Flying blind: Policy rationales for national qualifications frameworks and how they tend to evolve

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Abstract

Some National Qualifications Frameworks (NQFs) are simply hierarchical classifications for levels of formal learning programmes and their associated qualifications and certificates. More advanced NQFs can also play a role in facilitating stakeholder interactions, creating coherent qualifications systems, ensuring fit-for-purpose qualifications, supporting wider quality assurance processes, recognising learning gained outside formal education and training and for driving broader educational reforms. They also make national qualifications systems more transparent to foreigners. Across the world there has been a rapid take-up of NQFs and there has been associated development of regional frameworks that coordinate NQFs across wide geographical regions. The evidence for the success and reliability of NQFs is weak and this raises the question about what is driving the expansion of NQFs. What are they expected to do and how might they fulfil these expectations? In this paper the evolution of NQF development in “first generation” NQFs, namely in the United Kingdom, South Africa and Australia, is used to analyse the policy rationales for NQFs, concrete experience of them and to chart the evolution

1. An initial draft of this paper was developed jointly with Prof. Jack Keating. Due to his untimely passing in July 2012 the paper could not be completed. We decided to complete the paper in honour of his contribution to the wider NQF discourse, and hence his name is included posthumously. Andrea Bateman gracefully accepted the request to complete the contribution on the Australian NQF.
of these NQFs over two decades. This analysis is then used to reflect on the future development of second and third generation NQFs as many of these new NQFs reach maturity. The paper concludes with a critical consideration of the extent to which the existing NQFs, as well as those being considered, are “flying blind”: Are NQFs being developed without the necessary evidence base for their continued existence, or are there legitimate policy rationales for this global trend that has grown exponentially over the last twenty years?

**Keywords**: National Qualifications Frameworks; National qualifications system

### Introduction

The development of NQFs has been a prominent feature of policy and structural developments within national education and training systems over the past two decades. Countries as diverse as Canada, India and East Timor have made recent decisions to establish NQFs. These initiatives follow an irregular pattern of NQF developments across parts of Asia and the Pacific, the Middle East, Southern Africa and, most significantly, Europe where there has been a rapid expansion in the number of countries developing NQFs (European Training Foundation [ETF], 2012; European Centre for the Development of Vocational Training [CEDEFOP], 2012).

The significance of these developments is indicated by an increase in national government decisions to develop NQFs that seem independent of national economic and social contexts. It also is indicated by the varied sets of expectations that governments have placed upon them (Coles, 2007; Tuck, 2007). The use of qualifications as a policy instrument did occur before the worldwide movement towards NQFs — since the 1970s governments have been driven by economic and social objectives that invariably call for higher levels of participation in and stronger patterns of outcomes of education and training as well as greater relevance of education provision. The design and management of qualifications have been key policy tools in pursuing these objectives (OECD, 2007). Since the 1990s NQFs have gained increased acceptance in countries across the world: first in Anglo-Saxon countries such as Australia, New Zealand, Scotland, Ireland and England, one Francophone country, France, and then closely followed by South Africa, Malaysia and others. Regional qualifications frameworks in Europe, Southern Africa, the Caribbean and South-East Asia and the Pacific have also followed, albeit at different levels of development (ETF, 2012).

In this paper we critically reflect on this global move towards qualifications frameworks over the last two decades. As authors of the paper we have all been closely involved with these developments in our own countries, regions, as well as internationally. We have experienced first-hand what it takes to develop both
national and regional qualifications frameworks; we have experienced the successes and failures in our home countries; and we have assisted countries and regions to develop fit-for-purpose qualifications frameworks.

Following a discussion on the future of NQFs with the late Professor Jack Keating in 2010, the idea of a paper emerged and initial work took place up to 2012 when Jack passed away. In recognition of his contribution to the NQF discourse internationally and the need for a paper of this kind, we have completed this paper with the kind assistance of Jack’s colleague Andrea Bateman.

This paper is asking new questions about the promise of NQFs (McBride & Keevy, 2010). We take note that the evidence for the success and reliability of NQFs is weak (Evans-Klock, 2012), but being intimately involved in the development and implementation of NQFs, we ask difficult questions: What are NQFs expected to do and how might they fulfil these expectations? How will the future of NQFs unfold as many of the new NQFs reach maturity? By focusing specifically on our experiences in the United Kingdom, South Africa and Australia, we analyse the policy rationales for NQFs as we chart the evolution of these NQFs over two decades. We end the paper with some thoughts on NQFs in the future.

Policy rationales for the first phase of NQF development

The first phase of NQF developments took place in the first decade of the 1990s and was concentrated in the Anglophone countries of the United Kingdom, New Zealand, South Africa, and Australia; although it can be argued that the French system of classification of certification/qualifications levels predates this Anglophone initiative as it became operational during the 1960s (Charraud & Paddeu, 1999). The reasons for this concentration are typically located with decisions to move towards more outcomes-based vocational education and training systems in these countries, and the associated move towards competency-based training.

The Anglophone interest in outcomes-based education has been linked to liberal economic reformist policies that were launched in the 1980s in the United Kingdom, New Zealand and Australia. Extended to vocational education and training, these reforms involved the breaking down of the provider control and restrictions over courses and their delivery. The transfer of control of training programmes and qualifications to their users, who were regarded as employers and individuals, required the removal of qualifications accreditation functions from, and the regulation of, awarding functions of providers. It also demanded, at least in vocational education and training, the establishment of independent agreed standards for the content of programmes. More open training markets also
required more regulation that would provide nationally consistent systems for the accreditation of providers.

At the same time, outcomes based-education challenged assumptions that the location of learning was in formal provider based training programmes. The idea that learning occurs in work and social life had the advantage of strengthening the link between education provision and the labour market, in realising potential efficiencies in course delivery time and costs and in greater equity for those who have faced barriers in accessing and completing formal education and training programmes.

The South African rationale for the NQF was more extensive than those for Australia and the UK and included goals of overcoming discrimination which was part of the apartheid dispensation. This transformational purpose has remained an integral part of the South African NQF to date but it has come at a price. Implementation has been plagued by continued criticism which resulted in an extended review that started soon after the NQF was first implemented, in 1995, and lasted up to 2008 when new legislation for the NQF was promulgated.

The sense of need for economic and social reforms in these countries also drove policies of educational expansion and supply side policies of enhanced workforce skill levels and lifelong learning. These policies, including the development of qualification levels defined only by outcomes, drew business and union constituents together with government. Across these Anglophone countries there was a relative absence of the strong social partner controlled industry and occupational sectoral infrastructures that existed in many European countries. So despite competency or outcomes-based training’s origins in liberal economic philosophies and its emphasis upon empirically rather than historically derived knowledge, its adoption into a national training system required greater centralisation and state intervention. This manifested itself in state support for industry bodies and the establishment of national standards setting bodies, qualifications accreditation and awarding systems, and provider registration systems. Such developments were not paralleled across those European countries, such as Germany, where the core functions of the training awarding functions have been located with industry, regional authorities or social partner controlled agencies.

At the same time worldwide, high skills policies (Brown, 2001) led to expansion of higher education participation and the associated goal of greater flexibility that manifested itself in modularisation of programmes, use of learning outcomes and experimentation with credit arrangements. It is also arguable that employability of graduates became a stronger policy objective of higher education institutions
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(Knight & Yorke, 2004). The increased flexibility of higher education saw a diversification and expansion of programmes and it became necessary to make implicit hierarchies of qualifications and the range of titles used more consistent. Thus the qualifications provision began to take on the shape of a qualifications framework. This has continued and is now illustrated sharply by the Bologna Process and the Qualifications Framework for the European Higher Education Area (Adam, 2013).

The objectives of setting of nationally consistent industry skill standards, the national recognition of and user confidence in training awards irrespective of their provider origins, and better access to and progression through qualifications all led to the concept of a national system of VET qualifications. The location of some of these principles and objectives in the schools and the higher education sector extended this concept to that of a national qualifications system. A national qualifications framework was a logical means of formalising the provision of all the major national qualifications into a single classification that showed progression as well as provision.

Economic drivers clearly dominated the pressures for creating an NQF and using it to improve the volume, focus and quality of training. Linked to this was the need for national companies to be competitive globally and for countries to be attractive as places to invest in business infrastructure. Other rationales for NQF development included the need to provide better internal logic, both social and developmental, to improve education and training systems. Examples include NQFs in South Africa, Ireland, Russia, Poland and some Association of South East Asian Nations (ASEAN) countries.

There were also political, social and economic drivers for the formation of international or regional qualifications frameworks (common reference frameworks) to support free trade agreements, enhance mobility of learners and workers and support business generally by creating tools to make foreign qualifications systems more understandable. In consequence, it became necessary for NQFs to use these common reference frameworks. Examples of such developments are the European Qualifications Framework (EQF), the ASEAN Qualifications Reference Framework, the Pacific Qualifications Framework, the Southern African Development Community (SADC) Regional Qualifications Framework (RQF), and the Technical and Vocational Education and Training (TVET) RQF in the Caribbean region (ETF, 2012).

We note that national and regional qualifications frameworks have different functions and rationales. These are summarised in Table 1 below.
The networks of common reference frameworks and NQFs are indicators of broader internationalisation of provision (online programmes, international qualifications, international licensing), greater migration (the need to recognise foreign qualifications) and leading-edge skills development (to boost trade and attract inward investment). These three areas have pushed qualifications systems into the international arena and, to make these rather complex systems more understandable, it has been necessary to create NQFs that show levels, qualifications and qualifications types, progression pathways in relatively simple constructions.

These and other policy rationales are further explored in the context of case studies of the United Kingdom, South Africa and Australia on the following pages. In each case study, the evolution and impact of the NQFs, as well as some future considerations, are presented.

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### Table 1: Functions and rationales of national and regional qualifications frameworks (adapted from Bjornavold & Coles, 2008).

<table>
<thead>
<tr>
<th>Area of comparison</th>
<th>Level of qualifications framework</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National</td>
</tr>
<tr>
<td>Main function…</td>
<td>To act as a benchmark for the level of learning recognised in the national qualifications system</td>
</tr>
<tr>
<td>Developed by…</td>
<td>National governments, in many cases through national agencies set up for this purpose</td>
</tr>
<tr>
<td>Sensitive to…</td>
<td>Local, national and regional priorities (e.g. levels of literacy and labour market needs)</td>
</tr>
<tr>
<td>Currency/value depends on</td>
<td>The extent of regulatory compliance required; the level of buy-in from key role-players (such as industry, learning institutions and professional associations); the perceived or real value to the broad population</td>
</tr>
<tr>
<td>Quality is guaranteed by</td>
<td>Adherence to nationally agreed quality assurance systems, exemplified in the practices of national bodies and learning institutions</td>
</tr>
<tr>
<td>Levels are defined by reference to…</td>
<td>National benchmarks which may be embedded in different learning contexts, e.g. school education, work or higher education</td>
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Qualifications frameworks in the United Kingdom

The evolution of NQFs in the United Kingdom

In 2013 the United Kingdom had five large-scale qualifications frameworks in operation. In England, Wales and Northern Ireland (EWNi) the NQF is an eight-level structure covering all qualifications that meet certain quality criteria. There is also the Qualifications and Credit Framework (QCF) that incorporates VET qualifications that meet another set of quality criteria and uses the same eight levels of the NQF. In Scotland the 12-level Scottish Credit and Qualifications Framework (SCQF) covers all kinds of qualifications, including those from higher education. In Wales the Credit and Qualifications Framework for Wales (CQFW) is built around the NQF/QCF levels but, like the SCQF, offers an inclusive linkage to all kinds of qualifications, including those from higher education. The Framework for Higher Education Qualifications (FHEQ) uses the four highest levels of the NQF/QCF and includes most higher education qualifications. In Scotland a similar higher education framework uses the highest levels of the SCQF.

All of these frameworks are mature and most have a history that can be traced back to the 1980s with the introduction of levels for vocational qualifications based on occupational standards (Manpower Services Commission, 1986; Westerhuis, 2001). In the case of the FHEQ, the development in the early 2000s is based on the well-established cycles of higher education programmes. Whilst it is likely that the UK frameworks originated as the ‘provider capture’ type (Raggat & Williams, 1990) in that they meet a single set of government set criteria rather than multiple sets devised and owned by professional bodies, they have certainly evolved into more open forms of classification and communication and devices, such as the SCQF and the FHEQ. In the case of the QCF and NQF they have retained strong market regulatory roles.

Whilst all the frameworks are based on outcomes, which some perceive as symbolic of top down policy instruments (Young & Allias, 2009), these frameworks have attempted to become symbols of trust across a wide range of stakeholders including the learning providers that use qualifications. All the frameworks have aims and purposes that suggest the frameworks are communication tools to make the qualifications systems transparent. Indeed the aims and purposes of the EWNi NQF and the SCQF contain explicit references to adopting a learner/user centred approach whilst the other frameworks imply this focus. The SCQF and the FHEQ are explicit in their aim to facilitate lifelong learning. Credit arrangements feature in the aims and purposes of both the QCF and the CQFW.

In the late 1990s, in EWNi, five vocational levels were used in a framework which co-located three types of qualifications, occupational, general vocational...
and general schooling (Joint Forum for Higher levels, 2001; QCA, 2001). This was a critically important step since, for the first time, it signalled some kind of parity between these different types of qualification based on level even though general qualifications could not be related to the national occupational standards that formed the basis of the original five level hierarchy. In Scotland the SCQF was also beginning to locate qualifications from VET and higher education in a common set of levels.

In Scotland the evolution of the SCQF took on yet another form. The genesis of the SCQF was the collaboration between the stakeholder groups involved with the qualifications market in Scotland — principally the awarding bodies for general and vocational qualifications in Scotland, Scottish colleges, higher education and Scottish Government (Raffe 2008). In order to accommodate all qualifications in a harmonious and inclusive way, it was considered that 12 levels would be necessary and these levels were defined with level descriptors by the partner bodies. The 12 levels have persisted through the changing model of the SCQF that has resisted the focus on regulation and retained its character as an inclusive communication tool for levels of all qualifications that the partners deem to be of sufficient size, sufficiently quality assured and that are described in terms of learning outcomes for them to be assigned one of the 12 SCQF levels. The steady evolution of the SCQF has included reviews of the level descriptors (but not the number of levels) and the introduction of the use of credit as a measure of volume. The names of qualifications included in the SCQF have also changed, notably in 2013 when the word ‘National’ was adopted for major Scottish school qualifications where the distinguishing of levels is in terms of the SCQF level.

The learning outcomes approach (European Commission, 2012; CEDEFOP, 2009) is firmly established in the UK. All occupational standards, training programmes, assessment processes, qualification descriptors, national qualifications frameworks are described in terms of learning outcomes.

The impact of frameworks in the United Kingdom

The UK frameworks are clearly established as part of the qualification landscape in the UK. They are well known and trusted. The frameworks provide a language that many people are able to use to further their interests in education and training. The standards defined in the levels of the UK frameworks are deeply embedded in qualification design and in the registers of the qualifications on offer.

As the UK frameworks have evolved, strong differences have developed between them. Only in Scotland is there a single framework that, in principle, includes all qualification types across a single set of levels. In Wales the CQFW
attempts to do this though adoption of a pillar structure, which, when the pillars are taken together, offers a more or less inclusive approach. In England and Northern Ireland multiple frameworks exist and it is likely that these confuse users instead of offering a transparent and inclusive view of the qualifications system (CEDEFOP, 2013). Collectively the multiple frameworks in England and Northern Ireland do not offer an inclusive model for qualifications as they only include those qualifications from approved awarding organisations that meet certain quality criteria. There are possibly thousands of qualifications used in EWNI that fall outside these regulations. Some awarding organisations elect not to seek inclusion of their qualifications in the regulated frameworks as the conditions are perceived to have the potential to adversely affect the form, function and market for some qualifications. This non-inclusive approach to qualifications can confuse learners and employers looking for what is unregulated provision.

The SCQF makes simple demands on qualifications to be admitted to its hierarchy, the requirement for a minimum size, quality assurance and a learning outcomes format are seen as minimum requirements to support the integrity of the SCQF. This might be contrasted with the QCF which makes demands in terms of structure, for example, qualification titles, size, unit format, form of assessment criteria, classification of units as mandatory or optional, and rules of combination of units to form a qualification. The effect of the framework on qualifications therefore differs markedly. For example, the QCF requirements have led to the demise of the NVQ as a type of qualification in EWNI.

Stakeholders have been directly involved in the development of all of the frameworks in the UK. Indeed the need to engage employment interests in VET qualification structures has been a theme in the development of all frameworks and this has been particularly strong in the comprehensive frameworks.

Looking to the future

The frameworks of the UK will probably continue to adapt to the demands of the home country rather than to the needs of the UK a whole. The educations systems are diversifying according to the policies of the separate governments in parts of the UK and the frameworks need to reflect this diversity. There are clearly advantages for a UK approach — many businesses and higher education institutions tend to use a UK brand for their services and markets. Additionally, there is already a high level of learner and worker mobility across the borders of the parts of the UK. Other countries that need to use the UK qualifications systems would find it easier to deal with one framework than five.

It is arguable that the SCQF has strengthened its position as a useful device in
Scotland because it has a basis in collaborative agreements across the sectors and this has maintained its high-level operation whilst partners have initiated changes in parts of the education and training system. The SCQF is seen as a high level tool to support change rather than a part of the reforms themselves. For example, a key indicator of the continued advance of the SCQF into a common language for Scotland in terms of policy making and practice was the revision of the main school qualifications to National Qualifications with an SCQF level suffix, thus “National 4” and “National 5” will become the main qualifications for the end of compulsory education at SCQF level 5 (although most Scottish students continue in school to take their Higher courses (SCQF level 6), which also provide a qualification for entry to higher education).

In England and Northern Ireland the regulatory power of the NQF and QCF is used to moderate or drive change. There have been policy reviews of qualifications, for example related to qualifications offered to young people (Wolf, 2011) and for apprenticeship (Richards, 2013), and these call for change in the ways qualifications are organised. It can be argued that the reviews put pressure on frameworks to evolve to facilitate reform.

There seems to be little appetite for unification of the frameworks in England and Northern Ireland. Notwithstanding the differences in the basis of the key institutions (QAA is an autonomous body owned by the Universities, Ofqual is a regulatory body responsible to the UK parliament for standards in education and training), the policy to use the QCF as an inclusive framework for recognising all achievement is no longer supported as the regulatory conditions (required by the QCF) are seen as having the potential to harm the standards in classic school leaving qualifications. Thus the NQF, with weaker regulatory requirements is seen as a more inclusive and neutral tool. To unify the FHEQ, the QCF and the NQF has certain advantages (Manpower Services Commission, 2001; CEDEFOP, 2013) but also poses difficult technical and political problems.

Qualification frameworks have had multiple functions — for example in addition to being benchmarks of quality outcomes of learning programmes — they are used as part of funding mechanisms and performance tables for institutions. Moves to include measures related to qualification delivery are a challenge to the predominant outcome-based models that have been used for 30 years.

There is little hard evidence of the impact of frameworks on individuals as they plan progression or seek to clarify the value of their qualification in the labour market, but the longstanding use of levels in the different countries has led to a public language of levels to describe qualifications. Indeed there is an argument that frameworks have now done their work in establishing level as a common understanding of complex qualifications systems.
The South African National Qualifications Framework

The evolution of the South African NQF

The South African NQF was formally established in 1998 following the promulgation of the South African Qualifications Authority Act in 1995 by the first democratically elected post-apartheid government. The NQF was designed as an integrated system with a strong transformational agenda to promote lifelong learning for all race groups (SAQA, 2000). Preceding the Act, a broad and extensive consultation process took place that had its roots in the labour movement’s desire to recognise the tradable skills of black workers in the bargaining forums for better conditions of service in the late 1980s. Strongly influenced by the effects of increasing globalisation and the assumption that workplaces would be post-Fordist, a series of investigations were initiated under the broader ambit of the African National Congress’s policy development initiatives. As part of the investigations, education and training systems in a number of Commonwealth countries were scrutinised. A common trend towards national standards and flexible pathways was evident at the time. The Australian model, also with strong trade union influences, was particularly attractive to the labour constituency, while the New Zealand model was preferred by organised business. The emerging English model of National Vocational Qualifications was less attractive and perceived as compromised with strong Thatcherite pressures towards privatising education and training provisioning. The Congress of South African Trade Unions continued to champion the move towards an NQF during the early 1990s and continued to harness support through an inclusive and participatory approach (French, 2008).

The development and implementation of the South Africa NQF was ambitious from the outset, despite the fact that evidence available at the time suggested that the transformational route was a road less-travelled and fraught with difficulties. This approach was also in direct contradiction to the paradox put forward by Raffe in later years, namely that more modest frameworks are usually more successful (Raffe, 2009). An important question to ask is whether the South African NQF was in fact conceptualised as a transformational framework. To answer this, one must consider the unique South African context wherein the NQF was developed and implemented as the apartheid era government was replaced by the new democratic and multiracial order. This period was associated with extensive rhetoric and a knee-jerk negative reaction to everything developed before 1994. Some even argued that the anxious search for an alternative in the absence of any other viable options resulted in the development of the NQF:

...progressive forces could think of no coherent and feasible alternative response to the new challenges of power in the era of globalisation and the aftermath of apartheid (McGrath, 1997, p.181).
The South African NQF became caught up in the euphoria of transition in South Africa and in all likelihood became something it was never intended to be. In effect, the South African NQF was set up for failure; a good idea hijacked for political gain. This is not to say that the South African education and training system did not require transformation. On the contrary, the legacy of apartheid left the country with a skewed and largely dysfunctional system that privileged few and disadvantaged many. The point is rather that the South African NQF, on its own, could never achieve such transformation. As part of a coherent national strategy that includes direct and strategic intervention into, amongst others, inequalities amongst universities, disparities between private and public providers, increased access, the recognition of non-formal and informal learning, and skills development, the South African NQF can play a pivotal role in providing a framework wherein transformation can take place. This shift has become a reality in present-day South Africa, as the South African NQF has evolved into what many now call a third generation NQF; an NQF that is more modest in ambition and recognises differences between different types of learning within and across three distinct but articulated sub-frameworks.

The initial design of the South African NQF was strongly influenced as a result of the timing of its development and implementation that coincided with political transformation in South Africa. In effect, the South African NQF soon became corrupted by the ensuing power struggles. Today, many of the identified weaknesses of the South African NQF are being addressed, as is evident in the promulgation of the new NQF Act in 2008 (South Africa, 2008).

The impact of the South African NQF

Has the South African NQF been used to change the South African education and training system? Without any doubt, but the expectations of what it could achieve have always been unrealistic. As a result, the impact has been varied and the attempts to measure such impact highly contested. Early attempts at measuring the impact of the South African NQF (see SAQA, 2004; SAQA, 2005) were criticised for being overly perspectival, even ‘blatant NQF propaganda’ (Higgs & Keevy 2009, p. 14). Higgs and Keevy (2009) argued strongly against the original research design that proposed that the study should remain “outside” the contestations associated with the South African NQF. They suggest that evidence used in the impact study (whether from an evidence-based perspective or otherwise) could not be neutral and would necessarily be affected by the power struggles enacted within the broader NQF discourse in South Africa. Between 2006 and 2012 several attempts were made at developing an improved research design, while also drawing on the lessons learnt from evaluations conducted in Scotland (Scottish Executive,
2005), Ireland (National Qualifications Authority of Ireland, 2009), and by the International Labour Organisation (Allais, 2010). The findings of the “effectiveness study” of the South African NQF are expected at the end of 2014.

An important question to consider here is whether a more incremental, long-term, consensual and iterative model would have been more successful in South Africa. Probably not. There is an argument that suggests that the “transformational” South African NQF (with its weaknesses) provided the country with a radical break with what existed before, and as a result, placed the country on a new path. Of course, and as mentioned before, the initial design of the South African NQF proved inadequate to sustain development in the new direction and, as a result, the South African NQF evolved into its current form. The argument continues by suggesting that this radical intervention, as imperfect as it may have been, would not have been possible with an NQF that could be described as “reforming”, and much less so with a “communicative” NQF. While there is limited evidence to support the claim, evidence to the contrary is just as limited. Considering this argument, it seems fair to deduce that in some countries, as exemplified in South Africa, the reforming agenda is politically unpalatable, and is replaced by a transformational agenda (with or without the means to achieve such an agenda). Eventually, as a result of the impossibility of the task, the transformational agenda is moderated and can then be described as reformational or even communicative. This evolution does not detract from the fact that the initial transformational period served an important purpose.

Looking to the future

The most radical change to the organisational structures that form part of the new NQF landscape since 2009 was the establishment of a new quality council under the Department of Labour to perform quality assurance and standards setting functions for occupationally-directed training. The Quality Council for Trades and Occupations is now responsible for a sub-framework of the NQF that includes occupational qualifications on Levels 1–8 of the NQF. Within the new NQF landscape, professional bodies apply to SAQA to be recognised within the education and training system, while professional designations are also recorded on the NQF through an agreed process between SAQA and the professional bodies (SAQA, 2012). This recent extension of the South African NQF into the area of professional bodies and professional designations, as well as the development of a separate occupational sub-framework, are yet more examples of the persistent transformational ambition of the South African NQF.

Will the South African NQF continue to be used to transform the South African education and training system? Without any doubt, but this will take place as part
of a coherent national strategy, complemented by other change agents. As noted by Trevor Coombe (Coombe, 2012, pp. 296–297) in his tribute to the outgoing CEO of SAQA, Samuel Isaacs in 2012, it is impossible to imagine the South African education and training system without the NQF:

...the NQF itself is a national institution, the work of thousands, led by SAQA. In all likelihood the NQF will be a fixture on the South African scene for a good fifteen years more, despite its travails, controversies and uncertainties. It has framed so many of South Africa’s debates on education and training, contributed so much of the vocabulary and syntax of the South African discourse, influenced so much practice, that it is impossible to imagine what South African education and training would have been like without it.

The Australian Qualifications Framework

The evolution of the AQF

The Australian Qualifications Framework (AQF) was the creation of state, territory and federal education and training ministers and was established in 1995. The AQF evolved from two sets of developments. The first included the expansion of student participation in upper secondary school, the expansion of higher education in the 1980s and the interest in articulation and recognition of prior learning. The second was the emergence of a competency-based vocational education and training system. These developments led to a proposal for a national qualifications framework (Keating, 2003).

There were two factors that influenced the characteristics of the AQF. The first was the constitutional structure of federated states and territories which led to:

...fragmented qualifications, especially school qualifications, and has meant that any “national” qualifications framework [lacked] a consolidated statutory base, and must be built upon the “agreement” of the states and territories (Keating 2003: 271).

The second factor was the pattern of European colonisation of Australia in the six states and the establishment of universities based on the English model, two of which were established around the time of ‘the inauguration of the colonial legislature, before the establishment of the respective education departments’ (Keating 2003, p. 271). Consequently, these universities had a high degree of autonomy from the state governments and were an alternative source of “educational authority” to the
state education departments. In addition, in the school sector the boards of studies in the states and territories were independent statutory authorities and independent from the education departments. In Australia, the VET sector was separated from the other sectors ‘by its competency-based construct, constituency base, federalism and by the institutional apparatus that has been established’ (Keating, 2003, p. 274). The competency-based construct was clearly rejected by the higher education and school sector (Bowden & Masters, 1993) which were both broadly based on subject disciplines.

The embryonic AQF did not clearly outline a purpose but its claims were ambitious; that is, it should provide for nationally consistent recognition of outcomes achieved in post-compulsory education; promote pathways and lifelong learning, recognition of prior learning and credit transfer; and, promote national and international recognition of qualifications offered in Australia (AQFAB, 1995). The AQF as established involved no substantial change to the higher education sector as it essentially reflected the qualifications provided by universities, had little impact on the school sector, but resulted in changes to VET qualifications (Keating & Bateman, 2008).

The AQF consisted of a finite number of qualification type descriptors separated by sectors. It did not have formal qualification levels or level descriptors. The initial AQF qualification type descriptors were based on two other sets of descriptors. The higher education descriptors were based on the Register of Australian Tertiary Education (RATE) descriptors and the VET qualification descriptors were in the former Australian Standards Framework (Keating & Bateman, 2008).

As a framework, the AQF had no legislative base and no authority to accredit or regulate qualification awards. In the VET sector the nationally agreed processes related to accreditation of qualifications required alignment to the AQF; agreement was with government ministries/agencies and industry bodies. However, within the highly autonomous higher education sector and the relatively autonomous school sector there were no such agreements (Keating, 2003).

The impact of the AQF

There have been limited major Australian reviews of the AQF since its inception in 1995, with only one major report within the public domain, the High Level Review of Training Packages (Schofield, McDonald, & Leary, 2004), although this was specific to VET issues. Other reviews in the public domain include Keating (2003), Wheelahan (2003, 2009), OECD (2003), Asia-Pacific Quality Network (Corpus, Davies, Forsyth, Leung, Cervantes, Tillekeratne, & Martinez, 2007) and Young (2005). There have been few official reports and studies that have criticised the AQF,
and most of the critiques have been implicit in various studies and papers about sector-based qualifications (Bateman, Gillis, Noonan, & Taylor, 2005; Frankland & Smith, 2000), articulation arrangements, such as credit transfer (Phillips, 2006), analysis to strengthen the AQF (Keating & Bateman, 2008).

Critiques of the AQF identified discrepancies in levels of difficulty of VET qualifications possibly being the result of “inadequacies in the AQF descriptors used to align qualifications” (Schofield, McDonald, & Leary 2004, p. 14). In addition, criticism focused on the AQF’s capacity to link qualifications and to facilitate cross-sectoral articulation. The goal of seamlessness came under significant criticism with calls for greater linkages (Bradley et al., 2008; Keating, 2003; Wheelahan, 2003); with Wheelahan going as far to say that the AQF’s “main effect has been to maintain and entrench sectoral divisions” (Wheelahan, 2003, p. 186). The lack of formal levels, lack of legislative base and authority, especially in the school and higher education sectors, inability to facilitate or establish a credit framework was also noted (Keating, 2003). This particular issue led one state authority to develop a parallel credit framework referred to as the Victorian Credit Matrix.

If the purpose of a national qualifications framework is to provide equivalency and linkages, quality control as well as coherence, then to some extent the AQF has performed most of these functions, but only partly, or for some sectors, and/or weakly (Keating, 2003).

Up until 2010 the AQF had been remarkably stable except for the inclusion of additional qualifications in the sectorally contested field between VET diplomas and higher education bachelor degrees, the changing placement of the senior secondary certificate, and for removing the notion of qualification “levels” from the framework. From 2009 to 2010 the AQF underwent a major review coupled with extensive consultation across the sectors. The initial consultation paper contained ambitious options to develop an eight to ten level common taxonomy of learning outcomes into which qualification types would be allocated and it also encompassed a credit enabling facility that involved a measurement of the volume of learning for each qualification type at each level (AQFC, 2009).

It was envisaged that the proposals from the AQFC would face resistance from some stakeholder and industry groups that did not want their qualifications classified or described by level and volume of learning, and from elements of the higher education sector that would remain suspicious of the outcomes-based flavour.

The review resulted in the introduction of 10 level descriptors and 14 highly detailed qualification type descriptors based on a taxonomy of learning outcomes. The proposed framework was empirically tested focusing on the levels criteria, the
qualification type descriptors and the placement of Australia’s qualifications at a level in the proposed strengthened Australian Qualifications Framework (AQF) (Gillis, Wu, Dulhunty, Calvitto, & Bateman, 2010).

The revised edition of the AQF (AQFC, 2011) may not have resolved all the issues as previously identified. It did not include a volume measure as envisaged and resulted in a definition that focuses on “notional duration” as opposed to focusing on the average time for a learner to achieve the learning outcomes. The placement on the framework of the senior secondary education certificate is still ambiguous and is currently not positioned at any level. In addition, the close similarity of the level descriptors and the qualification type descriptors are potentially confusing for users.

Looking to the future

It could be argued that since 2011 the AQF has moved from a reflective framework (especially in the higher education and school sector) to a standards setting framework. This critical change included the introduction of supporting legislation in both vocational education and training and the higher education sectors requiring adherence to the framework. The revised AQF (2011) has also provided stronger policy statements on pathways and credit transfer; however, it remains to be seen whether these statements resolve the issues of lack of seamlessness and linkages.

The revised and heavily detailed level and qualification type descriptors, as well as the acceptance of qualification levels accompanied by the link to legislation may address the need to achieve greater consistency. However, there are still three very different processes for accreditation of qualifications (and the construction of sectoral qualifications) across the three sectors. These variations may be perceived as a strength (i.e. it is flexible) or a weakness. The lack of a strong and meaningful volume measure still mitigates against greater consistency of qualifications within and across sectors.

Finally, the quality assurance of qualifications within the three sectors has never been unified. Secondary school qualifications are still managed through state and territory departments of education, with a national quality assurance regulator now in place in each of the VET and higher education sectors. The AQF still remains a classification instrument and relies heavily on other processes for the quality assurance of AQF qualifications. It remains to be seen whether the key purposes of a national qualifications framework as identified by Keating (2003) have been resolved by the latest revision of the AQF.
Learning from the first qualifications frameworks

Three cross-cutting themes can be identified from the case studies: evolution, impact and future implications. The first two are discussed below and the third is taken up in the concluding section of this paper.

Evolution: starting with reforms

Having considered the histories of the NQFs in the United Kingdom, South Africa and Australia, it is evident that, apart from their geographic differences, these three systems also provide different geo-political, economic and cultural contexts. Each has also recently initiated some significant changes in its NQF arrangements. The reforms that were to lead to NQFs were driven in each of these countries by a sense of crisis or need for renewal.

In the UK, the Conservative Government had assumed office in 1979 in the wake of the industrial turbulence of the industrial “winter of discontent” of 1978 and a sense of long term economic decline relative to other European and OECD countries. The industrial reforms that were initiated did not immediately impact upon education and training. However, they precipitated or accelerated significant industrial restructuring and patterns of occupational changes and structural unemployment. These developments, together with numerous and unfavourable comparisons of the productivity levels of UK industries and the skill levels of their workers with other developed countries led to policy attention being given to the issue of workers’ training and skill levels. Within this context, qualifications reform was concentrated upon the VET sector. The highly distributed awarding function and the multiplicity of VET qualifications led to idea of a single national set of generic standards descriptors or a standards framework for VET descriptors. Connected to the principles of competency and standards based training, these developments subsequently led to the decision to establish national vocational qualifications (NVQ) that would act as benchmark qualifications to serve alongside established VET awards and eventually supersede them.

A similar scenario was played out from 2000 onwards when the new Qualifications and Credit framework in England, Wales and Northern Ireland was designed so that once again national benchmarks for qualifications were put in place (in the QCF architecture) that systematically brought together standards and qualifications offered by the wide range of sector skills councils and awarding organisations. This new inclusive framework was developed and promoted as a “framework of achievement” by the government of the time. A change of government in 2010 however has effectively put the advance of the new framework
into reverse gear and reinvigorated the more benign NQF which had never been totally abandoned.

The new democratically elected South African government entered office with a major agenda of economic and social inclusion for those members of society who had faced exclusion, including exclusion from education and training, under the former apartheid dispensation. The education and training infrastructure that was received by the new government had been developed to support privileged and racially based access under the apartheid policies. This infrastructure included the providers of education and training and the courses and awards delivered by them. The agenda of social and economic inclusion required an opening up of the education and training system to allow greater access to those communities that had previously faced exclusion and disadvantage. It also required attempts to redress past exclusion suffered especially by older workers who had not had the opportunity either to gain skills training or to have the skills that they had acquired formally recognised through qualifications. The scale of the reforms and the levels of the investments that were required to achieve access and redress were beyond the immediate means of the new government.

Impact of the NQF on the quality of education and training remained limited, while qualifications, many of which remained unused, proliferated. Trust between sectors did not improve to the extent that had been anticipated, although there was progress, as the NQF contributed in a significant way to collaboration across sectors that had previously remained closed to each other. Articulation of qualifications between the three sub-frameworks introduced by the NQF Act (South Africa, 2008) remains a serious challenge. While no NQF can be entirely seamless in that all qualifications articulate with each other, the South African NQF is facing serious challenges in that some of the main progression routes (e.g. from a technical and vocational college to a university) are not easy to use. Education and training systems are deeply historical constructs and the formal system could not immediately be transformed to one that provided widespread access and redress the denial of opportunity in the past. So a complementary strategy to reforms of the existing infrastructure was needed.

In the mid-1980s the Australian economy faced a crisis in the form of the collapse of its balance of payments that was precipitated by a fall in commodity export prices. In response, the Labor Government initiated a series of economic reforms that were designed to reduce structural barriers to industry productivity. As a national government with limited power within a federation, it sought the sponsorship of these reforms from the business community and the unions through processes of a tripartite (government, business, and unions) approach to elements of economic and social policy. Consistent with most periods of economic stress
(Wolf, 2011) the national government identified the need for stronger investment in industrial and occupational skills (Dawkins, 1988). Utilising its greater fiscal resources and the strength of the tripartite policy processes, it was able to persuade the states which have constitutional responsibility for education and training to accept a National Training Reform Agenda to establish a competency and standards based national training system, informed largely by developments in the UK. The national system that had evolved by the mid-1990s, by international standards is relatively complete. It has nationally developed and endorsed qualifications and nationally consistent processes for the awarding of qualifications and provider accreditation and quality assurance processes.

The reform processes for VET took place in almost complete isolation from the schools and higher education sectors. During this period, the school sector under the administration of stated governments also reformed their senior secondary qualifications in response to increasing retention rates. However, these reform processes did not engage the VET sector and the certificates that evolved were strong reiterations of the traditions of a general academic education. The higher education sector went through major reforms with the amalgamation of the universities and the colleges and advanced education.

The AQF, established in 1995, is an outcome of these processes and resulted in a settlement between the three education and training sectors that allowed and possibly entrenched their separateness. However, the AQF did play a role of guiding and providing a platform for cross-sectoral agreements and articulation and had a generic accreditation function in that it had the capacity to adopt and modify descriptors for types of sector based qualifications. It provided a focal point and did organise some aspects of the education and training system.

The advent of a Labor national government led to the establishment in 2008 of a non-sectorally based AQF Council (AQFC). Views that the AQF had fallen behind international developments in NQFs, especially in Europe (Keating and Bateman 2008), and criticisms of the AQF in a review of higher education (Bradley et al., 2008) led the national education and training minister to instruct the council to conduct a review of the framework, giving particular attention to its facilitation of credit transfer between VET and higher education qualifications. The culmination of this review led to the current version of the AQF.

The South African framework has been the most direct and robust challenge to historically received forms and ownership of qualifications. The Australian framework had been the most limited as it was largely confined to the VET sector, and was an outcome of rather than a vehicle for the sector reforms. The English and Welsh frameworks have been the most variable and complex.
Impact: limited, but formative

The NQF types that were adopted by these three nations share common purposes and principles. They are framed by the principle of “lifelong learning for all” and the objectives of broadening the national recognition of qualifications and facilitating access to and pathways between qualifications. They were all trailblazers in the acceptance of the principle of the recognition of informal learning and in the construction of qualifications and their assessment systems to allow recognition to be realised. Yet they are significantly different in their constructs and their ambitions. These differences are products of the different institutional forms of government, their relationship with civil society, and the institutional forms and cultures of the respective education and training institutions. These contextual factors are likely to be relatively enduring, especially over the short and medium term.

However, the differences are also the product of differences in concept and ambition. The ideas of competency and outcomes-based learning, principles and processes for the recognition of learning, the processes for the accreditation and award of qualifications, and the capacity and processes for system change all reflect differences in the epistemology of knowledge, skills and competencies, and the ownership of and value carried by qualifications. These concepts and ambitions are relatively new, contested and their impact remains therefore, largely formative. Their embodiment within the innovation of the first generation of NQFs provides unique case studies for an examination of the nature of qualifications systems and the extent to which these systems can be supported and managed to achieve wider national economic and social objectives. They also provide test cases of the efficacy of different constructs of knowledge and skills, and the processes, foundations and authority for their recognition.

Attempts to gather empirical data on the impact of first generation qualifications frameworks have had mixed success. This has been partly due to the lack of sophistication of the methodologies employed, but undoubtedly also as a result of the relational, perhaps even nebulous, nature of the construct itself (Keevy & Bolton, 2011). The many relational variables that must be taken account of, inevitably suggest the need for costly longitudinal studies that few governments have an appetite for. To date, reviews have avoided such complications, and have generally ended up being politically, rather than technically, driven. Impact analysis has been sacrificed for process (of implementation) analysis. Major reviews in South Africa and Australia (resulting in new formulations for the NQF) have been supplemented with a recent review in Wales and a series of smaller incremental reviews in Scotland that include impact analysis — for example on learners and employers. However to generalise the net result is that evidence of the impact of qualifications frameworks remains limited twenty years after the first NQFs were developed.
Concluding comments: looking to the future

The evolution of NQF development in “first generation” NQFs as described in this paper provides a useful lens to reflect on the future development of second and third generation NQFs. Some salient points are described below.

All three frameworks originated in the mid-1990s. This was a period when globalisation and competitiveness started to gain momentum. This period was associated with new business working methods, including more integration, flatter hierarchies, and more dynamic business practices. Importantly for education and training, this was also the time when a business orientation in education and training was advocated which subsequently materialised in an emphasis on competency-based training and national standards to underpin greater diversity in learning and qualifications. During this period, variation in the school sector was leading to concerns about standards. This was associated with federalism and growth in Australia, the new post-apartheid regime in South Africa, and the post-national curriculum period in the UK when variable curricula and standards was seen as unhealthy and in need of treatment. As a result, performance criteria and testing to national standards were introduced in all three cases. Universities were also seen as losing their grip on the countries’ educational needs and their autonomy, variability and lack of focus on outcomes was possibly an issue.

We see a trend for the NQFs to become less hard-nosed and more reliant on sectoral initiatives. The revised South African NQF looks to be more inclusive by design and able to accommodate difference and is now made up of three sub-frameworks. In the UK we saw moves away from framework levels based wholly on occupational standards and a broadening and accommodating approach. The ambitious nature of the AQF became weaker as it was implemented, it became more of a VET sector framework in the early 2000s. All three NQFs suggest that a stepwise evolution is a useful process, although the rate and form may vary greatly across the different contexts. All three NQFs point towards the critical role of sectors and sectoral frameworks to provide the meaningful structures and systems on a level that impacts most directly on the users of the NQF. This includes all types of learners, also professionals, and those in occupations.

NQFs may be created as a result of many pressures from within education and training and without. In all cases the NQF has been brought into existence by governments. The highest level of endorsement is a critical feature for the functioning of a framework as a transparency tool inside and outside countries. We have seen a trend for the governance of frameworks to be more remote from government as time passes, with a strong move towards the development of sector-specific frameworks. The mature frameworks are managed by agencies with strong links to government but also independent structures of consultation with main stakeholder
groups. Whilst mainstream government policy is supported, the frameworks also support other functions that are improving practice and co-ordinating changing social and technical contexts.

Learners seem to remain remote from these frameworks which is surprising as they are intended to be the main beneficiaries of NQF effects. Between the learner and the framework architecture we see interventions from curricula and programmes, assessment, teachers, and qualifications and each of these interventions has a multitude of influences and pressures that moderate the intended effects of frameworks.

Have the frameworks influenced education and training provision? We believe the answer is generally that they have not. Teaching and learning is separated from these frameworks even though learning outcomes are used across the board (Adam 2013). While the associated quality assurance processes and regulations have had some influence on provision — in that qualifications have changed and, by implication, what is taught, learnt and assessed has changed — NQFs by-and-large have not created the seamless whole for the education and training systems that many expected. They have not removed inconsistencies (e.g. between HE and VET provision and credit). There is no evidence for raised standards directly attributed to frameworks. Have the NQFs cleared the “jungle” of qualifications? Again the answer is that qualifications systems remain confusing even though the introduction of qualifications types has made systems more transparent.

Have they helped with lifelong learning? A more difficult question to answer. Using levels and level descriptors to describe a range of qualifications has the advantage of showing links between qualifications, equivalencies and progression routes. To add value in terms of lifelong learning, it is argued that there must be multiple access points to different pathways and linkages between qualifications that exist in different education and training settings, for example in higher education and VET (OECD, 2009). The UK frameworks differ in their capacity to offer these features. Lester reports (2011) that credit levels, modules, and the ten-hour standard for credit are used fairly widely in the university system, however credit is not universal and, in most cases, modules are designed to be part of specific qualifications or groups of qualifications in institutions and not part of national systems. Frameworks that map qualifications, levels, and outcomes can become a distraction from the goal of improving the quality of teaching and learning (Brown, 2011). It is argued that the operation of an NQF has a limited part to play in this process, and that a “rough guide” to equivalence would often be sufficient for mapping potential progression pathways.

Frameworks might also be expected to facilitate lifelong learning through validation of learning gained outside formal education provision. In Scotland, Wales,
South Africa and Australia the discussion of principles for a system of validation of informal learning are prominent. In England the qualification owners and learning institutions can voluntarily engage with validation (QCA, 2008; National Institute of Adult Continuing Education, 2013).

Have the frameworks helped with issues of coherence and dealing with diversity in federal systems? The answer is probably no. In the UK countries the diversity intensifies. In Australia the federal diversity remains an issue however the introduction of national regulators for VET and higher education at national level has helped. On the positive side, however, there is ample evidence to show that NQFs have raised public awareness of the meaning of different qualification levels. NQFs have also supported reform of systems. While it is not evident that NQFs have helped with articulating the core of learning at the lowest levels, they have possibly been useful here as inclusion tools.

Can we think of a qualifications landscape without NQFs? Evidence suggests that the answer is a definite no. As education and training is increasingly influenced by international opportunities and challenges, it has become more outward looking and frameworks are proving the most popular tool to make national systems more understandable to those in other countries. Having said this, the new third generation of frameworks will probably be more benign, more of a communication tool, less reformist in the future, and more reliant on sectoral involvement. Levels are important in registers and NQFs provide this important metric. The frameworks we have experienced are now part of the national identity in all the countries. They support the recognition process and they are undoubtedly the language of achievement.

It also seems that NQFs have been most helpful with international mobility and articulation across borders. Their use in alignment of qualification structures is growing. As an example, the UK frameworks have been aligned with those of Ireland and with each other since 2004 (Ofqual, 2013) and it is likely that this articulation has supported the high levels of mobility between the countries of the UK and between the UK and Ireland. All the UK frameworks except the NQF have been referenced to the European Qualifications Framework. It is not clear that the European referencing has yet benefited UK citizens but certainly a web-based tool is in place to support qualification comparison.

NQFs have all been successful as a way of engaging stakeholders and also the business community in general, although the extent to which social partners, including both employers and organised labour have been involved, remains varied. We might conclude that these frameworks are not strong scaffolding for systems but rather weak agreements representing consensus amongst powerful lobbies or actors. Frameworks that are more explicitly built on the consensus model have
obviously succeeded, such as in Scotland. It seems right to say that the NQFs have all tried to be inclusive, even if in all the countries the ways of remaining inclusive have been about weakening the requirements of the framework and, by implication, the aims of the frameworks have become more diffuse.

This is not say there will be no further contestations. The very essence of NQFs across the world, which we are only beginning to understand, is located in the continued reliance on contestations, power struggles and, above all, compromise.

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

The three case studies presented provide empirical evidence of NQF development spanning more than twenty years across three continents. NQFs are not the failed instruments described by some critics, they continue to evolve and be implemented in, not only first generation countries, but also globally. However NQFs are not a panacea, they will remain contested and they remain difficult to review, but nevertheless NQFs provide the best response to the increasingly complex qualifications systems and the challenges of globalisation we have now.

Countries do however need to take careful account of contextual considerations that are critical for determining the scope and style of the NQF being considered. There is no generic template that can be quickly implemented. Perhaps this is the basis of the contradiction. NQFs are not quick fixes, yet they appear so straightforward to implement.

Jack Keating was convinced governments are sometimes flying blind with NQFs but he also believed that through the valuable tool of NQFs we are also charting new territories for making qualifications systems more open, understandable and effective. We concur with Jack that, in years to come, the map of the new territories will become clearer. As has been shown in this paper, an analysis of NQF developments to date, such as in the United Kingdom, South Africa and Australia, can provide us with valuable learning about NQFs.
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Andrea Bateman is an independent consultant with extensive experience in qualifications frameworks and quality assurance policy analysis. Her research interests include competency based assessment, graded assessment, recognition of prior learning, credit transfer, and qualifications and quality assurance frameworks. She has evaluated and designed qualifications systems and frameworks, providing policy advice to AusAid, World Bank and APEC as well as to governments in Australia and the Solomon Islands and various ASEAN and Pacific island countries. She was responsible for the design and development of the ASEAN Qualifications Reference Framework, and a regional quality assurance framework for the East Asia Summit group.

The late Professor Jack Keating was director of the Education Policy and Leadership Unit at the University of Melbourne. He had over 25 years of national and international experience in education, training policy and systems analysis. He worked on state and national developments in education and training in Australia and for major international agencies. Jack designed and evaluated national qualifications systems and frameworks and quality assurance systems and provided policy advice for the World Bank, UNESCO/UNEVOC, the International Labour Office, AusAID and governments in many countries. He also carried out an OECD study on qualifications and lifelong learning.