COUNCIL ON HIGHER EDUCATION

A Proposal for Doctoral Qualification Types in the Revised Higher Education Qualifications Framework

(HEQF) Discussion Document

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Introduction

The Council on Higher Education (CHE) has initiated a project to define the nature and characteristics of doctoral degrees in the context of the proposed revisions to the Higher Education Qualifications Framework (HEQF) for the South African higher education system. The purpose of the project is to establish a set of criteria that could be used to define and distinguish the characteristics of the different types of doctoral degrees proposed in the HEQF, namely, the PhD, professional doctorates or other doctoral level offerings. In addition, the project also addresses the criteria that could be used to recognise and/or convert the existing D.Techs offered by the Universities of Technology in the light of the proposals in the revised HEQF.

This document, which was prepared by a Reference Group established by the CHE, is being released to facilitate the institutional responses to the revised HEQF, which are due on 7 March 2012.

Problem statement

The Higher Education Qualifications Framework (HEQF) of 2008 includes a Doctoral Degree at Level 10 as one of the permissible types of higher education offering. The HEQF states that the designator of *Philosophy* is typically used for such degrees, but other designators may also be used. A PhD, a DPhil a DEd or a DLitt are thus all encapsulated under this qualification type. The HEQF is, however, silent on what differentiates these types of offerings from each other, and beyond giving a general description of the purpose and characteristics of a doctoral degree which describes it in terms of the production and acceptance of a research thesis, it gives no further criteria for recognising a particular offering as a PhD or as another type of doctoral degree. In South African higher education institutions there are different traditions with respect to the nomenclature relating to doctoral degrees; for some institutions distinctions are made between research doctorates and senior doctorates, others use the D appellation for areas that are more professional in nature.

Within this context, two particular issues suggested that the doctoral/PhD terrain needed clarifying, and that it would be important to develop a common understanding across the system of what constitutes a PhD, as opposed to other types of doctoral degree, and to develop a set of criteria for recognising them as such. In the first instance, the question of the status of current DTech qualifications offered by the Universities of Technology and whether and how these should be converted to PhDs was a long-standing unresolved issue. While several attempts had been made to address this, the resolution had been hampered by the lack of a clear understanding of what constitutes a PhD as a specific kind of doctoral degree, and of clear criteria for determining the basis upon which DTechs, either as a whole group, or as individually distinct qualifications (if they are not all considered to be the same) are equivalent to a PhD.

The second major contextual factor necessitating work on defining better the nature and parameters of doctoral qualifications in South Africa was the CHE's proposal to the Minister of Higher Education and Training to amend the HEQF in several respects, one of which was to include a professional doctorate as a separate type of doctoral degree. The adoption or otherwise of this proposal has a direct bearing on the first issue outlined above. The revised HEQF, including this proposal, was published in the Government Gazette on 23 December 2011 and is currently awaiting public comment before being finalised. The proposal to include a professional doctorate on the HEQF was motivated in part by the recognition of a need to expand the range and types of professionally-oriented offerings on the Framework and to extend the articulation routes between them. The distinction between a doctoral degree as described on the current Framework, and a professional doctorate thus needed greater elucidation. The questions that needed clarifying were

whether the solution was as simple as PhDs for the one and Ds for the other, or whether it is the discipline and its orientation that determines the difference, or whether the mode (thesis as opposed to coursework plus thesis) is the determining factor. Further questions explored were the difference between a PhD in Education and a DEd and considering whether this would be similar for every field, how generic designators such as *Technology* should fit in to the Framework, and whether there should be a distinguishing qualification title for a professional doctorate, using such words as *Applied*, or *Professional* or whether the D appellation and a discipline designator would sufficiently describe such an offering.

Reference Group

A reference group of academic peers was established to:

- Determine the nature and characteristics of doctoral degrees in general for the South African context
- Determine the nature and characteristics of a PhD
- Determine the nature and characteristics of D degrees
- Determine the nature and characteristics of the proposed professional doctorate
- Clarify the relationships and differences between the above types of offering
- Propose a set of criteria for recognising each of the above
- Propose a way forward for determining the basis and process for recognising or converting DTEchs such that they are consistent with the new determinations and criteria developed by the reference group, and with the new HEQF in its revised form.

This document presents the findings and recommendations of that group.

Background

As in most countries, in South Africa the doctoral degree is a formal qualification awarded in recognition of advanced formal study or research in a particular academic field. It is also the highest academic qualification possible (with the possible exception of a Senior Doctorate). According to the most comprehensive recent study on the doctorate by the Council of the Academy of Science of South Africa (ASSAf), the PhD is the key qualification that defines the research standards of a country, that drives knowledge generation and that plays a critical role in reproducing and sustaining a healthy and innovative higher education system (ASSAf, 2010, p.35). While the doctorate has its origins as training towards teaching in the professions of theology, law and medicine in mediaeval Europe, the modern PhD is associated with the enlightenment and the Humboldtian research university of the nineteenth century which privileged research for its own sake; thus the role of the PhD came to be understood to be to "licence scholars to profess a discipline, to replenish communities of scholars within universities and to advance disciplinary knowledge production". (Boud, D. & Lee, A. 2009 in ASSAf, 2010, p.35). Currently, however, in the context of globalisation and the so-called knowledge economy, there is, in many countries, a renewed energy and investigation relating to a broadening of the role, function, characteristics and mode of the PhD to increase its relevance for a multiplicity of different purposes, from the narrowly academic, to training for the professions and to being more closely related to the industrial or economic development needs of a country.

The doctoral degree has come under scrutiny for a number of reasons. Even where the traditional role of the doctorate, which is to advance new knowledge in a particular discipline

through the conducting of and reporting on advanced research, is widely accepted, there are calls for re-examining the fitness for purpose of current doctoral programmes. Golde et al argue, for instance, that in a North American context where the purpose of doctoral education is broadly understood as the education and preparation of candidates for a research career in higher education, the notion of doctoral graduates as "stewards of their disciplines" needs to be better embodied in the discipline-based doctoral programmes on offer (Golde, C.M et al, 2006, pp. 3-23). They argue that the doctorate should signal a high level of accomplishment in three facets of the discipline: generation – that is, the ability to conduct research and scholarship that make a unique contribution and meet the standards of credible work in the discipline; conservation – that is, the maintenance of the continuity, stability and vitality of the field; and transformation – that is, the ability to represent and communicate the ideas of the discipline effectively through teaching in higher education or in other work settings (Ibid.pp.10-11). Implicit in this approach is that the PhD is a product, that is, an examinable thesis, as well as a process in terms of developing the individual to embody the requisite knowledge and characteristics to become a "steward of the discipline".

In a useful overview of the changing nature of the PhD in the UK context in recent years, Park notes that the fitness for purpose of the doctoral qualification has been widely questioned, particularly by students and employers. One of the key drivers of change is a growing emphasis on skills and training, on submission and completion rates, on the quality of supervision, along with changes in the examination of the thesis, and the introduction of benchmarking (Park, 2005, pp.190-192). These changes are associated with the rise of a managerialist approach to academic quality that seeks to ameliorate the interests of funding councils and research councils whose concern is to increase the efficiency of doctoral education. It is also a response to various national reports on higher education (Harris 1996, Roberts 2002, Dearing 1996) that have emphasised the need for British higher education to increase its competitiveness with other countries and to act as a driver for economic growth and development. One of the areas in which the change is most visible is in the shift from regarding the PhD as a tangible product, the *opus magnus*, a piece of research that could have a lasting impact on the discipline, towards examining the competence of the researcher and outlining the skills necessary to become an effective researcher or scholar (Park, 2005, pp.196 -198). While it has traditionally been the research content that has been examined, there is now in the UK, the USA and Australia, an increasing emphasis on the "testing of the process, looking for evidence of research training and the development of the autonomous academic researcher but with a broader skills-base for the majority of doctoral graduates whose careers will be outside academia." (Park, 2005, p.196)

This change has also been signalled in the introduction of qualifications frameworks (e.g the Framework for Higher Education Qualifications (FHEQ) in the UK, the Australian Qualifications Framework (AQF) and the European Higher Education Area (EHEA)) both within countries and as mechanisms to create equivalence of qualifications between countries, that specify levels of attainment for the individual at particular levels as well as the standards expected of particular qualifications. These are sometimes referred to as "graduate attributes", or, in the South African context, "learning outcomes".

Park outlines a number of new developments in relation to the form of the doctorate as well. Alongside the traditional PhD by thesis, some UK universities are now offering PhDs by publication (not to be confused with the higher doctorate such as a DLitt that are awarded on the basis of a distinguished and extended research career), practice-based doctorates (for example in the performing arts), professional doctorates in a variety of forms and formats and what is termed either a "new route" PhD or "integrated PhD". The last of these has been modelled on the North American doctoral model and includes taught elements, a shorter thesis than the traditional 80-100 000 word version, and is generally shorter in duration. The reaction to this development has

been mixed, with debate having been sparked about the validity and quality of such programmes and an apparently less worthwhile experience for the graduate than in a "real" PhD (Ibid. p.201). Uncertainty around the worth of such new variants may also be partly related to the fact that their introduction predated the establishment of level descriptors in the FHEQ, which outlines the expectations in terms of learning outcomes for all doctoral degrees, irrespective of their mode and type.

With respect to professional doctorates, the most developed of these in the UK, USA and Australian contexts appears to be the Doctorate of Education, DEd (or EdD). The reception of this degree has also been mixed and the difference from a PhD in Education is not always entirely clear. Other well-established professional doctorates in the UK context are the Doctorate in Clinical Psychology, the Doctorate in Engineering, and the Doctorate in Business Administration (Park, 2005, p. 201). There are others; Bourner et al listed 109 across 19 different subjects in 1998 in the UK (in the so-called first generation of professional doctorates, mostly offered by the 'old' universities) - these included a DArch, DVet, DOccPsych, DrPH and a ThD (Bourner et al; 2001, p.69).

Maxwell traces the development of the professional doctorate in UK and Australian contexts from first generation to second generation. Essentially, the first generation professional doctorates remained largely within the sphere of academe and differed from the PhD really only in form, in that they included a taught component as in American doctoral programmes, often relating to research methodology, and a shorter thesis that was examined in the same way as the traditional PhD. As they evolved into the second generation versions, however, there was a conscious effort made to develop programmes that focused on knowledge-generation in the intersection of the university, the profession and the workplace, and that therefore took different forms. Examples of these are the production of a portfolio of shorter pieces, some of which have had application in the workplace or the production of useful artefacts such as computer software, designs and folios. In so doing, the programmes began to privilege professional knowledge and outputs over pure academic knowledge (Maxwell, 2003, pp. 281-288). This development has, however, raised concerns about the academy's ability to assure the rigour of the research process, given the logical extension of such programmes requiring the involvement of professionals in supervisory activities and for the examination of the research products in whatever form they take. In general, the focus of such doctorates is the in-service (as opposed to pre-service) training of academic professionals rather than professional academics, and instead of being regarded as the individual pursuit of scholarship, these doctorates are seen as qualifications required to develop clearly defined and marketable skills (Scott et al, 2004, p.p. 18-19).

Although neither traditional doctorates nor professional doctorates are homogenous with respect to their characteristics, below is a list of typical differences between traditional doctorates and professional doctorates as compiled from various readings but from Bourner et al, 2001, pp.69-77, in the main.

	TRADITIONAL DOCTORATE	PROFESSIONAL DOCTORATE
TARGET	Aspiring academics and researchers before they enter the community of scholars	Practising career professionals in senior positions
DOMAIN OF TOPIC	Any topic to advance knowledge in the field of study	Topics that will further the development of professional or industrial practice
RESEARCH TYPE	An original investigation to gain new	Applied research to gain new

	knowledge (without being limited to practical application)	knowledge with practical aims and objectives
RESEARCH FOCUS	On a perceived gap in the literature or discipline	On projects of direct relevance to their own professional practice
STARTING POINT	A review of the literature of the field	A problem in professional practice that needs investigation and resolution
OUTCOMES	An original contribution to knowledge through research	Original contribution to the field of practice or own development as a professional
ADMISSIONS	Prior academic qualifications at appropriate level	Prior qualifications plus significant experience of professional practice
TAUGHT COMPONENT	Usually no credited taught component	On field of study and research training.
MODULARITY	Unitary thesis done on individual basis	Modular and credit-rated programmes included
PROFESSIONAL DEVELOPMENT	Pre-service training in research	In-service professional development
MODE OF STUDY	Full-time or part-time	Part-time attendance, location of research project in workplace
ORIENTATION	Theoretical	Integration of theory and practice
COHORTS	Individual, can enrol at any time	Enrolment through cohorts, structured support
DURATION	Variable per individual	Fixed duration, usually 4 years part-time for cohort
FORM	Unitary thesis of 40-100 000 words	Mini-thesis, multiple projects, portfolios of papers
ASSSESSMENT	Thesis assessment and viva voce	Taught components assessed, research component as for thesis
BREADTH OF STUDY	Focus on depth in one area	Greater breadth, interdisciplinarity and more than one topic

Situation analysis

In the South African context, the current version of the HEQF privileges the traditional academic purpose of the PhD as a qualification for which graduates must "demonstrate high-level research capability and make a significant and original academic contribution at the frontiers of a discipline or field", (HEQF, p.29) and demonstrate this in the form of the production of a unitary doctoral thesis. This restrictive view that allows only for the traditional PhD resembles the situation in the UK pre the 1990s, and is certainly out of line with the USA context in which different kinds of doctoral programmes have long been offered. The findings of the ASSAf study suggest that doctoral studies in South Africa need to be problematized and rethought to take account of some of the severe limitations experienced. First, the study concluded that in South Africa, at an average of 1039 doctorates per annum (2000-2007), or 26 doctorates per million of the total population, there are too few doctorates being produced. This is in contrast to a country such as Portugal with 569 per million (ASSAf, 2010, p.45). Secondly, there are blockages along the educational route limiting the potential pool of potential doctoral graduates, along with a low conversion rate of 37% from master's level studies to doctoral studies. Generally, based on the data produced by the study, South Africans take too long to complete doctoral studies (nearly 5 years on average), the attrition rate is high, the doctoral graduate pool lacks diversity (mostly white men in their 30s) and there are many

barriers to increasing the productivity of PhD programmes including financial constraints and limited supervisory capacity. Indeed, this is borne out by another study which points out that the "burden of supervision", that is, the number of masters and doctoral candidates relative to permanent academic staff suitably qualified to supervise such students in the apprentice model used in South Africa, doubled between 2000 and 2005 (CHE, CREST, 2009, p.15). Thirdly, the ASSAf study concluded that from employers' perspectives one of the salient weaknesses of South African doctoral programmes as a whole, is that they lack "real-world" relevance, a finding that is reinforced by the fact that more than half of doctoral graduates are employed in the higher education sector (this is assuming, of course, that academia is not the "real world"). The majority of doctorates are produced in the social sciences, in the fields of education, business and management, and religion (ASSAf, 2010, pp. 45-103). The impression is created of doctoral education in South Africa being inward-looking, limited in scope and diversity, inefficient, traditional in orientation and unequal to the challenges of a developing South Africa.

Within this context, it is germane to note that in 2007, 80% of all doctoral graduates at public higher education institutions in South Africa were produced by the universities, 17% by the comprehensive universities and 3% by the universities of technology (UoTs). For the UoTs, this translates into 38 doctoral graduates, up from five in 2005, which represents a growth rate of 27.5% as opposed to 6.8% in the universities (ASSAf, 2010, pp. 55-56). Recent figures obtained from the HEMIS system of the Department of Higher Education and Training indicate that there were 50 DTech graduates in 2009, and as many as 471 enrolments in DTechs in that same year (DHET, 2010), which suggests that the substantial relative growth is continuing in this group of institutions. The DTech can be regarded as a forerunner of professional doctorates in South Africa, yet the effect of the implementation of the current HEQF is to force a potential academic drift towards the traditional PhD. Many current DTech offerings already look very similar to the PhD; they are carried out by thesis alone and are examined in the same way as traditional PhDs and in terms of the current HEQF, they could not be curriculated otherwise. Bourner et al describe how in the UK context, the 'new' universities (or former polytechnics) had to catch up to the 'old' universities in terms of offering professional doctorates, largely because they were reluctant to offer programmes that may not have been regarded as on a par with the traditional PhD (Bourner et al, 2001, p. 69).

The ASSAf study suggests that the offering of one type and form of doctoral programme may not serve the needs of South Africa well. Among its recommendations for addressing the challenges it outlines in South African doctoral studies, is a call for a sharp increase in the number of entrants to doctoral studies which cannot easily be effected within the limitations of the current traditional, apprenticeship model of doctoral studies. Indeed, there is a call for the creation of innovative programmes that attract and retain larger numbers of post-baccalaureate students into masters and doctoral studies (ASSAf, 2010, p. 18), and for the recognition and reward of a diversity of doctoral programmes in practice. It recommends that national policy should be adapted to this end, rather than imposing a "one-size-fits-all model of the traditional PhD on a system that has long moved in the direction of multiple models of training for the doctorate in traditional academic as well as professional degrees."(Ibid.) It advocates further the strengthening of the relationship between universities and industry, as well as science councils, "so that larger numbers of doctoral students are trained and supported through learning in practice while at the same time supplementing academic advisorships on campus with those working in the field." (Ibid.) The review of the HEQF undertaken by the CHE recognised these concerns, and included among the proposals to the Minister of Higher Education and Training for amendments to the Framework the introduction of a professionally-oriented doctorate, along with a similar type at masters and bachelor levels, as well as a widening of the progression pathways open to students in professionally-oriented programmes (Revised HEQF, September 2011). This paper fleshes out the parameters of the potential professionally-oriented doctorate on the basis of the work undertaken by the CHE's reference group.

Nomenclature

The naming of doctoral degrees was one of the terms of reference that needed to be addressed. On the basis of a DHET list of designators currently used for doctoral degrees at traditional universities as they appear in the programme and qualification mix (PQM) documents of the various institutions, the following became apparent: apart from the Doctor of Philosophy (PhD), there are 22 different designators in use, such as Doctor of Commerce, Doctor of Education, Doctor of Laws, Doctor of Military Science, Doctor of Music, Doctor of Pharmacy, Doctor of Social Science, and Doctor of Veterinary Science. While many of the designators may indicate a professional orientation (e.g. Veterinary Science), others do not, and may indicate a higher doctorate (e.g. Literature). The logic behind the naming conventions and the fields in which D qualifications are granted is not immediately evident. This is further exacerbated as in some university traditions, there is a senior doctorate such that a Doctor of Science, for instance, may require a PhD as an admission requirement and may be awarded on the basis of published work as opposed to a thesis which appears to be obligatory for most. In the UoTs, there are 18 different designations, and the Latin name appears to be preferred. Apart from the Doctor Technologiae (DTech), the designations include Doctor Curiationis, Doctor of Literature, Doctor Scientiae, Doctor Musicae and Philosophiae Doctor Educationis. Again, the underlying logic is unclear. That there are different kinds of doctorates currently on offer is also evident from an analysis of 1247 current SAQA-registered doctoral offerings, as illustrated in the Table 1 below in which they are listed according to CESM category. The Table also illustrates the number of each type of doctorate in the current higher education system; that is, whether they are PhDs, DTechs, a Doctoral degree other than a PhD in a specific field and Senior Doctorates.

Table 1: SAQA-registered doctoral qualifications by title and field of study (2011)

Field of Study	Qualification Title				
	Doctor of Philosophy	Doctor of Technology	Other Doctorates	Senior Doctorates	Total by Field
01	41	10	0	7	**58**
02	12	30	25	1	**68**
03	34	49	113	2	**198**
04	14	12	30	21	**77**
05	28	3	54	0	**85**
06	18	29	9	6	**62**
07	80	1	53	12	**146**
08	9	5	23	0	**37**
09	115	42	70	13	**240**
10	128	21	6	33	**188**
11	9	15	5	0	**29**
12	22	23	10	4	**59**
Grand Total	**510**	**240**	**398**	**99**	**1247**

06 Manufacturing, Engineering and Technology
07 Human and Social Studies
08 Law, Military Science and Security
09 Health Sciences and Social Sciences
10 Physical, Mathematical, Computer and Life Sciences

11 Services
12 Physical Planning and Construction

(Data accessed November 2011)

There are different models internationally with respect to naming conventions. In the Australian context, there are two forms of doctoral degree with the same descriptor within the doctoral degree qualification type: the Doctoral Degree (Research) and the Doctoral Degree (Professional); the research variant is usually known as the PhD, and the professional variant is typically titled Doctor of [field of study]. While the emphasis in the learning outcomes and research may differ between the different forms of doctoral degree, the graduates of both are expected to demonstrate the knowledge, skills and the application of knowledge and skills of the AQF Level 10 (AQF, 2011, p.61). Similarly the FHEQ in the UK specifies that the titles PhD and DPhil are commonly used for doctoral degrees awarded on the basis of original research, but that doctoral programmes that may include a research component but which have a substantial taught component (as in professional doctorates), usually lead to awards that include the name of their discipline in their title (for example EdD for Doctor of Education or DClinPsy for Doctor of Clinical Psychology) (FHEQ for England, Wales and Northern Ireland, 2008, p. 25). The alternative is to use a signifying name to indicate the professional nature of this group of doctorates, as the DTech is currently used, such as Professional Doctorate (which translates into the rather ungainly DProf) or the use of a particular adjective before the field, such as "Applied", as in Doctor of Applied Arts in Graphic Design.

Qualification frameworks and doctoral qualifications

The Quality Assurance Agency for Higher Education in the United Kingdom (QAA) has recently published its guidelines on doctoral degree characteristics (*Doctoral Degree Characteristics*, see Appendix 2). This is very useful guide to establishing a common understanding across the sector in the UK and from different perspectives, academic, employer, and student or otherwise. This needs to be read in conjunction with the *QAA Code of Practice, Section 1: Postgraduate Research Programmes* (QAA, 2004) which sets out the conditions necessary to be present in high-quality research environments and the roles and responsibilities of students and supervisors. The characteristics have been harmonised with the "Dublin descriptors" which in 2004 were agreed to be the basis of the overarching framework of the European Higher Education Area. In this context it was agreed that qualifications that signify completion of the third cycle (i.e. doctoral level) are awarded to students who:

- Have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field
- Have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity
- Have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication
- Are capable of critical analysis, evaluation and synthesis of new and complex ideas
- Can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise
- Can be expected to be able to promote, within academic and professional contexts technological, social or cultural advancement in a knowledge-based society.

Of interest here is that the descriptors are framed entirely in terms of the expected competences of the doctoral graduate, rather than a description of the output of such study. These have been used to inform national qualifications frameworks, such as the Danish, which adapts the above as in, for

example, the fourth bullet above becoming "must be able to analyse, evaluate and develop new ideas, including design and develop new techniques and skills within the subject area" (note that critical analysis has been excluded as this is expected to have been developed at prior levels of the framework) (Higher Education in Denmark p. 24, EHEA website http://www.ehea.info/).

Similarly, the Australian Qualifications Framework specifies the level descriptors for all Level 10 qualifications in terms of the competences required of graduates and then in the qualification descriptors defines what is expected in the qualification. The South African system works in a similar fashion; the draft level descriptors for the NQF outline the framework for the qualification type descriptors in the HEQF.

Findings

1. The Reference Group, having considered a variety of sources of information and having discussed the issues at length, concluded that there should be a range of doctoral qualifications on offer in South African higher education. The Group was concerned, however, that no matter what type or form the doctoral level qualification takes, there should be a set of non-negotiable characteristics that underpin a Level 10 qualification. The Group endorsed the draft SAQA level descriptor for a Level 10 qualification but proposed that in addition, the so-called Dublin Descriptors should be adopted in the South African context and pertain to all doctorates. Two major concerns would hereby be addressed: the first was to facilitate the international comparability of South African doctorates, while the second was to ensure that all types of doctoral offerings within South Africa would be equivalent in terms of level, complexity and graduate attributes. A finding of the Group was that a characteristic that should be emphasised is the criterion of an original contribution to knowledge production, whether this took place in academic or professional contexts.

All South African doctorates should have the characteristics outlined in the Dublin Descriptors and must adhere to the SAQA level descriptor for a Level 10 qualification.

2. The Reference Group acknowledged the challenges posed by the ASSAf study and concluded that the current HEQF was unduly restrictive in insisting on a single model of doctoral qualification, that is, the carrying out of original academic research resulting in a singular thesis, whether it be professionally or academically oriented.

There should be a more flexible range of types of doctoral offering in South African higher education.

3. The Reference Group, in taking account of the challenges outlined in the ASSAf study, and recognising international developments in the last two decades, proposed that the range of potential doctoral types be extended to include a professional doctorate which will take a different form from the current offerings.

The Reference Group endorses the proposal in the Revised HEQF for the inclusion of a professional doctorate on the Framework.

4. The Reference Group found that the qualification descriptor for the professional doctorate on the version of the revised HEQF that was sent to the Minister of Higher Education and

Training would be acceptable with two minor amendments: that "mini-thesis" become "original thesis" and that the last sentence under **Purpose** be deleted, that is "Frequently a professional doctorate will be developed in collaboration with a professional or statutory body."

The Reference Group endorses the qualification descriptor for the professional doctorate in the revised HEQF.

5. The Reference Group found further that the format of the proposed professional doctorate would be in line with the so-called second generation of professional doctorates in other contexts, that is, that it would not be a PhD thesis by another name, but would be substantially different in that it would be distinguished, among other things, by its orientation towards the solution of problems encountered in professional contexts, it would not usually comprise a unitary thesis but rather a series of shorter problem-based assignments and a shorter thesis, that a certain amount of credit-bearing coursework would be included, and that the offering would take the form of a structured programme able to be undertaken on a part-time basis within a specified time-frame as opposed to a singular individual thesis done according to an individual's pace.

   The professional doctorate should take a different form from the PhD or other research-based doctorates designated with the D appellation.

6. Currently there are, as indicated above, a substantial number of doctoral offerings in South African higher education. PhDs constitute the largest number, but there is a large number of other doctorates (Doctor of…) offered by traditional universities, as well as DTechs offered by Universities of Technology. All current offerings are by research thesis, thus there are currently no professional doctorates of the type envisaged in the revised HEQF, and any such offering would therefore be a new one. The Reference Group found that the DTechs are currently an anomaly in the system. The Group proposed that in future there be two variants of the research doctorate – a PhD which is characterised by so-called "blue skies" research or research intended to extend the boundaries of knowledge in a particular discipline without necessarily having an immediate practical application, and a Doctor of (field) qualification, also conducted through original research presented in a unitary thesis, but where the field and the orientation is more professional or applied in nature than the PhD area. The professional doctorate would be a new creation. Current DTechs would need to be aligned with the new HEQF each in terms of its own merits: some, given the nature of the discipline and the orientation of the qualification would become PhDs, while most would most naturally become Doctor of (field) qualifications by virtue of the applied or professional nature of the discipline, as in the Doctor of (field) qualifications currently offered by traditional universities. A third possibility would be for a current DTech to be developed in time as a professional doctorate, a third type of doctorate, which has a different set of characteristics.

There would, in the new HEQF, be two variants of the research doctorate by thesis – the PhD and the Doctor of (field). A third type would exist in the new professional doctorate. Current DTechs qualifications would be aligned individually as part of the HEQF-alignment process into either the PhD or D variants, according to their specific orientations. It would be expected that all universities would in time develop professional doctorates as a new type of offering where appropriate.

7. Given the Reference Group's view that all doctorate qualifications should share the same set of overall characteristics, the naming conventions should reflect that. The Doctor of Philosophy should be retained with the abbreviation of PhD or DPhil to ensure international recognition. All other doctorates, including the professional doctorate, should be named Doctor of (field).

The Reference Group proposes two types of name for doctoral qualifications: Doctor of Philosophy (PhD, DPhil) to which a designator may be added for variant one, and Doctor of (field, designator) for all others (D(field).

8. Given the above findings, the Reference Group proposes a Typology of Doctoral Offerings based on a set of characteristics to assist institutions in aligning their current doctoral offerings with the HEQF and for curriculum development in the future. Such a typology cannot be based on hard-and-fast rules, but should provide some level of guidance in deciding which type an offering most closely resembles. The proposed Typology is presented below.

Doctoral degrees in South Africa – a proposed typology

General characteristics

Purpose: The advancement of knowledge through original research for academic or professional contexts
Outcomes: Doctoral graduates must:

- Have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field
- Have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity
- Have made a contribution through original research that extends the frontier of knowledge be developing a substantial body of work, some of which merits national or international refereed publication
- Be capable of critical analysis, evaluation and synthesis of new and complex ideas
- Be able to communicate with their peers, the larger scholarly community and with society in general about their areas of expertise
- Be able to promote, within academic and professional contexts, technological, social or cultural advancement in a knowledge-based society. (*adapted from Dublin Descriptors, 2004*)
- Have fulfilled the requirements of a Level 10 qualification:
  These include the demonstration of intellectual independence in the pursuit of advancing knowledge or solving problems at the forefront of a discipline or area of professional practice, in an ethical and accountable manner, such that the output can be clearly communicated to specialist and non-specialist audiences using the full resources of an academic or professional discourse.
  (adapted from SAQA Draft Level Descriptors for the NQF)

Doctor of Philosophy	Doctor of … "field"	Professional Doctorate
• **Purpose**: the advancement of knowledge through original research primarily for academic contexts	• **Purpose**: the advancement of knowledge through original research for academic or professional contexts	• **Purpose**: the advancement of knowledge through original research primarily for professional contexts
• **Specifications**: Level 10, 360 credits	• **Specifications**: Level 10, 360 credits	• **Specifications**: Level 10, 360 credits
• **Thesis** of 40-100000 words	• **Thesis** of 40-100000 words or portfolio of publishable papers	• **Thesis/projects/professional portfolio** and coursework (not more than 40%)
• **Orientation**: academic, theoretical	• **Orientation**: academic, integration of theory and practice	• **Orientation**: professional, applied
• **Characte**r: high level research to make significant and original academic contribution at the frontiers of a discipline or field. Discipline likely to be general academic in nature	• **Character**: high level research to make significant and original academic contribution at the frontiers of a discipline or field. Discipline likely to have a professional orientation	• **Character**: high level research to make significant and original contribution to solving problems in a professional context. Context likely to be inter-disciplinary
• **Target**: Aspiring academics and researchers before they enter or while in a community of scholars	• **Target**: Aspiring academics and researchers before they enter or while in a community of scholars	• **Target:** Practising career professionals with extensive experience
• **Topic:** Any topic to advance knowledge in the discipline or field of study	• **Topic**: Any topic to advance knowledge in the discipline or field of study	• **Topic**: Topics that will further the development of professional or industrial practice
• **Focus:** Generally on a gap in the literature	• **Focus:** Generally on a gap in the literature	• **Focus:** on projects of direct relevance to professional practice

Doctor of Philosophy	Doctor of … “field”	Professional Doctorate
• **Research type**: original investigation, empirical or conceptual, not necessarily related to practical application	• **Research type**: original investigation, empirical, applied	• **Research type**: original investigation/s, aims to develop new knowledge to solve practical or theoretical problems relevant to professional practice
• **Assessment**: external examination of thesis	• **Assessment**: external examination of thesis	• **Assessment**: external examination of coursework and thesis
• **Admission requirements**: An appropriate Master’s degree	• **Admission requirements**: An appropriate Master’s degree	• **Admission requirements**: An appropriate Master’s degree and professional experience
• Done on basis of **individual** admission	• Done on basis of **individual** admission	• Done on basis of admission to **cohort**
• **Duration:** Variable according to individual, normally 3-4 years	• **Duration:** Variable according to individual, normally 3-4 years	• **Duration:** Fixed duration for cohort
• Full-time or part-time	• Full-time or part-time	• Usually part-time, may include appropriate forms of WIL
• **Abbreviation:** PhD in “field”, DPhil, DLitt e.g. PhD in Biology	• **Abbreviation:** D“field” e.g. DCom	• **Abbreviation:** D”field” e.g. DPharm, DPsych, DEng, DEd