity to retrieve, evaluate, analyse and interpret information to make propositions and judgments; critical analysis and evaluation of existing professional practice and ability to comprehend and put issues and ideas in perspective; Specialised research and capacity to develop and apply new skills and techniques to identify and solve problems in a range of professional contexts.				X	
8	Demonstrates mastery of professional practice in a particular field of work or study. Ability to manage functions and processes. Capacity to carry out basic research, critical evaluation and synthesis of ideas, issues and concepts. Capable of identifying and solving complex and unpredictable problems.				X	
7	Capacity to carry out processes that require the use of specialised basic and applied research skills to solve problems, manage processes within broad parameters for specified activities and work outputs.			X		
6	Applies advanced skills and demonstrates mastery of and innovation required to identify and solve complex and unpredictable problems in a specialised field of work or study.			X		
5	Capacity to apply a broad range of cognitive and practical skills required to solve abstract problems in a relevant occupation or profession			X		
4	Capacity to perform a significant range of practical and cognitive tasks. Ability to select and use relevant procedures and techniques to solve a variety of concrete, abstract and unfamiliar problems.			X		
3	Demonstrates a range of basic cognitive and practical skills and has capacity to perform a range of tasks or standard processes in a specific field of work or study using basic methods, tools and materials.			X		
2	Demonstrates basic cognitive and practical skills and capacity to perform basic tasks using simple tools.			X		
1	Demonstrates elementary skills required to perform simple and familiar tasks using simple tools.		X			

- [33]Pre-structural (no relevance): Fail, incompetent, misses the point.
- Unistructural (one relevant aspect): Identify, name, follow simple procedure.
- Multistructual (several relevant independent aspects): Combine, describe, enumerate, perform serial skills, list.
- Relational (integration into a structure): Analyse, apply, argue, compare/contrast, criticise, explain causes, relate, justify.
- Extended abstract (generalisation to a new domain): Create, formulate, generate, hypothesise, reflect, theorise.

Lesotho NQF: Knowledge and Skill Application Domain		Dreyfus levels[34]				
		Novice	Advanced Beginner	Competent	Proficient	Expert
10	Discovery and development of new knowledge and skills; communication of results of research and innovation; engagement in critical dialogue					X
9	Knowledge and problem-solving skills are applied in new and unfamiliar contexts related to the field of study; well developed skills to lead complex, multiple and heterogeneous groups; take responsibility for own continuing academic /professional development				X	
8	Creative skill and knowledge applied to a wide variety of contexts, taking responsibility for the nature and quality of outputs				X	
7	Application of established principles in different contexts, exercise initiative and independence in carrying out defined activities			X		
6	Ability to make informed judgments and manage processes within broad parameters; fully accountable for determining and achieving group or individual work outcomes			X		
5	Ability to take full responsibility for own work, subject to general direction, ability to interpret information analytically		X			
4	Used in self-directed contexts with growing sense of responsibility for own work		X			
3	Confer minimum employability for low skilled occupations, requiring supervision, some judgment and discretion		X			
2	Act in a range of roles in directed activity, under supervision	X				
1	Applied in closely defined and highly specific contexts, under close supervision	X				

- [34]Novice: Has an incomplete understanding, approaches tasks mechanistically and needs supervision to complete them.
- Advanced Beginner: Has a working understanding, tends to see actions as a series of steps, can complete simpler tasks without supervision.
- Competent: Has a good working and background understanding, sees actions at least partly in context, able to complete work independently to a standard that is acceptable though it may lack refinement.
- Proficient: Has a deep understanding, sees actions holistically, can achieve a high standard routinely.
- Expert: Has an authoritative or deep holistic understanding, deals with routine matters intuitively, able to go beyond existing interpretations, achieves excellence with ease.

SA NQF: Knowledge and Skill Application Domain		Dreyfus levels[35]				
		Novice	Advanced Beginner	Competent	Proficient	Expert
10	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability					X
9	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability				X	
8	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability				X	
7	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability				X	
6	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability			X		
5	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability			X		
4	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability			X		
3	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability		X			
2	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability	X				
1	c.Method and procedure; d.Problem solving; e.Ethics and professional practice; f. Accessing, processing and managing information; g.Producing and communicating information; h.Context and systems; i. Management of learning; j. Accountability	X				

- [35]Novice: Has an incomplete understanding, approaches tasks mechanistically and needs supervision to complete them.
- Advanced Beginner: Has a working understanding, tends to see actions as a series of steps, can complete simpler tasks without supervision.
- Competent: Has a good working and background understanding, sees actions at least partly in context, able to complete work independently to a standard that is acceptable though it may lack refinement.
- Proficient: Has a deep understanding, sees actions holistically, can achieve a high standard routinely.
- Expert: Has an authoritative or deep holistic understanding, deals with routine matters intuitively, able to go beyond existing interpretations, achieves excellence with ease.

Figure 5 represents an application of the methodology to the level descriptors of the SADC RQF and level descriptors of three NQFs: Botswana, Lesotho and South Africa. The initial observations that stand out from the diagrams are as follows:

- In the case of the knowledge domain, progression in the cognitive dimension is reasonably well conceptualised in the descriptors of the SADC RQF (as previously mentioned). The same does however not apply to the descriptors of the three NQFs, each of which show different weaknesses. For the knowledge dimension, the SADC RQF, Botswana NQF, and SANQF all show a strong vertical trend focusing on procedural knowledge. Lesotho is the only one that shows reasonably good progression in the knowledge dimension.
- For the skills domain, the SADC RQF, Botswana NQF and SANQF again show a similar weakness; in this case, the level descriptors are unable to progress to the relational and extended abstract levels. The Lesotho NQF seems to be better conceptualised, although there is limited evidence of the descriptors reaching the highest level (extended abstract).
- In the competence domain, the level descriptors from the SADC RQF and all three NQFs show strong similarities, although both the SADC RQF and the Botswana NQF show limited evidence of descriptors on the expert level.

3.6 Global citizenship education and the SADC level descriptors

As discussed in section 2, GCE, while a fairly new concept, particularly in Southern Africa, is an important area which should be considered for inclusion in educational qualifications frameworks. In their report for UNESCO, Keevy and Matlala (2015) identified values, attitudes and communication skills as critical educational competences required by individuals to be able to function effectively as global citizens. The GCE domains are knowledge, skills and competences and are depicted in Table 4 above.

Table 4 was used as a basis for analysing the representation of GCE in the three regional frameworks (SADC RQF, EQF and AQRF) as well as the three national frameworks (Botswana NQF, Lesotho NQF, SANQF).

The analysis revealed that across all three domains and 10 levels of the SADC RQF, GCE is neither explicitly nor implicitly reflected. In order to make a fair judgement, the AQRF and EQF were analysed in the same way. Similarly to the SADC RQF, GCE was not reflected in these two RQFs either. A reason may be that that the level descriptors in the qualifications frameworks focus on specific, formal learning and not informal and universal or global aspects of learning. Analysis of the three selected NQFs also found no indication that the NQFs take GCE into account. With the exception of the SANQF, the value domain is expressed though the expression of the

values and ethics towards other people. The SANQF speaks of "the ability to understand societal values and ethics".

Generally, the three NQFs reviewed do not included the knowledge, skill, competences, and values related to GCE. Table 6 below compares the coverage of GCED in the three regional and three national frameworks.

Table 6: GCED and level descriptors

		Coverage as identified in level descriptors		
Domain	**Examples**	**SADC RQF**	**EQF & AQRF**	**Botswana NQF, Lesotho NQF and SANQF**
Knowledge	global issues and universal values such as justice, equality, dignity, and respect; global challenges and problems; languages; use of internet and modern ways of communication	The knowledge domain of the SADC RQF does not reflect any of the GCE competences mentioned in the examples. It focuses mainly on formal education rather than social and informal learning.	Both the EQF and AQRF knowledge domains have no indication of the GCE competences. Also, it is noted that mainly formal learning and no other form of learning appears to be covered.	It appears from our analysis that the GCE competences are not reflected in the NQFs of Botswana, Lesotho, and South Africa. As with the SADC RQF, their focus is mainly on formal learning rather than social and informal learning
Skills	actively contribute to civic activities; actively contribute to pro-environmental behaviours	The skills domain also does not reflect any of the GCE competences mentioned in the examples and the focus is mainly on formal education rather than social and informal learning.	Similarly to the knowledge domain, there is no indication of the GCE competences in the skills domains of the EQF and AQRF. Again, the focus of the frameworks is mainly formal learning.	Similarly to the knowledge domain, analysis of the skills domain did not find any indication of the GCE competences. Aligned to the other findings, the focus in the NQFs is mainly on formal learning.
Competences	demonstrate knowledge, understanding and critical thinking about global issues and the interconnectedness and interdependency of countries and different populations; understanding of collective identity; act collaboratively and responsibly to find global solutions to global challenges, and to strive for the collective good; act responsibly at local, national and global levels for a more peaceful and sustainable world	It appears global issues are not dealt with either explicitly or implicitly. The competences covered in the RQF mainly reflect formal learning.	Similarly to the knowledge and skills domains, we found no indication of the GCE competences. These frameworks mainly focus on what abilities a learner should have after completing a specific level within the level descriptors. The focus is also on formal learning and not social and global aspects of learning.	Similarly to the knowledge and skills domains, we found no indication of the GCE competences reflected in this domain in the three frameworks. Rather, this domain mainly focuses on what abilities a learner should have after completing a specific level within the level descriptors. The focus is once again on formal learning and not on social or global aspects learning.

		Coverage as identified in level descriptors		
Domain	**Examples**	**SADC RQF**	**EQF & AQRF**	**Botswana NQF, Lesotho NQF and SANQF**
Values	global identity and openness; willingness to help others; acceptance of universal human rights and equality; commitment to sustainable development; anti-fatalistic attitudes; respect for diversity; global empathy; sense of solidarity (belongingness to common humanity)	This is an additional component (domain) which is not explicitly expressed by the SADC RQF level descriptors. However, values play a crucial role in building a nation and ultimately a global citizen (Keevy and Chakroun, 2015). We therefore included this component to determine if these values are reflected in the level descriptors that were analysed for this report. Analysis revealed that global value are not reflected in the SADC RQF.	This additional domain is not explicitly expressed in the level descriptors of either the EQF or the AQRF.	While it appears that the SANQF does included values as part of the skills and competences required of a learner, values are not explicitly expressed as a global issue. While the SANQF does have some coverage of values, there is no mention of global values in the other two NQFs.

SECTION 4. FINDINGS, RECOMMENDATIONS AND CONCLUSION

4.1 Reflections on the research design and methodology

The research design and methodology employed in this study attempted to break new ground in the approach to analysing level descriptors. It has, however, been noted on several occasions that this factor is a limitation of the study. The study in its current form requires careful interrogation by the SADC TCCA as well as, if possible, international reviewers, to test and refine the approach.

4.2 Findings in relation to the SADC RQF level descriptors

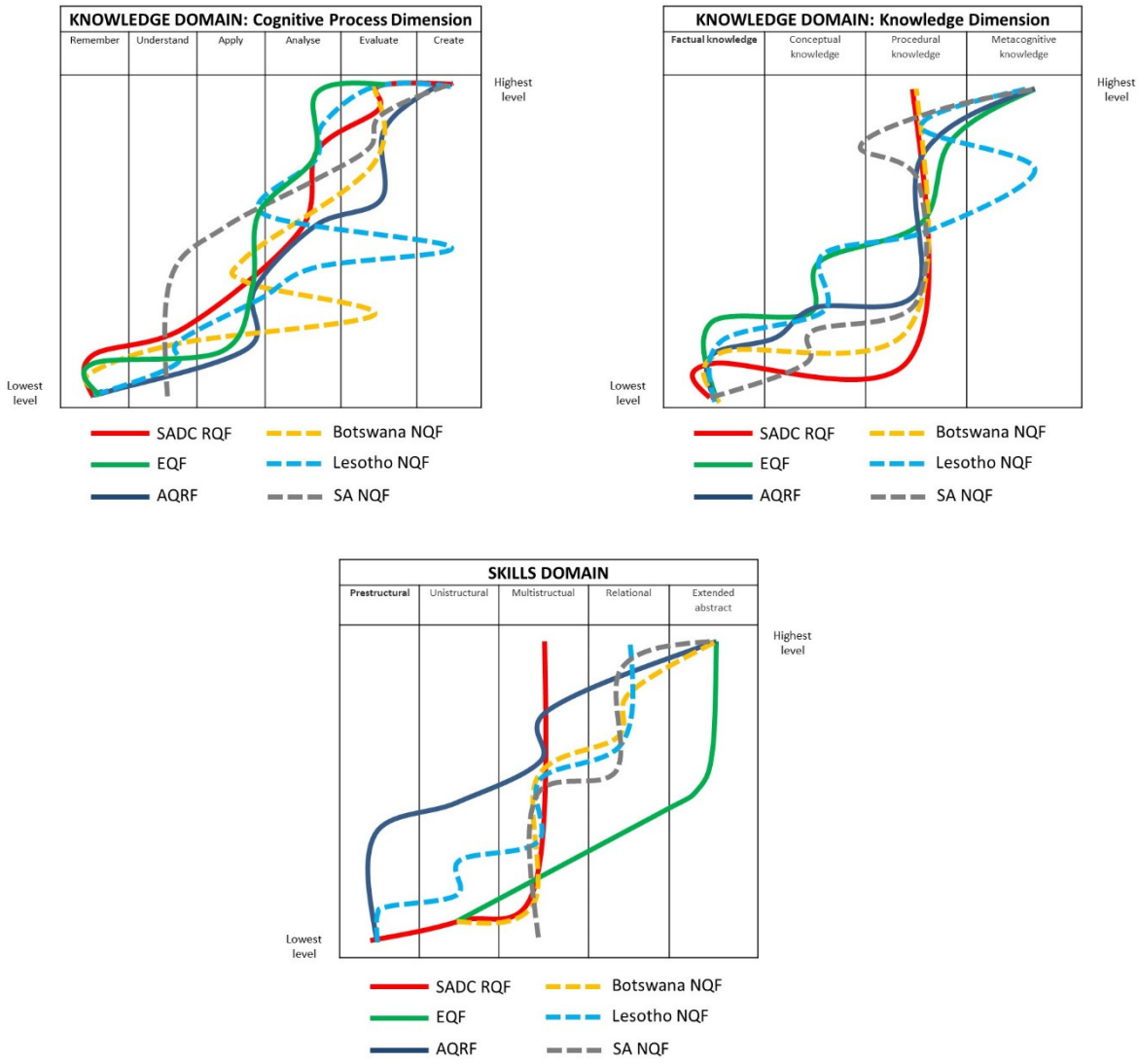
4.2.1 Domains

The use of the "knowledge", "skills", and "autonomy and responsibility" domains in the SADC RQF level descriptors fits well with the global trend in which the recognised domains are knowledge, skills, and competence. The autonomy and responsibility domain is very similar to the competence domain as most descriptors in these domains focus on the application of knowledge and skills in context. The ease of application of the Dreyfus Model of Skills Acquisition to the autonomy and responsibility domain further supports this point.

4.2.2 Progression

Progression across the level descriptors was the main focus of this report. While the limitations have been stated numerous times, the findings do provide important insights that contribute to the refinement of the descriptors over time. The figures below illustrate a mapping of the progression levels across the descriptors of the SADC RQF, EFQ, AQRF and the three NQFs included in the study. A key is provided below each figure and some initial observations presented.

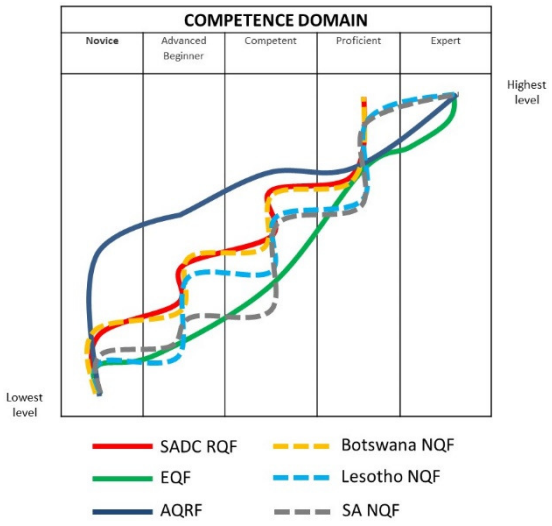
Figure 6: Mapping of the knowledge domain across the cognitive and knowledge dimensions



Although the knowledge domain is the domain that is the best understood, progression still varies across the frameworks included in the study. A common trend across several of the frameworks is the slow progression within the knowledge dimension and an over emphasis on procedural knowledge.

Significant variations across the different qualifications frameworks can be seen in progression in the skills domain. In this regard, the SADC RQF requires specific attention.

Figure 7: Mapping of the skills domain



Progression in the competence domain is more similar across the descriptors of the different qualifications frameworks.

4.2.3 Global citizenship education

The very weak coverage of the knowledge, skills, competences, and also values associated with GCE in the level descriptors of all the qualifications frameworks included in this study is an important finding. This finding has implications not only for the SADC RQF, but also for other qualifications frameworks and suggests that significant works is required from UNESCO in this area.

4.2.4 Quality descriptors and qualifications pathways

Considering that the methodology used to analyse the level descriptors of the SADC RQF is at an early stage of development and requires refinement, the review of the quality descriptors and qualifications pathways had to been postponed. This is an area that requires attention but this will have to be done in a follow-up study.

4.3 Recommendations

4.3.1 General observations

4.3.1.1 Meeting the objectives of the RISDP

In line with the development goals identified in the SADC's regional development plan, the RISPD, it is important that TVET qualifications are aligned to the NQF and meet the requirements highlighted in the RISDP priorities. Not all member states have an advanced TVET qualifications framework, which means that this area still requires some attention. In addition, not all TVET qualifications have adapted to

global demands, and therefore may not necessarily be building sufficient human resource capacity in the areas that have been prioritised. There is a need therefore to review existing qualifications in SADC member states in order to ascertain the gaps and to begin establishing cross-country/border qualification facilities and relationships to enhance skills development in the region. A key starting point would be to conduct a review of all qualifications offered in the member states and begin aligning them to the SADC RQF. The SADC RQF as it stands appears a little weak in the area of TVET qualifications.

In addition, for the benefit of lifelong learning, it is important to begin formulating progression strategies within TVET qualifications frameworks so that TVET does not remain the less popular choice of specialisation. To further enable the current RQF to assist in meeting the RISDP priorities, lower level qualifications offered at academic institutions or mainstream tertiary institutions need to be reviewed and compared against the world reference levels so as to increase their relevance and value.

Another priority identified in the SADC's ISRM is the need to build the region's manufacturing capacity, specifically in engineering, manufacturing, and high-tech production systems. The adoption of SADC RQF will enable member states to review and pitch their national qualification matrices or NQFs against the regional framework so that they can play an active role in meeting the industrialising needs of the region.

It is necessary for the SADC RQF to be referenced against the world reference framework so as to enable the region to develop a knowledge based economy that can compete effectively in the global market. This process would also encourage higher education institutions as well as TVET colleges in the region to improve their science, technology, engineering, and mathematics training, amongst other things.

4.3.1.2 Centralising data

The SADC RQF presents an opportunity for the region to develop a centralised system for recording qualifications and human capital data. While the initial attempt to create a skills portal proved unsuccessful, it is recommended that this issue be reviewed and revived. One would need to understand the reasons for its failure and to learn from that initiative. It is recommended that the centralised system is established at the SADC offices and managed by a dedicated team with specific ICT, data capturing, and data analysis skills.

The benefits of having such a centralised data base would be:

- The data will be available regionally;
- It will be easier to analyse the extent of scarce skills and to institute means to address those skills gaps;

- The region would have information regarding the availability of appropriately qualified people.

4.3.1.3 Gaining buy-in from member states

For the RQF to be recognised as integral to the regional growth strategy, the SADC would need to embark on a participatory advocacy campaign to enlighten all member states about the value of having an RQF. Support to member states for developing their own qualification frameworks, including for TVET qualifications, needs to be made available and provided.

In order to confirm the usefulness of such a recommendation, it will be necessary for the member states to review their NQFs against the SADC RQF to ascertain whether the referencing models presented in this report as well as by Keevy and Chakroun (2015) may apply. Member states should then be encouraged to consider how to reference their national qualifications against the RQF with the aid of referencing guidelines.

The move to develop quality assurance processes in each of the member states has led to the development of regional quality assurance guidelines for higher education in SADC (Sabaya 2008). These guidelines lay the basis for the referencing process.

4.3.1.4 Managing the RQF

A competent recognition authority needs to be established in each member state to provide expertise and support to the SADC office when reviewing member state qualifications against the RQF. The experts should come from the respective member states so as to ensure mutual trust and to build a healthy relationship based on integrity and professionalism. Their role will be to review regional qualifications for the purpose of achieving mobility and harmonisation.

It may even be useful to establish a regional accrediting body that will play an expanded role in referencing qualifications. Clear guidelines on referencing need to be established with recommendations for best fit when a perfect fit cannot be made. Ultimately, this will facilitate recognition by and hence mobility of qualifications across member states and regions for employment.

A relationship with other regions, including other African regions, should be established so as to facilitate greater cross-referencing and harmonisation.

There is also a need to establish a well-functioning governance structure. With respect governance, the draft SADC RQF put forward recommendations for investing in dedicated staffing and ICT; the setting up of an advisory committee that would include social partners from industry and the like; establishing coordination points within member states; and the setting up of thematic working groups. These recommendations would have to be considered in terms of cost implications,

ascertaining where the funding will come from, and how the envisaged functions will unfold. It may be necessary to contract personnel to carry out the various activities proposed.

4.3.2 Recommendations arising from this study

1. The level descriptors of the SADC RQF compare well with the descriptors used in the EQF and AQRF, as well as in the three NQFs included in this study. Even so, the SADC RQF descriptors need to be carefully reviewed to ensure the best possible progression across all three domains, with notable improvements required in the knowledge dimension of the knowledge domain and also in the skills domain.

2. Referencing between the SADC RQF and NQFs in the SADC region will contribute to the strengthening of the RQF and the respective NQFs. A comparison of level descriptors is a useful point of departure, but this has to be supplemented by a consideration of substantial differences between and quality assurance approaches followed in member states. Above all, the referencing process should contribute to increased mutual trust within the region. It should not be seen as a purely technical exercise.

3. The capacity for implementing the SADC RQF should be strengthened by developing a feasible institutional framework for the provision of adequate resources at the regional level for implementation.

4. The TCCA, as an advisory body, should benchmark the framework against existing, operational RQFs, for example, the EQF, to assist with the development of an effective roadmap and derive lessons for implementing the SADC RQF.

5. Before piloting or implementing the SADC RQF, it should be further developed. The TCCA should consider including quality descriptors as well as values in the current level descriptors in line with the competences of GCE.

6. In order to meet the objectives as spelled out in the TCCA deliberations in September 2016 (see the TCCA Plan of Action as annexure to this report), it is necessary that the TCCA facilitates the referencing process between member states' NQFs and the SADC RQF and also enables the development and finalisation of NQFs where needed. The process has begun with the development of objectives and alignment criteria. It is recommended that member states refer to the Plan of Action, utilising the proposed alignment criteria and implementation model to begin referencing their qualifications frameworks to the SADC RQF.

7. The TCCA could play an important role by disseminating the RQF to stakeholders nationally, regionally, throughout the continent, and at international levels. This would allow the SADC RQF to achieve the prominence it requires to enable the main objective of mobility and portability of qualifications globally.

8. It is also necessary for the institutional mechanism to be strengthened so that referencing and facilitation of referencing can be supported. A strengthened institutional mechanism may include having skilled personnel who could support the process, clear criteria for referencing, and a sophisticated electronic recording and storing mechanism which can provide required information readily. This will assist in ensuring that the processes are fair, transparent, and trustworthy, and will contribute to greater buy-in.

9. Greater collaboration between member states need to take place to build the necessary foundation for a strong regional movement towards achieving the goals set out in the RISDP, Education 2030, and other related policies.

4.4 Conclusion

The SADC RQF can be seen as a tool for inducing SADC member states to review their own human resources development strategies and begin participating in regional initiatives designed to bring about industrialisation and the ability to compete in the global market. The framework consists of a set of agreed principles, practices, procedures and standardised terminology intended to ensure effective comparability of qualifications and credits across borders in the SADC region. The SADC RQF attempts to establish mutual recognition of qualifications among member states and to harmonise qualifications wherever possible.

Establishing and adopting the SADC RQF would assist in aligning all the region's qualifications to ensure comparability and compatibility. This would enable easy credit transfer across the region and encourage mobility and opportunities for global interaction. However, it is vital that all member states integrate TVET qualifications into their NQFS and increase the momentum in finalising their frameworks. . It is also important that member states begin the process of referencing their qualifications against the SADC RQF so as to enable the skills mobility that is envisaged in the various regional policies.

Capacity to implement the SADC RQF remains its main weakness. Important conceptual work, as presented in this report, has an important role to play, but this can only go so far. Political will was evident when the SADC RQF was formally approved by SADC Ministers of Education in 2011. However, political will without the commensurate allocation of resources leaves the SADC Secretariat and member states with very little to work with. Unless this situation changes, the SADC region will

remain behind the rest of the world, even though much of the thinking relating to qualification frameworks started in SADC in the early 1990s.

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ANNEXURE

TWO YEAR PLAN OF ACTION FOR THE SADC TECHNICAL COMMITTEE ON CERTIFICATION AND ACCREDITATION (TCCA), SEPTEMBER 2016 – AUGUST 2018

"ACCELERATING IMPLEMENTATION OF THE SADC REGIONAL QUALIFICATIONS FRAMEWORK (RQF) AND NATIONAL QUALIFICATIONS FRAMEWORKS (NQFs)"

Introduction

The Plan of Action (PoA) is designed to accelerate the operationalisation of the RQF and in particular the development and alignment of NQFs to the RQF. It takes into consideration the slow pace in the implementation of the RQF since its approval by the SADC Committee of Ministers responsible for Education and Skills Training in 2011.

The PoA will be implemented by the SADC Technical Committee on Certification and Accreditation (TCCA) coordinated by the SADC Secretariat.

Objectives and Outputs

Objectives

1. To establish and strengthen the institutional mechanism and systems for coordinating and supporting the implementation of the RQF and NQFs.
2. To popularise and advocate for the implementation of the RQF in SADC.
3. To facilitate the alignment of NQFs/Educational training systems at national level to the RQF.
4. To ensure the alignment of Quality Assurance Systems and policies at National level with the SADC Quality Assurance Guidelines.
5. To facilitate and coordinate a Network of Verification Agencies within the SADC Region
6. To facilitate capacity building in the development and implementation of qualification frameworks and quality assurance

Outputs

1. Institutional mechanism for coordinating and supporting implementation of the RQF established and strengthened;
2. The RQF popularised among stakeholders at regional and national levels;
3. NQFs aligned to RQF;
4. Member states quality assurance system aligned to Regional Quality Assurance Guidelines;
5. Regional Verification Network established and implemented';
6. TCCA Action Plan monitored.