COUNCIL ON HIGHER EDUCATION

DIRECTORATE:

STANDARDS DEVELOPMENT

A Framework for Qualification Standards in Higher Education

Consultation document

November 2011

CONTENTS

Abbreviations

AQF   Australian Qualifications Framework
AUQA   Australian Universities Quality Agency
BCom   Bachelor of Commerce
BSc   Bachelor of Science
CESM   Classification of Educational of Subject Matter
CHE   Council on Higher Education
CTP   Committee of Technikon Principals
DHET   Department of Higher Education and Training
DoE   (Legacy) Department of Education
DoL   Department of Labour
EHEA   European Higher Education Area
FET   Further Education and Training
FQEHEA   Framework for Qualifications of the European Higher Education Area
GFETQF   General and Further and Education and Training Qualifications Framework
GET   General Education and Training
HEIs   Higher Education Institutions
HEQC   Higher Education Quality Committee
HEQF   Higher Education Qualifications Framework
HESA   Higher Education South Africa
ISCED   International Standards Classification of Education
NQF   National Qualifications Framework
NSB   National Standards Body
PQM   Programme and Qualification Mix
QAA   Quality Assurance Agency
QC   Quality Council
QCTO   Quality Council for Trades and Occupations
SAQA   South African Qualification Authority
SAUVCA   South African Universities Vice-Chancellors Association
SETA   Sector Education and Training Authority
SGB   Standards Generating Body
Stanza   Standards South Africa
TEQSA   Tertiary Education Quality and Standards Agency
UNESCO   United Nations Educational Scientific Organization

1. Introduction

1.1 Legislative background

In terms of the Higher Education Act (no. 101 of 1997) and the Higher Education Amendment Act (no. 39 of 2008), the Council on Higher Education (CHE) is responsible for quality assurance for higher education, and for implementation of the Higher Education Qualifications Framework (HEQF).

The HEQF, in turn, assigns to the CHE the responsibility for developing standards for all higher education qualifications. The standards

> must have legitimacy, credibility and a common, well-understood meaning, and they must provide benchmarks to guide the development, implementation and quality assurance of programmes leading to qualifications. (Department of Education, 2007.)

There are two important points here that should inform standards development. The first is the set of characteristics that ought to influence the process as it unfolds, if it is to be regarded by all interested parties as being beneficial to the higher education sector. The second is the emphasis on standards as a developmental guide for programme design and delivery, rather than as rigid instruments for regulating compliance. It is within this context that the CHE proceeds with its mandate.

1.2 Standards development in the context of quality assurance

The role of the CHE as the Quality Council for higher education means that its responsibility for standards should proceed alongside its other statutory responsibilities in the areas of quality assurance, including the accreditation and re-accreditation of programmes, institutional reviews, and national reviews. The coexistence of all these responsibilities in the same body puts the CHE in a privileged position to advance the objectives of the National Qualifications Framework (NQF) within the higher education system. The model for standards presented here takes cognisance of some of the complexities and difficulties experienced in the implementation of the HEQF in relation, for example, to the programme accreditation aspect of the quality assurance function.

Planning by the CHE for higher education standards goes back a number of years, at least to the publication in July 2004 by the erstwhile Department of Education of a draft HEQF for public comment. A brief summary of the research conducted in this field is contained in *Appendix A*. Over the last few years, there has been limited progress in giving effect to the role of standards development, due largely to a need for confirmation of the allocation of dedicated funding and to clarification of the organizational structure and core functions of a Standards Directorate to ensure alignment with the Council's mandate, as provided for by the National Qualifications Framework (NQF) and the HEQF. The issues of funding, structure and functions have since been addressed, and the CHE is ready to proceed with its standards development mandate.

2. Standards in higher education

Establishing standards for higher education qualifications is nothing new. Institutions have always applied their own internal means of maintaining standards. The means are varied; they range from requirements for admission into a qualification, to the maintenance of staff-student ratios that are appropriate for effective teaching and assessment, to valorising a hierarchy for the measure of student success (for example, first, second, third class passes). Probably the most relied-on means of assuring parity of standards is the system of external examination, in which peers from other institutions validate the assessment instruments and the grading of student achievement in their disciplines (although rarely across qualifications as a whole). These means, when diligently practised, have considerable value in establishing and maintaining standards for higher education. However, their main limitation is that they are institutionally controlled and localized. Their efficacy across the entire sector, and for all comparable qualifications offered by the sector, assumes absolute parity, between all institutions, in the ways in which quality criteria are applied, and the levels at which they are applied. The main aim of a national set of standards, as mandated to the CHE, is not to displace existing, internal means of quality control over qualifications, but to provide for an agreed matrix of benchmarks against which institutional practices and awards can be evaluated.

Historically, higher education standards have been the prerogative of disciplinary expert groups. Such groups have exerted their influence on the content, assessment criteria and outcomes of qualifications in their fields without necessarily comparing them with similar aspects of equivalent qualifications awarded in other fields. This has resulted, at least partially, in a disciplinary atomization of qualification standards. There is little if any evidence to demonstrate that the standards that are applied, for example, to a master's degree in medicine are comparable to the standards required for a master's degree in business administration, or that the standards for a diploma in somatology are comparable to a diploma in electronic engineering, despite the fact that they aspire to the same generic outcomes described by the NQF level descriptors.

While acknowledging responsibility for reaching clearly-defined outcomes envisaged by the CHE mandate, this document will emphasize the developmental aspect of the process, taking into account the many conceptual and controversial issues that have arisen, nationally and internationally, from attempts to formulate an approach that addresses adequately the role of standards in higher education. The Framework proposes that the development of standards is an on-going process addressing a multiplicity of complex principles and involving a variety of interested parties. It is a process fundamentally different from the notion of a singular once-off 'setting' which, while it may be appropriate to the stabilization of concrete in physical structures, is arguably less appropriate for higher education standards. The CHE task is, furthermore, distinguished from the role that has been played by standards generating bodies (SGBs) under the auspices of the South African Qualifications Authority (SAQA). For these reasons, the term 'development' is used in preference to either 'setting' or 'generation'. The development of standards needs to take into account a number of fundamental issues, including the following: what 'standards' mean in the public imagination, the extent to which 'standards' for higher education qualifications are similar to, or depart from, notions of

'standards' as they are applied in other domains, and the capacity of higher education 'standards' to play a meaningful role not only in ***assuring*** quality, but also in ***developing*** quality in the sector, while recognizing the fundamental importance of higher education institutions to promote their own internal processes of quality assurance.

3. Qualification standards

Before proceeding to establish the purpose and goals of standards, it is necessary to clarify what is meant by a qualification 'standard'. In its Advice to the Minister on the proposed HEQF (CHE, 2007), the CHE stated its concern

> that definitions of the terms standards, standards generating, standards setting, and standards registration are not made sufficiently explicit in the document and recommends that clear definitions of these terms be provided.

However, further clarification has not been forthcoming. The concept 'standards' in higher education in South Africa 'is more than a little nebulous', and is used on different occasions for different purposes and practices (CHE, 2009a). There are two main reasons for this. One relates to *how* a standard is measured; the other concerns *what* is being measured.

A discussion of these two issues is contained in ***Appendix B***. The discussion seeks to distinguish between **qualification** standards (which the CHE aims to develop) and other fundamentally different kinds of standards sometimes employed by higher education, for example, content standards and achievement standards. It also addresses the question of the appropriate **level** at which standards aim, and whether a range of levels (by way of illustration, 'threshold', 'typical' and 'enhanced' levels) is feasible for higher education standards. There are potential advantages, but also limitations, to different approaches to the level at which standards aim. For example, there is doubt whether the development of 'threshold' standards alone (akin to the minimum requirements for programme accreditation) would add any real value to existing CHE quality assurance processes.

4. Principles and characteristics of standards in higher education

Qualification standards should be influenced by a number of principles (CHE, 2006).

- They foster and provide a central role for communities of practice, in that the preferred origins of standards are expert groups of peers representing knowledge fields and disciplines. While the standards authority, the CHE, must assure the embodiment of constitutional values (efficiency, effectiveness, social justice, human rights, equity, redress, democracy, development) and mediate between diverse influences and expectations emanating variously from the higher education sector, the state, the marketplace and civil society, grounding standards in communities of practice would be the most beneficial way of developing well-focused, informed results

that enhance the status, validity and reliability of standards while, at the same time, recognizing the need among HEIs for self-regulation and acknowledgement of inter-dependence.

- They move essential features of higher education qualifications from conventions (with associated questions of whose conventions are being applied, whether they remain in touch with intellectual and disciplinary developments, and whether they are conducive to contextual diversity) to (publicly known, quality-assurable) compacts.
- They are generative, rather than prescriptive, and allow for innovation and creativity as principles, rather than bureaucratic or administrative processes for superficial compliance. Within a dynamic relationship between institutional autonomy and nationally-generated standards, higher education institutions are able to design programmes that are fit for purpose, in the sense of being linked to the missions and contexts of the institutions themselves, and their capacity to be continually responsive to changes in knowledge fields and society at large.
- While allowing for on-going disciplinary and inter-disciplinary development, standards have a reasonable durability, to enable medium- and long-term programme and qualification planning on the part of institutions.

These principles should form the basis for development of standards for higher education qualifications. They recognize the dynamic and diverse contexts in which higher education programmes are offered. This implies that the establishment of standards is much more a process of keeping abreast of academic developments, nationally and internationally, than it is an end-product.

Taking into account the principles stated above, it is proposed that the following are some of the fundamental characteristics on which standards for higher education qualifications should be based:

1. Recognizing the need to avoid a 'one-size-fits-all' approach, given the many contextual differences existing between higher education institutions in South Africa;
2. Accommodating long-held practices of institutional autonomy while allowing for a strengthening of institutional accountability;
3. Matching standards development to the development of self-accreditation approaches, so that higher education institutions which meet the requirements for self-accreditation status can exercise this function in terms of the national standards developed for higher education qualifications;
4. Avoiding all forms of over-regulation in the generation of standards, and making the development and application of standards as simple and transparent as possible, including the development of clear criteria against which judgements can be made;
5. Acknowledging that qualification standards, while they necessarily address the purpose and the outcomes of programmes, are – while they ought to inform and guide them – not the same as standards which focus on their delivery, for example, standards of pedagogy or student achievement;
6. Distinguishing clearly between the distinctive and separate roles and responsibilities in this field of the DHET, SAQA and the CHE. DHET is responsible for registering

private higher education providers and for approving new qualifications and programmes in terms of a public higher education provider's PQM. SAQA is responsible, in consultation with the CHE, for the development of NQF level descriptors for higher education levels, and for the registration of higher education qualifications in terms of the criteria for the designation of qualifications set by the CHE and the standards for qualifications developed by the CHE. The CHE through its Higher Education Quality Committee (HEQC) is responsible for the accreditation of higher education programmes leading to qualifications in terms of the standards developed by itself;

7. Recognizing the fundamentally important role of expert and peer groups of different knowledge, professional and vocational fields, as well as professional bodies and associations in the development and revision of standards for higher education qualifications. Since standards for qualifications relate to the role and emphasis of a variety of knowledge contexts, it stands to reason that appropriate expert and peer groups would be best equipped to develop standards for qualifications in their fields of expertise and experience. The CHE is given authority to establish standards for all higher education qualifications, but it should do so in close consultation with professional bodies, which perform a separate function of setting requirements for *professional* designation/registration. There should be no serious disjuncture between these processes and the standards that emerge from them;

8. Avoiding interpretations of terminology which give rise to notions of hierarchies, rankings, or classifications across institutions. This aspect is of particular importance so that standards development can take place in an environment of equity and collaboration. It is essential that standards take their cue from the different purposes of qualifications and the different contexts in which they are offered, and do not translate into signals of the ranking of qualifications offered by different kinds of higher education institutions. This does not mean, however, that standards should not serve the purpose of enabling the enhancement of quality and efficiency of programmes, whether existing or new ones, when it originates within institutions. In any case, rankings can never be a proxy for effective quality assurance, which focuses on intrinsic (for-purpose) rather than relativistic criteria.

5. What can, and cannot, be expected of standards

In determining what the development of standards is intended to achieve, it is important to view them in the context of other approaches to quality assurance, and to ensure that there is no unnecessary duplication of functions or effects between the various approaches. Some areas of overlap are illustrated in the following figure.

Figure 1: existing means of quality assurance

Approach to quality assurance	Existing means
Qualification descriptors	NQF level descriptors
Purpose and characteristics of qualifications	HEQF
Benchmarks for programme approval	HEQC accreditation: minimum standards
Institutional capacity to offer qualifications	Institutional audits/reviews Institutional self-accreditation (forthcoming)
Comparability of programmes leading to qualifications	National programme reviews
Professional designation	Professional bodies

In the light of this context, the main purposes of standards in higher education need to be defined. It is suggested that the purposes are to:

- Provide a framework for the consistent and coherent development and design of qualifications and their curricula across the higher education system;
- Clarify the meaning, purpose and distinctiveness of qualification types and variants;
- Guide the accreditation and recognition of learning programmes, by contextualizing, in terms of qualification types, the requirements established by the HEQC;
- Contribute to the quality assurance of learning programmes, within and between institutions;
- Provide broad guidelines for the attributes expected of a recipient of a higher education qualification;
- In terms of a broad global context, establish benchmarks for international comparability of qualifications; and
- Strengthen public confidence in the value and credibility of higher education qualifications.

Standards for qualifications provide the basis for designing, accrediting and delivering programmes, and the basis for evaluating or quality assuring those programmes once they have been implemented. With greater clarity on what it takes to articulate and monitor them, standards would also indirectly contribute to the development of institutional capacity and strengths as well as providing a clearer context for self-accreditation processes, in that these processes bring together peer academics from a variety of institutions. The learning benefits of these peer group activities have already been observed as one of the positive outcomes of the HEQC National Review of selected programmes.

While the potential benefits of qualification standards in higher education are proposed, it is important to identify limits on what standards can be expected to achieve. They should NOT:

- Form the basis for any kind of ranking (tacit or otherwise) between higher education institutions;
- Provide a resolution to all issues surrounding the academic quality of learning programmes and associated qualifications;

- Enforce the adoption of a particular educational philosophy, pedagogical model or assessment regime;
- Dictate to institutions the design of their programmes, other than the need to ensure specified graduate attributes at the appropriate level of the qualification, and in line with its purpose;
- Guarantee the recognition of learning credits for students moving from one qualification to another or one educational provider to another; nor
- Provide a platform for addressing institutional issues that fall outside of the purposes of standards development as described above.

These matters fall beyond the ambit of qualification standards.

It should be noted that the NQF adds an additional layer of complexity in that it distinguishes very clearly between the various quality assurance and standards-setting roles of the three Quality Councils (QCs): the CHE, the Quality Council for Trades and Occupations (QCTO), and Umalusi (QC for the GET and FET bands), which will each perform their duties within the parameters of sub-qualification frameworks, in the case of higher education, the HEQF.   The NQF Act proposes that there should be articulation between these sub-frameworks. In other words, there has to be coherence between the standards established at corresponding levels of the sub-frameworks, and more particularly, at the exit level of one framework and the appropriate entry level of another. (In the case of higher education, this is particularly relevant in the case of articulation between NQF level 4 and levels above.) For this reason, co-operation will be needed between those tasked with establishing standards for different components of the NQF.

At the same time, there is a likelihood that each QC will need to adopt an approach to standards that fits well with its particular area of jurisdiction and its particular needs. The approaches may not be identical in all respects. For example, there will be differences in the methods of generating standards. Whereas, in the draft General and Further Education and Training Qualifications Framework for GET and FET (Umalusi, 2011), prescribing qualification specifications, and verifying the quality of external examinations, are cited as significant ways of establishing standards for the GET and FET, in higher education these aspects of quality assurance are much more appropriately left to the institutions themselves.

6. Standards in the context of related higher education frameworks

It is critically important that the development of standards adds value to the already existing context in which higher education qualifications are regulated. The benefits and advantages ought to be clear to all parties concerned. Standards should not duplicate the roles played by other frameworks, nor should they be perceived as an imposed technicist or bureaucratic device whose effect would be to add another 'hurdle' that programmes and qualifications must cross in order to get approved. To prevent such undesirable consequences, standards must guide and oversee aspects of qualifications that are distinct from those aspects governed by other frameworks.

6.1 NQF level descriptors

The NQF Act (no. 67 of 2008) assigns to SAQA the task of developing the content of level descriptors for each level on the NQF, but it does so by reaching agreement on the content with the relevant Quality Council (QC). The QC – in the case of higher education, the CHE – has in turn the responsibility for considering and agreeing to the level descriptors contemplated by SAQA, and ensuring that they remain current and appropriate.

In some literature, level descriptors and standards are regarded as, more or less, synonymous, in the sense that they can be regarded as criterion-referenced, hierarchical indicators. However, while it is the case that NQF level descriptors serve as the outer and most 'generic' level of specification in the 'nested' approach of the HEQF, it is also the case that they are designed to cover all offerings at a level on the NQF, including qualifications, part-qualifications and short courses and, for that reason, attempt no specific reference to the essential coherence, cohesion and internal progression that ought to characterize whole qualifications. Level descriptor outcomes do not attempt to address the specific purpose of a qualification, nor are they able to distinguish between different qualifications at the same NQF level.

NQF level descriptors have always been inherent in our qualifications frameworks. They seek to identify predictable levels of complexity and knowledge for programmes (whether whole qualifications or not) developed at each level, while also providing for the aims of portability and articulation. Standards in higher education seek an alignment of the level descriptors with the qualifications permitted by the HEQF. This alignment calls for mediation between an approach to level description that assumes an undifferentiated base of knowledge, with generic outcomes, rather than specific learning fields and an approach to standards that has, as its starting point, the principles that qualification types and descriptors, on the same NQF level, will have distinctive, and differentiated, knowledge bases and that learning outcomes are consequences of, rather than precedents for, knowledge as it reveals itself in contextually appropriate design of programmes.

6.2 The HEQF

Appendix C includes a summary of the principal characteristics of the HEQF, how the HEQF relates to qualification standards, and the main amendments proposed by the recent review of the HEQF. This Framework takes the proposed amendments into account.

One can find a brief statement of the purpose of each qualification type in the HEQF. The question arises, however, whether the brief and generalized purpose contained in the HEQF is nearly adequate enough to represent appropriately the broad diversity of qualification fields and specializations that are contained within each qualification type. If this is not the case, and if the purpose of a qualification is regarded as fundamental to its value, then one of the aims of standards should be to adapt and particularize the broad (and, in some respects, vague) purpose statements of the HEQF to reflect the characteristics of the qualifications that the standards govern.

There is also limited synergy between the purpose statements of the HEQF and the 'categories' of outcome included in the draft NQF level descriptors. There are ten such categories:

- 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
- Management of learning
- Accountability.

In some cases, for example 'Scope of knowledge', there is a reasonable similarity between the NQF level descriptor and the HEQF purpose statement. In respect of other categories, for example, 'Ethics and professional practice' and 'Accountability', the HEQF is completely silent, while, in the case, for example, of 'Management of learning', level descriptor outcomes are so indistinct from one level to the next that applying them to qualification types would have little real benefit. What this suggests is that neither NQF level descriptors nor the HEQF are intended to address, or indeed capable of addressing, fully the relationship between qualification purpose and qualification characteristics, a relationship that is fundamental to the fitness for and fitness of purpose that ought to determine the qualification. Bridging this gap is one of the tasks of standards development.

6.3 HEQC accreditation of programmes

Criteria for accreditation of a programme leading to a qualification include the requirement to demonstrate the programme's fitness, intellectual credibility, coherence and capacity for articulation (HEQC, 2004, Criterion 1). There is little doubt that these qualities are central to any notion of standards in higher education. Would criteria for programme accreditation not, then, cover much of the ground that standards might embrace? There are, arguably, some important differences. Firstly, accreditation is based on 'minimum' or threshold requirements, and the question has already been raised whether this would be the most appropriate (and restricted) approach to standards. Secondly, these requirements are very generally stipulated, and do not give any explicit guide to potential providers or to the judges of proposed new programmes. In applications, responses to Criterion 1 are adjudicated by knowledgeable peers, but, in the absence of more explicit criteria, these cover a wide range of possibilities and disputes become tricky to arbitrate. Far from being simply adjuncts to existing criteria for accreditation, standards aim to establish the core credentials of qualifications and, as such, they are intended to make the process of programme accreditation – as well as review, whether internal or external to institutions – better benchmarked, and thus more transparent and even-handed. However, the generation of standards and the application of criteria for accreditation are not mutually exclusive matters. They inform each other.

6.4 Professional body approval/registration

Legislated professional bodies (councils and associations) have their own criteria for approval of programmes leading to the registration of graduates. These criteria are often referred to as 'standards'. In the case of such qualifications, standards developed by the CHE and professional body criteria should be informed by one another, and are, ideally, aligned. In many cases, however, professional body criteria go beyond HEQF purpose statements and the HEQC requirements for accreditation, and may differ from higher education standards insofar as they may include requirements specific to the occupational contexts for which they are intended, relating to content, values and attitudes, on-going professional development, ethical issues, awareness of client needs and environment, and knowledge of the relevant regulatory framework (and, in doing so, they come closer to addressing the range of outcome 'categories' of the NQF level descriptors).

At the same time, a distinction needs to be drawn between standards for higher education *qualifications* on the one hand and, on the other, criteria determined by a recognized professional body for conferring on an individual a professional *designation*. Alignment between the two is a matter to be decided between the institution awarding the qualification and the professional body that confers the designation.

To be of genuine value, efficacy and benefit to the higher education sector, the development of standards by the CHE must take all the associated frameworks into account, and establish appropriate benchmarks that are not in like manner provided, explicitly or implicitly, elsewhere.

7. A framework for developing standards

Education at NQF levels 5-10 encompasses a broad spectrum of programmes leading to qualifications. While there are a number of criteria that can be used to locate programmes in this spectrum, a widely accepted benchmark is the amount of learning that occurs in the context of a specific workplace (and is influenced by workplace interests) in proportion to the amount of learning that happens in the institution of learning. At one end of the spectrum are qualifications that focus on specific trades or occupations in which procedural knowledge and work-based skills are paramount, and work-integrated learning – mainly in the workplace itself – is at the core of the qualification design. These qualifications are often referred to as vocational qualifications, in that they are related largely, if not totally, to a specific skills-set, or vocation. In many countries, they are offered in a 'dual education system', with industry-based apprenticeship being combined (and often simultaneous) with institutionally-based training. At the other end of the qualification spectrum are what are often described as 'formative' or 'general' programmes in which curriculum and outcomes emphasize declarative or conceptual knowledge and relatively scant reference is made to workplace competence beyond the academy. Along the spectrum are gradations in the relative emphasis on procedural and declarative knowledge, with many qualifications, although assuming limited *new* knowledge being acquired in the workplace, requiring a skilled application of acquired knowledge in a relevant context.

Along the spectrum the nature of the proficiency ranges from proficiency in a *particular* or *general vocation* (podiatry or hospitality work, for instance), proficiency in a *profession* (law, engineering or teaching, for example, with specializations at more advanced levels), or proficiency in a *specialised knowledge area*, be it disciplinary or inter-disciplinary. The more task-specific the proficiency, the more *contextually* relevant and coherent the curriculum must be; the more knowledge-specialised, the more *conceptually* relevant and coherent. In general all higher education curricula and qualifications will need to demonstrate relevance and coherence both contextually and conceptually, albeit in different proportions. The crucial questions are these: first – how much of each (that is, what is the appropriate ratio between them)? Second – what are the particular requirements of each? Third – how are they inter-related? In a nutshell, stipulating these three should be one of the standards-generating tasks for each qualification.[1]

Appendix D summarizes grounds for approaching the development of higher education standards on the basis of a matrix of three qualification '**pathways**' that reflect the contextual-conceptual spectrum of relevance and coherence referred to above. The pathways are termed:

- Vocational
- Professional
- General.

The aim of establishing any model of qualification pathways is not to suggest that they are categorically absolute, but rather to develop a framework that would enable the implicit intentions of the HEQF to be made clear by means of generative standards that articulate the purpose and characteristics of higher education programmes in a way that aligns their distinctive aspects with their general purpose as qualifications.

There is no suggestion that different qualifications falling within a single pathway are alike or are homogeneous. For example, engineers have a quite different knowledge and skills base to social workers or doctors. What these professional qualifications have in common is that they all have to have a specialized mix of theory and the application of relevant skills in practice. The mix will be quite specific for each, and debates can be observed amongst experts in each field as to the appropriate nature of the mix: how much problem-based learning should doctors have, for example? Or how much school-based training should trainee teachers have? In each case the debate will revolve around what is appropriate for the trainee to become a competent professional in that field. This is quite different from concerns in the general qualification path where debates are far more likely to focus on the necessary proportion of research methodology, in a field like Social Anthropology, for example, as compared to coverage and disciplinary breadth. In this case the question is: what does it take to be a

---

[1] One example, in respect of vocational (or, for the purpose of this example, occupational) qualifications, of how this would be answered is suggested in the draft Occupational Qualifications Framework (Department of Labour, 2008b). In an occupational qualification, knowledge and theory represents 'the practicalities of the occupation' and disciplinary knowledge is 'recontextualized for occupational purposes' and 'framed in terms of appropriate delivery mechanisms and modalities'. In this case, the approach is *highly* contextualized.
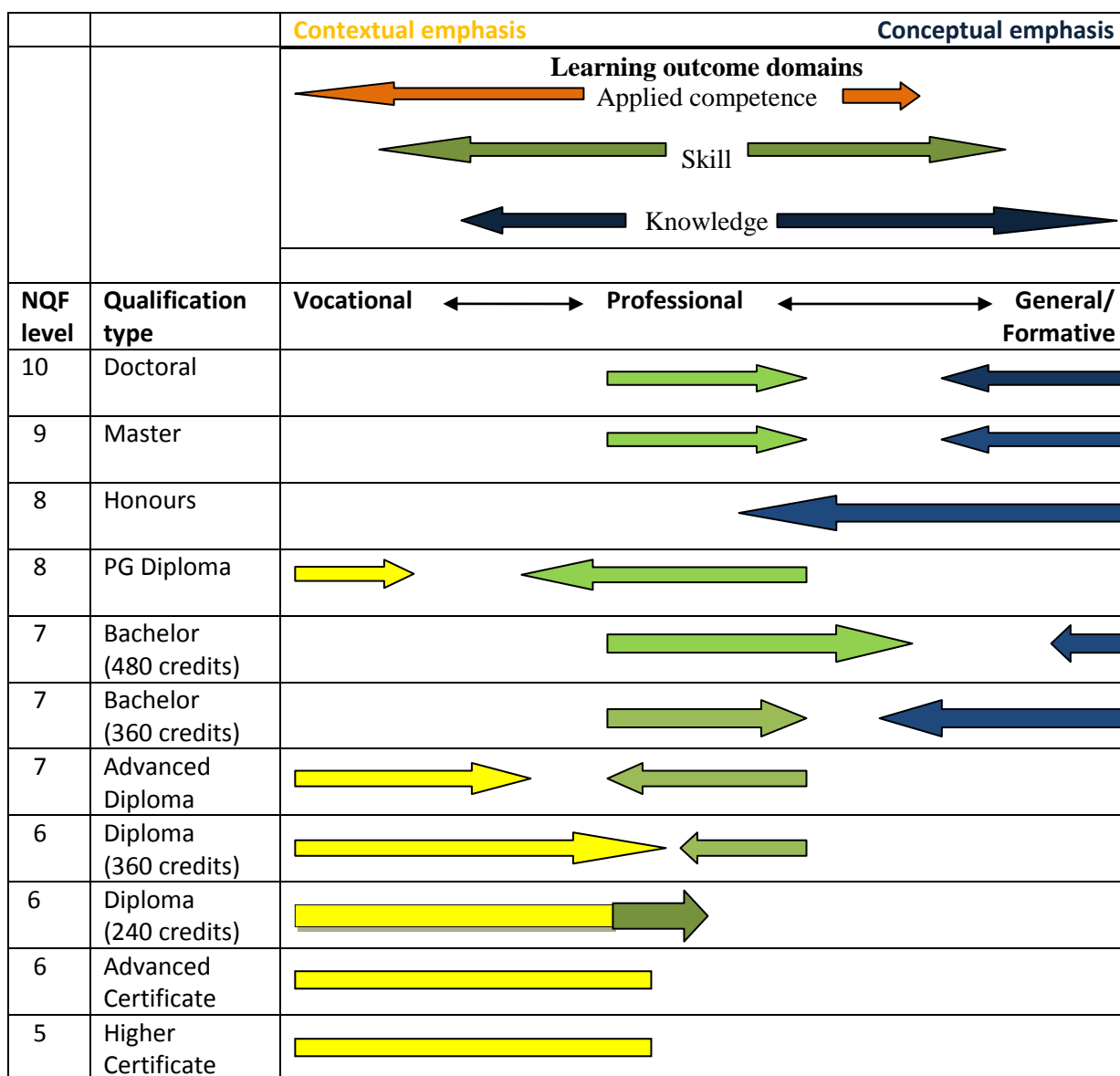
disciplinary or inter-disciplinary adept? The issue will be the kinds and levels of proficiency aimed for in different qualifications. Equally important is that a qualification should not be pre-emptively type-cast into a pathway, but that classification should be the outcome of an analysis of its standards-related characteristics. In a nutshell, applying the concept of qualification pathways must avoid any and every notion of the strait-jacketing of either qualifications or the institutions that offer them.

The spectrum of pathways referred to above, based on proportional emphasis on contextual and conceptual origins of knowledge, skills and applied competence, is a useful way of mapping the range of qualifications (as well as part-qualifications and short courses) offered on NQF levels 5-10. In determining the role of the CHE in relation to the roles of other QCs, another perspective should be considered. The role of the CHE is to quality assure whole qualifications (as opposed to part-qualifications or short courses) offered at these levels. It is in the nature of higher education that qualifications in its realm are based on the premise that a conceptual base of knowledge (provided within the awarding institution) lays the groundwork for, and precedes, the application of such knowledge to the skills and applied competence that would be required of a graduate in the workplace. Such qualifications can be distinguished from other qualifications (or part-qualifications and short courses) for which workplace-based needs, skills and applied competence provide the rationale and experiential basis for the institutionally-grounded knowledge that serves to conceptualize, justify and enhance such skills and applied competence. This implies two different approaches to the award of a qualification: one, from a conceptually-grounded (institutional) identification of a knowledge base necessary for contextual application and, two, from a contextually-grounded (workplace) identification of a skills and applied competence base that, through the qualification, is bolstered by a conceptual underpinning. The ambit of the CHE as QC lies largely in the former approach. Using the 'pathway' spectrum as a guide, this in turn implies that qualifications that exhibit the characteristics of the general (academic) and professional pathways, and those qualifications that exhibit the characteristics of the vocational pathway and are second or more advanced qualifications in the band of NQF levels 5-10, would normally be located within the jurisdiction of the CHE.

Appendix D also establishes grounds for use in the Framework of a taxonomy of three **learning domains** that will be used to describe the contextual-conceptual spectrum of competence. The domains are named: knowledge, skill(s) and applied competence.

The discussion in Appendix D can be represented by Figure 2 below. It represents a provisional mapping of NQF levels and existing qualification types onto the qualification pathways proposed above. (The figure incorporates the proposed amendments to the HEQF recommended by the CHE, and summarized in Appendix C.)

Figure 2: Qualifications by level and orientation

		Contextual emphasis		Conceptual emphasis
		Learning outcome domains		
		← Applied competence		→
		← Skill		→
		← Knowledge		→
NQF level	**Qualification type**	**Vocational** ←→	**Professional** ←→	**General/ Formative**
10	Doctoral		Skill →	← Knowledge
9	Master		Skill →	← Knowledge
8	Honours			← Knowledge
8	PG Diploma	Applied competence →	← Skill	
7	Bachelor (480 credits)		Skill →	← Knowledge
7	Bachelor (360 credits)		Skill →	← Knowledge
7	Advanced Diploma	Applied competence →	← Skill	
6	Diploma (360 credits)	Applied competence →	← Skill	
6	Diploma (240 credits)	Applied competence → / Skill →		
6	Advanced Certificate	Applied competence		
5	Higher Certificate	Applied competence		

The figure suggests that different knowledge-skill-applied competence blends are better suited to some qualification types than to others. The chart is designed to make more transparent issues of compatibility and appropriateness. It should be emphasized that it aims to represent a spectrum of contextual-conceptual prominence, not water-tight compartments into which qualifications must be force-fitted.

What value does this standards framework add to the existing statutory requirements of the DHET and the HEQC on the one hand, and SAQA on the other? What concrete aspects are proposed here and how will they help? One suggestion is that, by linking the level with the major purpose-orientation of the qualification type, it provides a means for identifying the distinctive characteristics of programmes that lead to qualifications, in a way that is not available through other, existing frameworks.

Figure 2 has obvious implications. The most significant of them are the following.

- Vocational qualifications are, in the main, offered at exit-levels 5 and 6 on the NQF, as certificates and (in certain cases) diplomas. An important question arises about the relationship between vocational qualifications and their articulation, either horizontal or diagonal, with higher level qualifications on the professional pathway. Some guidance on this question is provided by the HEQF, but articulation routes need to be made clearer, and more specific.
- Certificate qualifications are not envisaged either on the professional or general pathways. The assumption here is that, in these pathways, a diploma on level 7 or level 8 degree will be the first qualification.
- Whereas 360-credit diplomas as well as Advanced Diplomas may have either a vocational or professional orientation, the 240-credit diploma would be provided for mainly on the vocational pathway, although there may be certain cases in which a professionally-oriented 240-credit diploma is required.
- While both 360-credit and 480-credit bachelor degrees may have either a general or professional orientation, the 360-credit variant would be offered mainly in general fields and the 480-credit variant mainly in professional fields.
- Honours degrees would be offered mainly in general fields. In most professional fields there would be progression routes available either through a 480-credit bachelor degree or (as may likewise apply to the vocational pathway) a postgraduate diploma.
- Both general and professional qualifications would be available at master and doctoral levels (NQF levels 9 and 10).

As indicated above, the HEQF requires compliance with a number of qualification features, and these requirements will on their own place a considerable burden on providers, but they do not deal with issues of programme purpose, contextual-conceptual coherence, and the appropriate blend of knowledge, skill and applied competence. It is this gap that standards development proposes to fill. Needless to say, applying this matrix to the real world of qualification types and specializations offered across the higher education sector will be anything but a simple, or uncontested, matter.

8. What should standards comprise?

Depending on their aim and purpose, standards can influence a broad range of features that make up the characteristics of a qualification. These can include:

- Purpose of the qualification (fitness for and of purpose)
- Outcomes (common capital)
- Student progression (the passage from assumed entrance-level competence to baseline exit-level competence)
- Student achievement (graded personal or cohort capital)
- Curriculum (content, conceptual and contextual coherence, sequence and pacing)

- Pedagogy (the means and methods of ensuring students' progression from initial to eventual competence – this may include workplace learning)
- Assessment criteria (threshold levels).

The current SAQA (2000) registration procedures require the stipulation of *exit outcomes* and *assessment criteria*. The assessment criteria come closest to what are conventionally regarded as standards, as distinct from outcomes. There are two principal problems with the assessment criteria as presently registered. The first is that they are very largely provider-supplied, which means that the same qualification (e.g. BCom) can have very different assessment criteria registered by different providers on the same NQF level. (There are noteworthy exceptions, like the BSc Engineering, which is regulated, in terms of professional approval and graduate registration, by a legislated professional council. Note, however, the point made above about the distinction between qualification standards and criteria for professional designation.) When provider-based qualifications are effectively converted into national qualifications, this is done without any national standards stipulated. The second problem is that the assessment criteria, as registered, present a simple list of subject and skill procedures to be covered. While this is a start, and while these lists of assessment criteria may prove helpful in the fleshing out of standards, they do not address the issue of the *purpose* of the qualification directly, and therefore make no further distinction, in important areas, between programmes leading to the same qualification. One way of seeking to identify the distinctiveness of a qualification, and of programmes leading to its award, is to compare the extent to which the blend of learning domains (knowledge, skill, applied competence) reflect the purpose of the qualification, and the extent to which the blend is reflected in the attributes of a graduate or recipient.

Globally, an increased public investment in higher education has resulted in greater demands on universities as public institutions to demonstrate that they are efficiently and effectively producing what is deemed to be a 'relevant and worthwhile graduate' (Woodhouse, 1999), or a graduate for the 'public good'(Walker, 2010). In South Africa the critical need for graduates who are able to participate in developing the national economy was emphasized in the 2001 National Plan for Higher Education and Training [DoE ,2001] and, more recently, in the Higher Education Amendment Act, no. 39 of 2008 (DoE, 2008).

Graduate qualities have, internationally, been widely debated using a variety of terms such as key competences, core skills, transferable skills and the like. Of late, the term 'graduate attributes' has been widely used to describe these qualities (Holmes, 2000; James, Lefoe and Haid, 2004; Barrie, 2007 and 2009). A base-line study of South African graduates from the perspective of employers (Griesel and Parker, 2009) also embraces the term.

Graduate attributes have, of course, a number of points of reference. Some are shared by the higher education sector as a whole (such as attributes relating to academic authenticity); some will emanate from the specific mission and ethos of the awarding institution; others are shaped by the disciplinary context and knowledge in which they are conceptualized and taught (Jones, 2009). It is the last-mentioned type of attribute that qualification standards ought to identify, taking into account the fact that they will often find common ground with

attributes of a more generic kind. To this end, standards should address such questions as the following:

- What mix of conceptual and contextual knowledge, skill and applied competence is appropriate to the purpose of the qualification?
  - What is the appropriate ratio of focus on conceptual knowledge?
    - Procedural
    - Declarative
  - What is the appropriate ratio of focus on contextual knowledge?
    - On-the-job or on-site
    - Service learning
    - By formal instruction (work-directed theoretical, problem-based, project-based learning, etc.)
  - What therefore is the appropriate pathway of the qualification?
- How do requirements for entry to the qualification (assumed entrance-level learning) relate to the mix of knowledge within the programme?
- How does the exit-level blend of learning domains (knowledge, skill, applied competence) represent the purpose of the qualification, and how are they demonstrated through assessment?

and,

- How do standards for a qualification relate to the outcomes set out in NQF level descriptors? Alternatively, how do the level descriptors represent the standards developed for qualifications on each NQF level?

Most importantly, in addressing such questions, what is the appropriate line of distinction between what is specified in national standards on the one hand, and, on the other, institutionally-determined and contextually-relevant application of a set of national standards for the qualification type?

Based on these principles, a model for developing qualification standards is summarized in figure 3.

Figure 3: proposed role of qualification standards

Aspect of the qualification	Control / Responsibility
Admission requirements	HEQF / other relevant legislation
Purpose of qualification	(HEQF) ⟷ **STANDARDS**
Descriptors and qualifiers	Accreditation ⟷ **STANDARDS**
Assumed entrance-level learning (Knowledge, skills, applied competence)	Exit level of previous qualification **(Standards** developed for entry-level qualification)
Programme design, sequence, internal progression, pacing, pedagogy, assessment, student achievement	Field/discipline expertise; HEI quality assurance and approval processes
Exit-level outcomes	NQF level descriptors
Graduate/recipient attributes: Exit-level knowledge/skill/ applied competence blend (and how the purpose of the qualification is demonstrated in the exit-level assessment criteria)	**STANDARDS**

This model aims to address, via standards development, the following aspects of higher education qualifications, expressed here as questions.

1) What is the **purpose** of the qualification? The HEQF will be the starting point, but the details included there need, if the purpose is to be aligned with the distinctive characteristics of each qualification, to be expanded and elaborated on in considerably greater detail.
2) How does the exit-level knowledge/skills/applied competence **blend** match the purpose of the qualification?
3) Is the exit-level knowledge/skills/applied competence blend at the **appropriate NQF level**, and are the criteria for assessment of the competence blend aligned with the purpose of the qualification?
4) How does the competence blend reveal itself in the attributes of the graduate/recipient of the qualification?

In this approach, the purpose of a qualification is compared with exit-level attributes and the assessment criteria by which the attributes are manifested, rather than outcomes. The notion of outcomes does not apply equally well to all qualification types and to all knowledge domains. Outcomes can arguably be better articulated and measured within knowledge domains that are essentially hierarchical and cumulative (for example, the 'hard' sciences) than they can be in, for example, the arts.

Previous discussion raises two further, related questions. At what level of proficiency should standards aim? And can they be based on a '**range of standards**' model, embracing a range from a threshold standard to a high-quality standard?

The notion of a 'range of standards' may be expressed diagrammatically as follows.

Figure 4: a range of standards

Qualification type → | Programme (best practice) / Programme B (typical) / Programme C (threshold) | → NQF level n
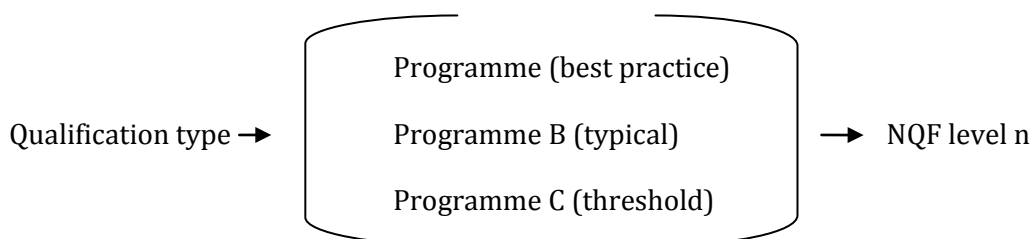
There is a wide divergence of views on both of these questions. The divergence arises from different emphases placed on the advantages and disadvantages of each possible level. On the one hand, standards must provide a clear indication of the threshold (minimum) level of proficiency required of each qualification type. On the other hand, if standards are to be an aid to quality development and not just an instrument for quality control, and if they are not merely to replicate the minimum standards for programme accreditation, they should go beyond threshold levels. The Framework proposes that the identification of threshold levels (for the registration of qualifications) should be supplemented, as a guide to institutions for on-going internal quality development, with indicators of above-threshold and best practice, based on research conducted in both national and international spheres.

9. How will this approach affect higher education institutions?

This approach to qualification standards will influence the development of programmes by HEIs in the following manner.

- The mission, goals and resource allocation of a HEI are linked to one or more qualification pathways, and to some or all qualification levels and types provided for by the HEQF. This should be an enabling process internal to the institution, not an external type-casting. The HEI will, from time to time, review the relationship between institutional and programme profiles.
- A proposed programme is linked to a qualification pathway, and to a qualification that is appropriate to that pathway.
- The conceptualization and design of the proposed programme are expected to meet the standards developed for the qualification.
- The programme must, minimally, meet the 'threshold' standards for the qualification. 'Threshold' standards will inform and influence the minimum standards for programme accreditation as contained in the HEQC Programme Accreditation Framework, and the registration of qualifications.
- As part of its internal quality assurance processes, the HEI assesses its capacity to enhance, where relevant, 'threshold' standards to 'typical' standards, or 'typical' standards to 'best practice' standards.

- HEQC institutional and programme reviews evaluate the capacity of the HEI to enhance programme and qualification standards, and progress in doing so.
- Standards (at one or more levels) will be used to assess the international comparability of qualifications. Comparison between programmes (for example, between programmes of the same qualification type, or programmes on the same NQF level of different qualification types) would be a matter controlled between or within institutions.

10. How many layers should standards address?

In principle, standards can be generated for a number of layers specified in the HEQF 'nested approach':
- NQF levels
- Qualification types (the HEQF specifies nine types)
- Qualification types and variants (for example, general and professional doctorates)
- A combination of some or all of: qualification types, variants, designators, and specialized qualifiers.

A decision on the number of layers to be addressed should be based on both qualitative and quantitative criteria. On the qualitative side, the question is to what extent standards for a qualification should be primarily characterized by common ground covered within the qualification type or descriptor itself, or whether the primary characteristics are features of a particular knowledge field or discipline. For example, are a Bachelors degree in social science and a Bachelors degree in commerce characterized more by what they have in common as bachelors degrees, or by the distinctive characteristics of different disciplines? Likewise, would the distinctively characteristic features of a B Com in Accountancy and a B Com in Taxation outweigh their common features? How would the features of a B Com in Taxation differ from the features of a Diploma in Taxation? Answers to these questions will have a very significant effect on a model developed for standards generation.

There is also the quantitative issue. Ideally, the development of standards ought to maintain a balance between intellectual feasibility, based on the principles of credibility, legitimacy, comprehensibility and integrity, and the dangers of administrative and bureaucratic inundation. To illustrate the point: restricting standards to qualification types and variants would mean a manageable number of qualification standards to be generated. If that scope was to be extended to a separate set of standards for qualification designators, then (applying the twelve designators cited in the HEQF as examples for a bachelors degree) the number of separate standards required would rise to well over a hundred. Even on this scale, dangers are apparent: the sheer quantity of standards to be developed could overwhelm the capacity of the higher education sector to ensure that the exercise is designed for an efficient and beneficial result.

The scale of the potential exercise does not end there. The HEQF is silent on the role of an organizing basis for the development of standards, such as the system of occupationally-related organizing fields used by SAQA. If a system, such as the DHET system of Classification of Educational Subject Matter (CESM) categories were used, then the number of separate standards (by type, descriptor and organizing category, even if restricted to first-order CESMs) would increase to a probably unmanageable level. And this number would not account for distinctions between specialization areas within first-order CESMs.

There are potential pitfalls at both poles of the 'nested' approach. On the one hand, developing standards for the broadest layer of qualification specification (by qualification type) could result in standards that are deemed to be too generic, and possibly too nebulous, to be of any real value for design and quality assurance of a multiplicity of programmes of that type. Against that, it can be argued that the use of expert disciplinary and specialization groups would be the key to an application of broad standards to their particular areas of expertise. On the other hand, generating standards for the most specific layer (separate standards for each descriptor and qualifier), while it would be of certain benefit for quality assurance *within* each knowledge field, it would have, arguably, limited value for quality assurance *across and between* knowledge fields and, thus, for qualifications *per se*. A balance needs to be sought between the contrasting dangers of the qualification-type homogenization of standards and their per-discipline atomization.

10.1 Qualification types and variants

Taking these factors into account, the CHE proposes, at least initially, to develop standards in the following manner. The aim is to find a balance between generic qualification-type standards, and the manifestation of those standards in terms of the distinctive characteristics of knowledge fields and disciplines. This proposal is based on the anticipation that the recommendations of the CHE, arising from the review of the HEQF, will be, in the main, accepted by the Minister. On account of the CHE recommendation that, in the long term, the Higher Certificate at level 5 and the Advanced Certificate at level 6 should not remain on the HEQF, these qualifications are, for the present, held in abeyance insofar as higher education standards are concerned.

At the generic level, the starting point will be qualification-type variants and their applicability to qualification 'pathways'. This suggests that the matrix shown in Figure 5 will apply. It comprises a total of 18 variants. The Framework proposes that, at least provisionally, standards development by the CHE should focus on the qualifications included in the shaded blocks, namely 14 (possibly 15) variants.

Figure 5: qualification types and variants

NQF level	Vocational	Professional	General
10		Doctoral degree	Doctoral degree
9		Master's degree	Master's degree
8	Postgraduate Diploma	Postgraduate Diploma Bachelor's degree	Honours degree Bachelor's degree
7	Advanced Diploma	Bachelor's degree Advanced Diploma	Bachelor's degree
6	Diploma (240cr)	Diploma (360cr) (Possible) Diploma (240cr)	
6	Advanced Certificate (120cr)		
5	Higher Certificate (120cr)		

10.2 Designators and fields

If, however, generic standards based on these variants are to be academically credible and meaningful, they will need to be tested against, applied to and, if necessary, modified by application to specific fields and perhaps even disciplines within those fields. For this to happen in a way that allows for an appropriate balance between generic stability and disciplinary adaptation, the two processes, namely the development of qualification-type standards and the assimilation of those standards with the particular features and characteristics of programmes leading to qualifications of a specialized nature, will, ideally, run simultaneously.

The potentially unwieldy scale of the exercise has already been observed, especially if it were to encompass all qualification types and an unlimited number of fields and disciplines. The CHE proposes that, in the early stages of standards development at least, the scope should be highly selective, and should be based – during a first phase – on the following considerations.

Qualification types should be selected according to a particular need to distinguish between proposed variants (for example, general and professional types at doctoral or/and master's levels; or the four proposed variants of the bachelor's degree; or the proposed offering of both a 360-credit and a 240-credit diploma).

For those identified qualification types, CESM-related fields should be selected in line with one or more of the following contingencies:
1. Request from the Minister;
2. Selection of a field for HEQC national review;
3. Selection of a field which has recently modified, or is in the process of modifying, its professional or vocational requirements;

4. Request from a representative and authoritative party in higher education (for example, a forum or association of deputy vice-chancellors or faculty deans);
5. Selection by the CHE on any other relevant ground (for example, matters arising from the processes of institutional review or programme accreditation).

10.3 The initial phase of standards development

In the initial (pilot) phase, the number of qualification types, and the number of fields associated with those types, will be limited, possibly to no more than four and three respectively in the first year of standards development.

10.4 Standards for sub-fields (qualifiers within the same designators)

A further question arises, whether it will be necessary to develop separate standards for sub-fields or disciplines within a field, or whether field standards will suffice. For example, would there be a need in the engineering field, to have separate standards for the electrical, electronic, chemical, civil and aeronautical sub-fields? Or would there be a need, in the field of psychology, for separate standards for the clinical, occupational, counselling and industrial sub-fields? The CHE proposes that, in principle, that should not be necessary, on the grounds that the distinctions would manifest themselves in programme content, curriculum organization, or other aspects of the programme (or the specific requirements of a professional body) that are not envisaged as being within the scope of qualification standards, as they have been defined above. There may well, however, be exceptions that arise when field standards are tested against specific sub-fields or disciplines. There may also be need to adopt a modified approach in the case of non-degree qualifications, where designators do not apply.

The approach implies that, at least in an initial stage, a manageable number of standards will be developed. Once the first phase of the process has been completed, the CHE will evaluate the outcome and proceed accordingly, taking into account the extent to which this approach addresses the aims and principles of qualification standards that were outlined above.

The initial task for the CHE is to establish the fundamental principles on which the development of standards for higher education qualifications is to be based, bearing in mind the caution expressed (see Appendix A) about the need for intellectual – and, indeed, practical – modesty. The process will require, as a first step, extensive discussion with all interested parties, comprising the higher education sector in its institutional, governmental and professional aspects. The CHE recognizes its responsibility to ensure that its standards-development mandate takes into account the imperatives of access, articulation, progression, portability and public accountability. While acknowledging these needs, the CHE suggests that it is only when we have explicitly stipulated standards for each qualification type that we will be able to develop transparent articulation criteria for transferring credits, and progression across qualification pathways with different qualification purposes.

11. The way forward

- The CHE will invite comment on this proposal for standards development from all parties in the higher education sector, including higher education institutions, the Department of Higher Education and Training, SAQA, other QCs, and legislated professional bodies.

- The CHE will form a reference group, including appropriate external membership, to evaluate the comments received and make recommendations accordingly to the Council. The reference group will also advise the CHE on steps to be taken in advancing the standards development process. This will include design of a model for standards development, a methodology to be used in establishing them, and an organizing basis, as is necessary, for the classification of knowledge fields.

- Once the CHE review of the HEQF has been finalized, any amendments to the NQF level-qualification type matrix will be incorporated.

- The CHE will invite representatives of the higher education sector, through workshops and individual submissions, to comment on draft principles, methodology and procedures for the initial phases of standards development.

- Taking into account the advice and recommendations received from institutions, the CHE will commence the actual process of higher education qualification standards development by means of a sample of qualification variants and fields, as outlined above. To this end, the CHE will select expert peer groups, comprising both qualification-type and field specialists. Draft standards developed in consultation with such expert groups will be circulated to higher education institutions, and other interested parties in the sector, for comment and improvement, before the process is expanded to cover other qualification variants and academic, professional and vocational fields.

Appendix A

Summary of CHE research on higher education standards, 2004-2009

In July 2004 the then Department of Education published the draft HEQF for public comment. The new legislation added standards generation and setting to the statutory responsibilities of the CHE. Anticipating this responsibility, the CHE had hosted a first seminar on Standard Setting in January 2004. By late 2005, against the backdrop of a slow political and policy process in relation to the implementation of the NQF, the CHE set up a task team under the leadership of the late Professor Ben Parker, which gathered senior academics experienced in the implementation of the NQF and in the operation of the National Standards Bodies (NSBs) and Standards Generating Bodies (SGBs), responsible for the generation of standards within the unit-standard model developed by the South African Qualifications Authority (SAQA). In June 2006, this task team submitted its report and recommendations to the CHE on the most appropriate model for the conceptualisation and implementation of standards in the context of higher education.

The processes of political settlement between a variety of stakeholders, particularly the ongoing discussion about the responsibilities and spheres of influence of the erstwhile Department of Education and the Department of Labour in the areas of education and training, delayed the implementation of the new function assigned to the CHE. The final settlement of the NQF debate with the passing of the NQF Act (no. 67 of 2008), the Amendment to the Higher Education Act of 1997 (DoE, 2008), and the Amendment to the Skills Development Act (DoL, 2008a) created a more propitious environment for the CHE to revisit the development of a framework for higher education standards. The recent reorganisation of government and the creation of a Ministry of Higher Education and Training with responsibility for higher education and skills development have provided an enabling politico-organisational framework for the implementation of the new legislation.

The second stage of development of a framework for higher education standards, commencing in mid-2008, included the commission of further research which expanded on the model proposed in 2006. Perhaps because it is a mark of good thinkers to anticipate future developments in a field, the 2006 document enters into easy dialogue with more recent contributions which focused particularly on a proposed distinction between three qualification 'pathways', and the characteristics of the knowledge underpinning each of them. The notion of qualification 'pathways' will be addressed in detail below.

Among the internal reports and discussion documents produced by the CHE since its 2004 standards seminar, three in particular represent initial framing principles and recommendations according to which the way forward may be charted. They are *Standards Setting and Standards Generation in Higher Education in South Africa*, produced by Professors Parker, Gevers and Harley (CHE, 2006), *Higher Education Qualifications and Standard Setting* (CHE, 2009a), and *Discussion Document: An Approach to Standard Setting for Qualifications in Higher Education* (CHE, 2009b), both compiled by Professors Muller and Stumpf. Although some of the views expressed and recommendations contained in these works may, in the light

of further experience, call for modification or elaboration, they collectively provide important background to and interpretation of both the national and international contexts in which standards in higher education are to be envisaged. The present document will not attempt to paraphrase those works in their entirety. Instead, it will draw on some of the most important principles, questions and proposals contained in them, and will attempt, by doing so, to summarize CHE thinking around higher education standards as it currently stands, and to take it forward towards the next steps in the process. The three documents referred to above have been made available on the CHE website[2], and are recommended for reading as reference points.

The Parker report (CHE, 2006) provides important background to the establishment of standards in the South African context. The report refers to it as an 'example of the nationalization of a global influence'. Over the last five decades the concept of standards setting has pervaded quality assurance initiatives in both the developed and developing worlds. The report discusses the experience of SAQA with SGBs and NSBs and how that experience revealed the complexity and contestation, the uncertainties and ambiguities underlying the process. At the same time, it acknowledges the progress made towards clarification within this debated terrain. It summarizes and evaluates further national developments in standards setting, involving, in different although related projects, the CHE, the South African Universities Vice-Chancellors Association (SAUVCA), the Committee of Technikon Principals (CTP) and the coordinated Higher Education South Africa (HESA) in the Generic Qualification Standards Setting Project (GQSSP), the Department of Labour and Sector Education and Training Authorities (SETAs) in developing a curriculum model for occupational qualifications, and the erstwhile Department of Education in developing the HEQF. Taking all these related, although not clearly integrated endeavours into account, and comparing them with global experience of both national and trans-national initiatives (European, Latin American and Southern African included), the 2006 report suggests that the best approach to standards generation would be incremental, building on past experience (national and international), and an appropriate degree of intellectual modesty that acknowledges the importance of caution when creating any structures for quality assurance and development 'that have limited grounding in practice.' While the project is taken forward, it would be advisable to take this caution into account.

Research conducted by the CHE has taken into account international trends in standards setting, and the models on which it is based. A critical task in standard setting is to determine the appropriate unit of stipulation: what is a standard the standard of? There are many different kinds of answer to the question. Three examples are given below.

- *Standardised units of learning stipulated in terms of outcomes, by level* (in short, a unit standards-based approach). This approach stipulates standards at the learning 'chunk' or unit level, not at the qualification level, and it stipulates them in terms of outcomes (what must be done in order to be deemed proficient). The system most often associated with this approach is probably the New Zealand Qualification Framework, although many systems have used unit standards – like SAQA, and the system for

---

[2] The web page is still under construction.

Scottish vocational qualifications – usually in combination with other standards-based approaches. Although unit standards serve the purpose of some qualifications, they generally do not seem to serve the purpose of higher education qualifications, and the higher the level on the NQF of the qualification, the less appropriate they appear to be.

- *Qualifications stipulated in terms of outcomes, by level (or cycle)* (what has been called a taxonomy-of-learning approach). This approach takes qualifications at each cycle as the learning 'chunk' and stipulates them in terms of a broadly defined notion of outcome. The European Higher Education Area (EHEA) system, brought into being to 'harmonise' qualifications across various national systems within the EU, is a good example of this approach.

- *Qualifications stipulated in terms of subject (or content) standards, by level/cycle.* This approach takes the subject, or the disciplinary cluster, as the 'chunk' for which standards are to be crafted, and, in contrast to the other two approaches, stipulates them in terms of cognitive or knowledge demands rather than skills-based outcomes. The UK Quality Assurance Agency has embarked on this relatively more arduous route. The Australian Qualifications Framework has also recently declared its intention to go along this path. In the case of the latter at least, this is explicitly to avoid the acknowledged difficulty of stipulating knowledge-based requirements in terms of outcomes.

Each of these systems was developed to meet very specific purposes and priorities. The EHEA, for example, would be unable to develop content standards, because of the difficulty in comparing content across national systems. The New Zealand and South African systems sought initially to define the standardised unit in the hope that it might facilitate articulation across qualifications. This has proved far harder to achieve than anyone imagined. Each approach to standards has its merits, given particular contexts.

On the other hand, research suggests limitations, even fundamental flaws in each approach. An early CHE seminar on standards setting heard arguments against the adoption of both an outcomes-based and a content-based approach, in favour of the strengthening of peer review procedures as a way of developing 'a sense of national standards…, without having them prescribed or stipulated' (Allais and Shalem, 2005).

The Framework above attempts to combine whatever virtues of various approaches are able to meet the needs of a diverse, evolving and multi-purpose higher education system such as South Africa's. At the same time, the Framework seeks to locate the development of standards within the ambit of other frameworks affecting qualifications in South African higher education (refer to Section 6 above).

Appendix B

The 'what' and the 'how' of standards measurement

Standards can be construed in many ways. They can refer to threshold (or minimally acceptable) requirements, in that respect comparable to the criteria applied to accreditation of programmes. Or they can establish normative, typical characteristics which all similar programmes would be expected to achieve. This approach to a standard is often applied in commerce and industry, as it is by bodies such as the SA Bureau of Standards whose governing legislation defines a standard as that which 'provides for common and repeated use, rules, guidelines or characteristics for products, services, or process and production methods' (Department of Trade and Industry, 2008). Thirdly, they can reflect best practice exemplars (paragons to which all aspire); an example of this is the concept applied by Standards SA (Stanza) which develops standards to 'enhance competitiveness' by promoting design excellence and innovation (Department of Science and Technology, 2011). For the development of standards in higher education, it is important to clarify what meaning (or meanings) of the term will best ensure not only adequacy, but also the enhancement of, quality in programmes leading to qualifications.

The next question is *what* standards in higher education should measure. A search of quality assurance and related websites reveals three main foci for standards setting (CHE, 2009a). The first deals with content (alternatively, curriculum) standards. A content standard sets out broad expectations about subjects, subject clusters or fields. Examples of this are the subject benchmark statements of the UK QAA referred to above (QAA, 2007). The purpose of these statements is to 'assist academic staff in course design, delivery and review'. While clear-cut subject statements can, in most cases, reasonably achieve their intended purpose, they cannot so easily do so in the context of multi-disciplinary and inter-disciplinary innovation.

A second focus is a performance (or achievement) standard. This kind of standard seeks to establish the prerequisites for achievement of learning and educational outcomes that would suit the awarding of particular qualifications. Performance standards can relate to a number of institutional aspects, such as resource allocation, teaching practices, learning achievement, throughput and graduation rates, and research output. As an example, a draft discussion paper by the Australian Universities Quality Agency (AUQA, 2009) proposes an academic achievement standard, defined as 'an agreed specification or other criterion, used as a rule, guideline or definition of a level of performance or achievement'. A question that arises from this approach is whether any comparison between institutional achievement standards would be applicable unless each of the institutions was to offer identical programmes, with the same student profiles, same curriculum and same assessment tasks. This clearly does not apply in our higher education sector. In principle, performance (or achievement) standards are not the same as qualification standards. The Australian Tertiary Education Quality and Standards Agency (TEQSA), into which the AUQA has been incorporated, envisages a standards framework comprising at least five domains, of which 'qualification standards' is one, and is distinct from performance standards such as 'teaching and learning standards' and 'research standards' (TEQSA, 2011). Performance standards are, ideally, not restricted, or primarily

aimed at, a calibration of individual student success; rather, their main purpose is to enable institutions to improve their quality and levels of instruction. Yet a clear relationship between the quality of provision of an institution and the achievement of its students is difficult to ascertain. Performance standards are one of the cornerstones of outcomes-based education, and recent re-evaluation of some fundamental problems relating to outcomes-based education as it has been applied in the General and Further Education bands in South Africa should not be lost on the higher education sector.

Besides content and performance standards, a third focus is represented by a proficiency standard, which establishes a relationship between purpose and standing at a number of levels (often comprising basic, intermediate and advanced levels). This is the type of standard used, for example, throughout Europe as a common framework of reference for assessing learners of foreign languages, dividing learners into three broad divisions and, within them, six levels, ranging from a basic 'breakthrough' level to a proficient 'mastery or advanced' level[3]. A proficiency standard can, in principle, embrace the range of quality levels (such as threshold, typical and ideal levels) in a 'range of proficiency'. Are higher education qualification standards amenable to this notion of a range, or band, within which different manifestations of proficiency can be embraced?

There are international precedents for this. Commentators on the Framework for Qualifications of the European Higher Education Area (FQEHEA) propose that expected learning outcomes (ELOs) may be expressed to define minimum, typical or else a 'range of standards for the level' (Cullen, 2009 – ENQA 17, 17). Standards for programme accreditation in Malaysia (Malaysian Qualifications Agency, 2008) are specified at two levels of attainment. One level comprises 'benchmarked' standards which must be complied with. Another level comprises 'enhanced' standards designed to reflect superior practice in higher education. While it is expected that providers will demonstrate that they achieve either some or all of the 'enhanced' standards, it recognizes that achievement of 'enhanced' standards 'will vary with the stage of development' of the institutions, their resources, missions and policies. This approach acknowledges the need for contextual diversity in the higher education system, while maintaining a threshold level of standards. The qualifications framework of Thailand (Commission on Higher Education, 2006) also seeks to acknowledge aspects of qualifications that exceed threshold standards, by stressing the importance of institutions being able 'to identify areas of special interest and to define student attributes that are part of their special mission' – in this instance, too, space is provided in the application of standards for recognition of diversity going beyond thresholds, based on the context, mission and goals of institutions awarding qualifications.

Another example of the definition of standards as a band of accomplishment is to be found in the subject benchmark statements for bachelor honours degrees generated by the UK Quality Assurance Agency (QAA Academic Infrastructure). This example demonstrates not only some of the potential inherent in this approach but also some of its challenges. In many cases (e.g., English, Accounting, Mathematics and Statistics) distinction is made between 'threshold' and

'typical' subject standards, but the approach is not uniform. The subject statement for Social Work acknowledges a continuum in levels of achievement ranging from 'threshold' to 'excellence', but restricts itself to the 'typical'. The statement for Law does not distinguish between levels of standards yet, in its outcome statements, there is distinction between 'very proficient', 'proficient' and 'pass' outcomes, while, for Biomedical Science, the 'threshold' and 'typical' subject standards are equated with classifications of result ('bottom of the third class' and 'bottom of the upper second class' respectively). In the case of Physics, an argument is made that, while a threshold/typical distinction is valid for a bachelor honours degree, it is inappropriate for a masters degree, on the grounds that 'a higher level of achievement renders a distinction ... unnecessary.'

These examples suggest that any approach to the establishment of standards, and any attempt to articulate a continuum ranging from 'threshold' standards to standards of 'excellence', whatever their potential may be for the maintenance and enhancement of quality in higher education, they need to be sensitive to the diverse characteristics of academic fields and disciplines, and, possibly, to different needs between levels of qualification. What is appropriate, for example, for a NQF level 7 bachelors degree (or diploma) may not be – without suitable modification – appropriate for a NQF level 10 doctorate. The important thing, as the FQEHEA notes, is for each national framework, and each set of standards, to make its approach – whether describing threshold, typical, or ideal standards, or a range of standards that represents some or all of those levels – absolutely clear. In addition, standards for each qualification type need to be distinctively suited to the level, purpose and characteristics of the qualification which they address.

If such a *range of proficiency* approach were found to be appropriate to the development of standards for qualifications in higher education, it would need a caveat, namely that comparable qualifications offered by different institutions would not be externally graded according to an implicit or explicit ranking order but, rather, that it would assist institutions, in their internal processes of quality assurance and development, in arriving at their own evaluation of programme quality.

The distinction referred to above between content, performance and proficiency standards does not imply that they are mutually exclusive. Any one domain of standards has relevance to other domains. What is important for qualification standards for higher education is that they reflect – but do not attempt to go beyond – the features of the qualification itself that can provide guidance and clear benchmarks to all the parties with an interest in them: the institutions awarding them, the qualifying students, the state that funds programmes leading to those qualifications, the employers who expect qualification standards to guarantee appropriate levels of competence, and the public who seek warranty that investment in higher education will yield valid and reliable results.

Appendix C

C.1 Principal characteristics of the HEQF

The HEQF is designed to be compatible with other national and international qualifications frameworks and to enable comparisons. It does not provide the basis for establishing equivalence but rather for comparing and benchmarking similar qualifications and thus enhancing portability. It is also intended to be simple, clear and comprehensible. It has expanded the range of *levels* on the NQF that are devoted to higher education qualifications from four to six, thereby expanding the total range of the NQF from eight levels to ten. At the same time it has radically reduced the range of HE *qualification types* to nine. The qualification types that it recognises are the following:

Figure 6: Qualifications on the HEQF

Undergraduate qualifications	Postgraduate qualifications
Higher Certificate (exit level 5)	Postgraduate Diploma (exit level 8)
Advanced Certificate (exit level 6)	Bachelor Honours Degree (exit level 8)
Diploma (exit level 6)	Master's Degree (exit level 9)
Advanced Diploma (exit level 7)	Doctoral Degree (exit level 10)
Bachelor's Degree (exit level 7 or 8)	

An important point of departure for the generation of standards is the HEQF statement that 'each qualification type has a unique descriptor stating its purpose and how it relates to other qualification types.' The descriptor is a 'point of reference', providing a basis for the design, approval and review of programmes. The aim is an appropriate degree of consistency between programmes of the same qualification type and, where relevant, the same designated variant or, in certain cases, a cognate cluster of variants. In standards generation the primary *purpose* of a qualification is taken as the point of departure, particularly in respect of its emphasis on different types of knowledge and knowledge contexts. This approach is deemed appropriate for higher education institutions as knowledge-based institutions.

In this approach the NQF level descriptors are embedded in the standards developed for the various qualification types. However, whereas the level descriptors are common for all offerings at a particular NQF level, irrespective of their various purposes, standards take the purpose of each qualification type, and the way in which outcomes manifest that purpose, as their starting point. Thus, for example, while standards will be developed, on the one hand, for Qualification Type A on level 5 and another set of standards for Qualification Type B on level 6 (such as the Higher Certificate and Advanced Certificate), there will also be a need to distinguish between standards for Variant C on level 8 and standards for Variant D on the same NQF level 8 (such as the Bachelor Honours degree and Postgraduate Diploma).

C.2 Standards in relation to the HEQF
Nonetheless, if the aims set out earlier, and the limitations on what standards can be expected to achieve, are accepted as a sufficient basis for the development of standards for qualifications in higher education, the next question to be addressed is whether the

provisions of the HEQF, notwithstanding the difficulty mentioned above, are not sufficient for achieving these purposes. And, if they are not sufficient, then how can standards supplement and enhance them?

The HEQF forms an indispensable background to the development of standards in that it describes and specifies matters such as:

- Qualification types, permissible permutations of designators and qualifiers, and abbreviations;
- Rules, in terms of minimum credits, for the use of qualifiers in the titles of qualifications;
- The NQF exit level of each qualification type;
- Minimum total credits for learning programmes, minimum credits at exit level, and in some cases the maximum number of credits permitted on lower NQF levels;
- In the case of most postgraduate qualifications, the minimum number of credits required for the conducting and reporting of research;
- Minimum admission requirements;
- Broad purpose and characteristics of each qualification; and
- Possibilities of progression from one qualification to others in the HEQF.

This specification and description provide a substantial framework for qualification design and assessment but these details are largely structural and do not address, directly or sufficiently, the issue of standards *per se*.

It has been mentioned that neither NQF level descriptors nor the HEQF are designed fully to align qualification purpose with outcomes. There is also the matter of distinction between the purposes of various qualification types. While the HEQF does provide very general statements about the purpose and characteristics of qualifications, what it does not do is provide any meaningful guidelines for distinguishing clearly between higher education qualifications with *different purposes* in respect of their primary knowledge orientation, such as the role of discipline-based knowledge, of professionally-derived knowledge, and of workplace-derived knowledge. Given that qualifications at the same NQF level may have similar levels of cognitive or content demands, while having very different purposes and thus different balances between the conventional knowledge, skills and values/attitudes inherent in them, it would be problematic, if the HEQF were to be deemed a standards-setting or standards-management framework, that it provides no guidance in this regard. It is therefore clear that the HEQF was not intended to perform this function. As a broad structural framework, it does not delve into the distinctions and nuances that come from differences of purpose and differences in knowledge areas/fields within common qualification types or NQF levels.

C.3 CHE review of the HEQF

As indicated in its Communiqué 1 (CHE, 2010), the CHE is conducting a review of the HEQF. Submissions from higher education institutions have been received and collated. The CHE has approved a set of recommendations to be submitted to the Minister. Because any changes to

the HEQF will influence the development of qualification standards in higher education, the proposals that will go to the Minister are summarized below.

1) The HEQF should reflect an approach to standards that includes recognition of three broad qualification routes. (This matter is discussed in detail later in this document.)
2) The HEQF should provide for various forms of work-integrated learning. (Recognition of forms such as work-directed theoretical learning, problem-based learning, service learning, etc., is likely, in certain cases, to have profound effect on qualification standards.)
3) While in the short term they should remain on the HEQF, in the longer term the NQF level 5 Higher Certificate and level 6 Advanced Certificate should be offered as particular qualification types elsewhere in the education system. (If this proposal is accepted, then standards for these two qualifications will ultimately fall beyond the scope of the CHE.)
4) The HEQF should introduce a 240-credit diploma at level 6 as a variant of the 360-credit diploma. A 240-credit diploma must lead to a professional designation, whereas a 360-credit diploma may or may not so lead. (Standards for the two diploma variants would be distinctive.)
5) There should be provision for a 360-credit professional bachelor's degree.
6) The purpose and characteristics of the bachelor's degree should recognize that both the 360- and 480-credit variants may have either a professional or general orientation. (It would then be highly unlikely that all bachelor's degrees could subject to a single set of standards.)
7) The purpose and characteristics of the Advanced Diploma should be expanded to make provision for articulation directly with a cognate Honours degree at level 8 as well as with a Postgraduate Diploma.
8) The CHE proposes the introduction of a professional master's degree as a separate qualification type to the general master's degree with its current two variants, by coursework and by dissertation.
9) There should be provision for a professional doctoral degree, as a variant of the current research doctorate.
10) The HEQF should not specify maximum credits at levels below the exit level of the qualification.

If some or all of the recommendations above are incorporated in a revised HEQF, while they will affect the matrix of qualifications, they will not materially affect the principles on which standards are developed, nor will they affect the basic framework for developing standards that is outlined below. Although the recommendations for amendments to the HEQF remain subject to Ministerial consideration and approval, the framework takes them into account. The amendments are not of the sort that, whether approved in whole, in part, or not at all, would require radical revision of the basic standards framework.

Appendix D

Qualification 'pathways' in higher education

The HEQF seeks to cater for the entire range of qualifications awarded at NQF levels 5-10. While the HEQF attempts a limited differentiation *between* qualifications, mainly through the presence or absence of the need for a 'typical' inclusion of work-integrated learning , for example differentiation in workplace emphasis between a diploma and a degree, it does not attempt a similar differentiation *within* qualifications. There is an assumption in the HEQF that some qualifications are more suited than others to different ends of the spectrum referred to above, although this assumption is nowhere explicit. In this respect, the HEQF differs from the qualifications frameworks of some other countries. There are cases in which a clear distinction is made between different qualification purposes. Some qualification frameworks distinguish clearly between qualifications in the field of 'vocational and technical training' and the professional and general qualifications that are defined as 'higher education'.[4]

Distinctions of this kind, or of similar kind, are not apparent in our HEQF. Experience, however, indicates that some form of distinction is necessary between qualifications whose purposes and outcomes place them at various positions on the qualifications spectrum. Referring to early tendencies towards an 'integrated approach' to the NQF, a 2006 report (CHE, 2006) cites a 2003 Consultation Document developed jointly by the Departments of Education and Labour which distinguishes between three qualification 'pathways' in the higher education band. These are defined as 'general', 'general vocational/ career-focused' and 'trade, occupational and professional' pathways. These pathways are not discussed in detail, nor is there any clear indication of how they would relate to higher education specifically, but the report comments that the emerging HEQF offers a single framework without any 'pathway' differentiation. While this is the case, there are indications that the HEQF, by including the need for work-integrated learning as a 'typical' component of some qualifications (specifically the Higher Certificate, Advanced Certificate and Diploma) but not in others, implies that qualifications particularly suited to the trade/vocational/occupational 'pathway' (with exit outcomes at NQF levels 5 and 6) should have a distinctive workplace orientation. In this tripartite qualification pathway model, there is a reasonably clear distinction between, on the one hand, 'general' qualifications and, on the other,

---

[4] This is the case, for example, in the framework developed by the Kingdom of Saudi Arabia (National Commission for Academic Accreditation & Assessment, 2009, 8). The framework describes the distinction thus:

> Programs in vocational and technical training are largely competency based with competencies directly derived from employment requirements for particular trades and occupations. Higher education programs are based to a major extent on research and the development of generalizable knowledge in a field of study, and the application of that theoretical and practical knowledge in research and professional practice.

In the Saudi Arabian framework, the term 'technical' (and, by implication, the term 'vocational') ought to be included in the naming of all qualifications of that nature, but avoided in the names of professional and general qualifications, to make the distinction transparent.

'trade/vocational/occupational' qualifications, but it does not provide adequate and distinctive space for 'professional' qualifications, which often integrate characteristics of different pathways.

To accommodate this difficulty, while at the same time acknowledging the potential merits of a differentiated qualification pathway model, a slightly different triad of pathway terms has more recently been proposed (CHE, 2009a and 2009b). They propose three arguably less ambiguous qualification 'pathways'. They are defined respectively as 'occupational', 'professional' and 'general' paths. This tripartite distinction, informed by international precedents such as the UNESCO International Standard Classification of Education ISCED (UNESCO, 1997)[5] and the EHEA qualification frameworks (Danish Ministry of Science, Technology and Innovation, 2005), has important, if not fundamental, implications for standards generation in higher education. The present document proposes that, while any 'pathway'[6] categorization is subject to radical challenge on a number of grounds, the categorization initiated in the 2006 report and refined in the 2009 proposals provides for at least a provisional way forward in the generation of higher education standards that are capable of representing the diversity, in terms of purpose and outcomes, of qualifications (and programmes leading to those qualifications) at NQF levels 5 – 10.[7] This range of levels embraces a complex combination of knowledge, skills and applied competence.[8] These terms can be construed as a taxonomy of learning domains, and are discussed below.

As can be seen from this brief summary of the conceptualization of 'pathways', there have been various approaches to terminology, especially the apparently inter-changeable terms 'trade', 'career-focused', 'occupational' and 'vocational'. For the sake of consistency and clarity, in this document the proposed pathways are defined as 'vocational', 'professional' and 'general'. The term 'vocational' is used mindful of the fact that the role of the CHE, as quality council for higher education, in relation to the roles of the QCTO and further education in respect of 'trade' and 'occupational' programmes and qualifications – and the effects thereon of the Organizing Framework for Occupations provided for by the Skills Development Act, 1998 as amended in 2008 (Department of Labour, 2008b) – has yet to be finalized.

In common with the UNESCO ISCED and the EHEA frameworks, among many others, this standards framework will distinguish between vocationally-oriented, professionally-oriented,

---

[5] Although, for the first stage of tertiary education, ISCED proposes two categories of qualification, it is clear that three pathways are distinguished: in the first category a distinction is made between 'theoretically based/research preparatory' programmes and programmes 'giving access to professions with high skill requirements'; the second category includes programmes that are 'practical/technical/occupationally specific'. This categorization, however, is not a feature of the second stage of tertiary education, which is largely research-based.

[6] The term 'pathway' itself may be amenable to review. Alternatives such as 'streams', 'routes', 'tracks' or 'orientation' could prove to be preferable. However, terms used in the HEQF and elsewhere, having different connotations (e.g., 'types', 'variants') should be avoided, to prevent possible confusion.

[7] Each pathway can, in principle, be sub-divided. For example, in the Canadian Quality Assurance system, bachelor degrees are categorized in four types: programmes for a broad education as an end in itself; those for in-depth study of an academic discipline; those with an applied focus; and those with a professional focus (Council of Ministers of Education, Canada, 2007).

[8] Most qualifications frameworks internationally include descriptors of a taxonomy of learning outcomes. The number of descriptors varies.

and general qualification pathways. Although there will, obviously, be occasions when some degree of porosity in the boundaries between the paths is called for (as well as cases in which the pathway alignment of a programme is disputed and would call for resolution by experts in that field), in general qualifications and their standards can be classified as belonging to one of these three orientations. The critical issue will be the stipulation of the coherence requirements and the mix for each qualification, since even qualifications belonging to a common path may well differ in key standards-relevant ways, in the levels of specialization, and in the mix of contextually and conceptually relevant knowledge and skills. The following figure represents these three proposed pathways.

Figure 7: Qualification pathways
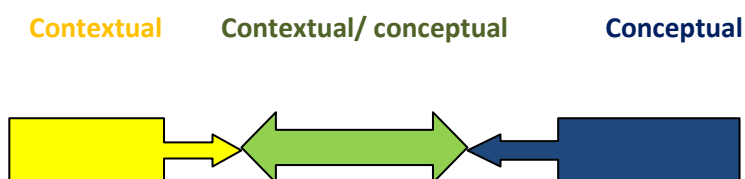
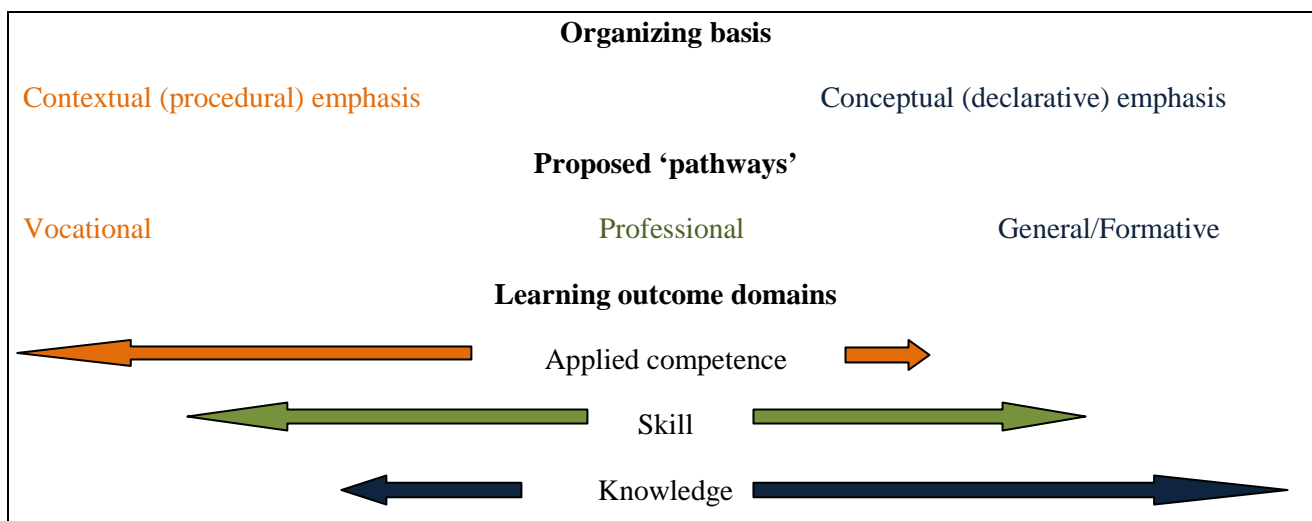|	Vocational qualification	Professional qualification	General qualification
Labour market	Eg. engineering trades (fitters, boilermakers), HR operators	Eg. engineers, lawyers, journalists, doctors, social workers, teachers	Eg. academics, researchers, welfare and service workers
Knowledge and skill requirements	Practical knowledge grounded in applied theory	Pure and applied theory plus practical experience	Largely theoretical progression of the discipline or field
Induction	Apprenticeship	Induction, internship (e.g. articles, housemanship)	Mentorship (e.g. postdoctoral work, probation)
Typical qualifications	Higher Certificate: Office Administration (5); Advanced Certificate: Oral Hygiene (6)	Bachelor of Law (8); Master of Arts: Clinical Psychology (9)	Bachelor of Commerce (7); Postgraduate Diploma (Gender Studies) (8)

Reference was made earlier to a taxonomy of learning domains representing the contextual-conceptual spectrum of competence. What is needed is a set of domains that, without being excessively complex, is capable of reflecting the distinctive characteristics of the vocational,

professional and general pathways respectively. A survey of international practice shows that, while there are differences in the number of domains (for example, autonomy, independence, accountability, breadth of practice, making informed judgements, ethical and moral development are variously identified as distinctive domains)[9], what is common is that the domains include, at least, a knowledge-base, a skills-base, and the application thereof in a relevant context.

This taxonomy characterises many national frameworks and standards, although actual terms may differ. By way of illustration, the Australian Qualifications Framework applies a simple triad of 'dimensions of competence': knowledge (what a graduate knows and understands), skills (what a graduate can do), and application of knowledge and skills (AQF, 2011). The AQF defines 'application' as 'how a graduate applies knowledge and skills in context and in terms of autonomy, responsibility and accountability'. By way of comparison, in the European Framework (FQEHEA, 2005, 40-41), three strands are defined: 'knowing and understanding' (theoretical knowledge of an academic field); 'knowing how to act' (practical and operational application of knowledge to certain situations); 'knowing how to be' (values as an integral element of perceiving and living with others and in a social context). In the model proposed here, the domains are referred to as 'knowledge'[10], 'skills' and 'applied competence'.

The relationship between the organizing basis, the proposed 'pathways' and the learning outcome domains can be expressed as follows.

Figure 8: Organization, 'pathways' and learning domains

The question then arises what the relationship might be between these knowledge/skill/applied competence learning domains and the nine modal qualification types permitted by the HEQF. As with debates within disciplinary and professional

---

[9] See, for example, the summary of higher education qualification frameworks provided by the Asia-Pacific Economic Cooperation (APEC, 2009).

[10] Some qualifications frameworks include, in the classification of outcomes, a category that focuses on an understanding of the *limits* of knowledge achieved. See, for example, the Canadian higher education standards (Council of Ministers of Education, Canada, 2007, 6).

communities, questions about permissible qualification types reflect a dynamic interaction between knowledge production and the world of work, and it will only be in moribund fields that no debates will arise.

References

Allais S.M. and Shalem Y. (2005). Why the case for outcomes-based standards in quality assurance is a circular argument. Paper presented at the CHE Standards Setting Seminar, 25 January 2005. CHE, Pretoria. Unpublished.

Asia-Pacific Economic Cooperation (APEC, 2009). Mapping qualifications frameworks across APEC economies. APEC Human Resources Development Working Group, June 2009, www.apec.org.

Australian Qualifications Framework (2011). Pathways, www.aqf.edu.au/AbouttheAQF/pathways and www.aqf.edu.au/AQFGlossaryofTerminology.

Australian Universities Quality Agency (2009). Setting and monitoring academic standards for Australian higher education: a discussion paper. May 2009.

Barrie, SC. 2007. A conceptual framework for teaching and learning of generic graduate attributes. *Studies in Higher Education*. 32(4): 439-458.

Barrie, SC., Hughes, C. & Smith, C. (2009). National Graduate Attribute Project (GAP) Final Report. http://www.itl.usyd.edu.au/projects/nationalgap/resources/presentations.htm

Commission on Higher Education, Thailand (2006). National Qualifications Framework for Higher Education in Thailand. www.mua.go.th/users/tqf-hed.

Council of Ministers of Education, Canada (2007). Ministerial statement on quality assurance of degree education in Canada. www.cicic.ca/docs/cmec/OA-statement-2007.en.pdf.

Council on Higher Education (2006). Standards setting and Standards Generation in Higher Education in South Africa. Unpublished.

Council on Higher Education (2009a). Higher Education Qualifications and Standard Setting. Unpublished.

Council on Higher Education (2009b). Discussion Document: An Approach to Standards Setting for Qualifications in Higher Education. Unpublished.

Council on Higher Education (2010). Communiqué 1: The functions of the Council on Higher Education as a Quality Council: the Higher Education Qualifications Framework (HEQF). Pretoria, 12 October 2010.

Cullen P. (2010). Determining whether intended learning outcomes meet subject-specific and academic and/or professional requirements. In Quality Assurance and Learning Outcomes, ENQA Workshop Report 17, European Association for Quality Assurance in Higher Education, Helsinki, 2010, 17.

Danish Ministry of Science, Technology and Innovation (2005). A framework for qualifications of the European Higher Education Area (FQEHEA). Copenhagen, February 2005.

Department of Education (2001). National Plan for Higher Education in South Africa, Government Gazette, vol. 230, no. 22138, 9 March 2001.

Department of Education (2007). The Higher Education Qualifications Framework (Higher Education Act, 1997), Government Gazette, vol. 508, no. 30353, 5 October 2007.

Department of Education (2008). Higher Education Amendment Act (Act No. 39 of 2008), Government Gazette, vol. 521, no. 31651, 27 November 2008.

Department of Education (2009). National Qualifications Framework Act (Act No. 67 of 2008), Government Gazette, vol. 524, No. 31909, 17 February 2009.

Department of Labour (2008a). Skills Development Amendment Act (Act 37 of 2008), Government Gazette, vol. 521, no. 31666, 1 December 2008.

Department of Labour (2008b). Occupational Qualifications Framework: draft policy for the Quality Council for Trades and Occupations. www.labour.gov.za/.../qcto-draft-occupational-qualifications-framework.

Department of Science and Technology (accessed 15 April 2011). Standards South Africa (STANZA). http://www.dst.gov.za/s-tlandscape/public-research-institutions/science-councils/stanza.

Department of Trade and Industry (2008). Standards Act (Act no. 8 of 2008), Government Gazette, vol. 517, no. 31253, 18 July 2008.

Griessel, H. & Parker, B. (2009). Graduate attributes: a baseline study on South African graduates from the perspective of the employers. HESA and SAQA. http://www.saqa.org.za/docs/pubs/general/graduate_attributes.pdf.

Higher Education Quality Committee (2004). Criteria for programme accreditation. Pretoria: CHE.

Holmes, L. (2000) "Questioning the Skills agenda" in Fallows, S& Steven, C., (Eds.), *Integrating Key Skills in Higher Education*, pp. 201-214 (London, Kogan Page).

James, P., Lefoe, G. & Hadi, M. (2004). Working "through" graduate attributes: A bottom-up approach. Proceedings of the HERDSA 2004 International Conference. http://www.herdsa.org,au/conference2004/contributions/RPapers/P022-jt.pdf

Jones, A. (2009). Redisciplining generic attributes: the disciplinary context in focus*. Students in Higher Education*, Vol 34, no 1, pp 85 -100.

Qualifications Agency (2007). Malaysian Qualifications Framework. www.mqa.gov.my/mqr/english.

National Commission for Academic Accreditation and Assessment, Kingdom of Saudi Arabia (2009). A National Qualifications Framework for higher education in the Kingdom of Saudi Arabia. Riyadh, 2009.

Quality Assurance Agency (2007). Academic infrastructure: Subject benchmark statements. www.qaa.ac.uk/academicinfrastructure/benchmark/default.asp.

South African Qualifications Authority (2000). Criteria for the generation and evaluation of qualifications and standards within the National Qualifications Framework. Pretoria: SAQA.

South African Qualifications Authority (2010). Level Descriptors for the South African National Qualifications Framework. Pretoria: SAQA.

Tertiary Education Quality and Standards Agency (2011). Draft provider standards – consultation draft. April 2011. www.deewr.gov.au/HigherEducation/Policy/teqsa/Documents.

Umalusi (2011). Draft General and Further Education and Training Qualifications Framework for GET and FET. http://www.umalusi.org.za/ur/publications/2011.02.28%20-%20GFET%20Qualifications%20Framework%20%20draft%2011%20final.pdf.

UNESCO (1997). International standard classification of education. UNESCO, November 1997.

Walker, M. (2010). A human development and capabilities "Prospective analysis" of global higher education Policy. *Journal of Education Policy*, 25(4): 485-501.

Woodhouse, D. (1999). Quality and quality assurance, in Quality and Internationalisation in Higher Education, *Programme on Institutional Management in Higher Education*. Paris: OECD.