

# Competence standards and frameworks: some lessons from the United Kingdom

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Final version published in *Edukacja ustawiczna Dorosłych (Polish Journal of Continuing Education )* 3 (90), 132-141 (2015).

## Abstract

The United Kingdom (UK) was one of the earliest countries to develop a ‘competence-based’ approach to vocational education and training (VET), and to draw up competence specifications for a comprehensive range of occupations. This approach has been emulated or drawn upon by several other countries, and it is still used as a benchmark or comparator for developing competence standards internationally. The UK’s basic approach is however now nearly thirty years old, and although it has evolved in response to problems and challenges, more innovative and robust models have emerged outside of the formal VET system. The UK can provide some learning-points for countries and groups considering developing occupational and professional competence standards, but many of these need to be sought out from beyond the official guidance for developing occupational standards and qualifications.

## Key words

Competence; professions; occupational standards; vocational qualifications.

## Introduction

Alongside its more formal system of schools, further education (VET) colleges and universities, the UK has a tradition of industry training organisations either formed by industry sectors and partnerships or (as with many of the training boards of the 1960s) set up with government support. This parallel sector has been concerned with the more directly work-related and utilitarian aspects of training, including programmes for apprentices and short courses for people already in work, as well as in some industries proficiency testing or certification of competence. While many vocational courses in colleges included a skills testing component, the large-scale cross-over of industry-based approaches to competence into the VET sector can be traced to government-sponsored youth training programmes in the early 1980s, and specifically the search for a means of developing curricula that was more closely oriented to the needs of the workplace than the syllabus-based model that was usual for vocational education programmes<sup>1</sup>. From this early initiative emerged a heavily funded, large-scale and far-reaching drive to create ‘competence-based’ programmes that at one time appeared set to engulf the entire VET system, and which was part of a broader movement towards specifying the ‘outcomes’ – or more correctly objectives – of education and training in the form of what learners should be able to do, rather than the topics to be taught<sup>2</sup>.

## **Competence, NVQs and National Occupational Standards**

As indicated above, early developments in the ‘competence movement’ focused on programmes designed to move young people into work, and used various models of competence borrowed from industrial training. Initially the most widely-used approach to developing competence standards used task analysis, which involves breaking a job down into component parts and describing the various tasks that need to be completed; this draws to an extent on the principles of work study that had been widely used up to the 1970s<sup>3</sup>. A review of UK vocational qualifications mid-decade<sup>4</sup> initiated more far-reaching reforms that resulted in the system of National Vocational Qualifications (NVQs). Initially the ‘NVQ’ label was envisaged as a kitemark for qualifications that reflected industry needs, but it was quickly restricted to qualifications that were constructed to a standard set of design rules based around a specification of competence<sup>5</sup>. As early NVQs started to move beyond the lower levels (equivalent to EQF levels 2 and 3) associated with youth training programmes, it became apparent that task analysis struggled to produce adequate descriptions of activities that involved interpretation or discretion. An alternative approach was developed in the form of functional analysis, which starts from considering the overall purpose of an occupation and breaks it down to produce a hierarchy of increasingly detailed activities<sup>6</sup>; in the language of the time, these were expressed as key roles, units and elements of competence, and finally performance criteria. The aim of functional analysis is to capture whole work roles rather than bundles of tasks; ideally, this includes four interrelated aspects, viz. the ability to complete tasks, manage tasks (e.g. decide which actions are appropriate for the situation), cope with unexpected situations and things that don’t go to plan, and to manage the overall work role (e.g. to work effectively with other people, to plan work and use initiative)<sup>7</sup>.

From the late 1980s onwards, close to 200 organisations and committees were formed or authorised to develop descriptions of competence based on functional analysis, with the aim of covering 80% or more of identifiable occupations. These descriptions, which became known as National Occupational Standards (NOS), would typically consist of four or five key roles, between ten and thirty or so units of competence each subdivided into perhaps three or four elements, and anything between six or seven and upwards of twenty performance criteria per element. In addition to the performance criteria, each element included a ‘range statement’ describing the different conditions and contexts that it applied to, and a list of knowledge that was assumed to be needed in order to act competently. In most occupations the NOS would therefore amount to a hundred pages or more of detailed specifications, normally written in the passive tense. Feedback from users of these standards frequently indicated that they were difficult to understand and apply, too detailed, and failed to capture the breadth of competence needed for whole work roles as expressed above. Although there was initially resistance to change among those responsible for NOS, official reviews<sup>8</sup> precipitated a gradual move towards clearer, more active language, more concise specifications, and a smaller number of organisations responsible for developing the standards: the latter was reduced through mergers to under a hundred in the mid-1990s, and again to 25 Sector Skills Councils, most representing major industry sectors, in 2003.

A notable feature of the UK approach to occupational competence is that it quickly adopted what has become known as an ‘outcomes-based’<sup>9</sup> or ‘external’<sup>10</sup> perspective, concerned with what a person can do rather than with the abilities and attributes that enable them to do it. This contrasts with established approaches that focused on the latter, and were geared more to designing education and training programmes than being (as NVQs were intended to be) assessment specifications for use in

the workplace. Two of these ‘internal’<sup>11</sup> approaches to competence were widely used at the time that NOS and NVQs were originated. One, based on Bloom’s educational taxonomy<sup>12</sup>, had become a common method for designing training programmes in the UK; in outline, it involved carrying out a job analysis and identifying the skills, knowledge and attitudes needed to perform the required work activities effectively. The other involved identifying the attributes and behaviours of effective or superior job performers through processes such as critical incident analysis<sup>13</sup>, behavioural event interviewing<sup>14</sup> or repertory grid technique<sup>15</sup>; this had become widely used in North America in the ‘competency’ tradition, where a large number of studies were completed using these techniques in order to develop curricula for professional education and training programmes.

Contemporary literature<sup>16,17</sup> attests to a debate between proponents of internal and external models of competence, although this was resolved early on in favour of the external approach. While internally-based competence specifications are generally more informative for developing education and training programmes, they have a number of disadvantages when used as assessment specifications. One of these is that having the relevant attributes does not imply the ability to integrate them to produce proficient practice. A further issue that is a significant limitation of both the behavioural competency approach and the inclusion of attitudes in the instructional design tradition is the extent to which the attributes that are identified are actually necessary for effective performance, rather than simply correlating with it. The techniques used in these approaches can pick up characteristics that happen to be present in the populations being studied, but may not actually be necessary to act competently, thus creating bias against people who could become highly competent but don’t fit the profile represented by existing job incumbents.

### **Limitations in the functional model of competence**

Almost from its inception, the approach underpinning NOS and NVQs was criticised from a number of directions; this was partly a matter of defence against imposition of the new programmes<sup>18,19</sup>, but particularly as NOS were developed for higher-level occupations, some credible critiques of the functional approach began to emerge. Early critiques of the underlying principles maintained that NOS were insufficiently flexible to accommodate negotiation in context, reflected too static a definition of competence, and failed to recognise the level of individual discretion and interpretation needed in higher-level roles<sup>20,21</sup>. They could also build in current assumptions about how work roles needed to be performed that could result in cultural and gender discrimination<sup>22</sup>, a particular criticism of the standards for management. The way that units of competence were specified and assembled into qualifications could discriminate against highly competent people who were already in the workplace, simply because their roles, or the way that work was carried out in the organisation, made it difficult to match what they did to the standards; attempting to gain a qualification could be more a matter of collecting and manufacturing paper-based ‘evidence’ than acting as a competent professional<sup>23,24</sup>.

Some of the problems with NOS stemmed more from the way that developers described occupational roles rather than any problem with the functional model of competence itself. However, as noted previously, functional analysis is a deductive process rather than a research method, and its effectiveness depends on how well developers understand how the relevant roles work in practice. The use of experts who are senior members of the relevant occupations but who don’t have up-to-date insights about current practice and the contexts it takes place in can be a particular weakness in the

development process. Wider consultation can remedy some of the resulting problems, but experience suggests that respondents limit their comments to relatively minor aspects of competence frameworks and rarely challenge underlying structures and assumptions. Even assuming that these aspects have been got right, functional frameworks tend to allow insufficient room to accommodate more than a narrow range of contexts, and can quickly become out of date as practice evolves.

On balance, the external approach to competence has proved particularly useful where standards of practice are needed rather than standards to guide education and training, and where there is a need to assess competence as a practitioner rather than as a novice entering the workplace. The idea of competence as “the ability to perform... tasks and roles... to the expected standard”<sup>25</sup> or “the ability to apply knowledge and skills to achieve intended results”<sup>26</sup>, is widely endorsed in the UK. The main problem, even allowing for updated guidance<sup>27</sup>, is that the functional approach is too narrow and insufficiently based on evidence from real-life practice. Although more recent NOS are less prone to some of the problems identified above, they have not escaped criticism in recent government-commissioned reviews of VET<sup>28,29</sup>, and it is noteworthy that the requirement to use NOS in apprenticeship specifications – at one time non-negotiable – has recently been dropped, particularly where there are alternative professional or industry standards. Recently, more innovative examples of competence frameworks have tended to come from outside the formal VET sector, particularly from professional bodies.

### **Variations and reworkings: professional competence**

The UK has a tradition of independent bodies that represent and often govern individual occupations and professions, generally at the upper levels of the occupational spectrum. These bodies can take the form of independent regulators, self-governing associations, and learned societies; there are an estimated 400 operating across the country<sup>30</sup>. A small minority of UK professions have legally-required licensing, but rather more have a qualified status that confers advantages in the employment or professional services market. Traditionally, qualifying in a profession would mean passing a degree or diploma approved by the professional body and then serving a form of apprenticeship with a suitable employer; qualified status was granted at the end of the apprenticeship, and could be revoked for malpractice or failing to keep up-to-date. Over the past two or three decades, broadly in parallel with the ‘competence movement’ in VET, professions have increasingly introduced some form of assessment of ability to practise before sign-off<sup>31</sup>. Again partly influenced by the emergence of NOS, professions have gradually introduced explicit criteria for this final assessment.

The adoption of competence or practising standards in UK professions can be identified as taking place in two overlapping phases. In the first, professions have simply aimed to identify a workable set of criteria for assessment purposes. Before the emergence of NOS, if they used a competence standard at all it would tend to follow one of the ‘internal’ models, either from the instructional design tradition or the behavioural competency one. This is consistent with the tendency for professions to define themselves in terms of their ethos and educational requirements rather than by reference to occupational functions, so that for instance to be an architect is as much about being trained as an architect and adopting the profession’s ethos as it is about carrying out particular tasks. Nevertheless, the need to have standards for sign-off led several professions to experiment with the functional competence model and with NOS, with varying degrees of success<sup>32</sup>, while others created their own standards using variations of the instructional design or functional approaches<sup>33</sup>.

The second phase of development involves a more sophisticated consideration of professional competence that is external in approach, but reflects the idea of a profession based on ethos and value-commitment as opposed to an occupation that simply involves doing a job. There is a strong emphasis on general professionalism and the essence of what is involved in practising as a member of the profession, rather than on detailed work functions that practitioners might undertake. Commonly, second-phase professional competence frameworks will be constructed so that they apply to all members of the profession regardless of specific occupational role or area of detailed expertise, removing the compatibility problems that are common with functional analysis (or the need for core-and-options structures to reflect different job roles)<sup>34</sup>. These frameworks draw on the idea of capability, a broader if less defined concept than competence that as well as implying the ability to do, suggests the ability to become (more) able to do particularly to move into new areas and respond to changing contexts and demands<sup>35</sup>. Second-phase frameworks are now established or emerging in a number of areas including engineering, heritage conservation, landscape architecture and law.

Second-phase professional competence frameworks normally draw on mixed development methods that include research into what practitioners actually do and the contexts they work in, investigation into factors that are critical for effective practice, and common-sense expert discussion with a less structured approach than that used in functional analysis. Compared with NOS that can run to hundreds of pages of text<sup>36</sup>, second-phase professional standards typically take up no more than a dozen pages. Some of the most recent frameworks, such as the professional standards for VET teachers, are considerably more concise although they are not intended to be used directly for assessment. A further aspect of some of these frameworks is that they use a series of steps, such as the Dreyfus novice-to-expert scale<sup>37</sup>, to communicate competence as a progressive scale rather than a fixed point; this can serve as a means of tracking progress, provide a generic threshold for sign-off (normally at the third, 'competent' or fourth, 'proficient' level), and illustrate that there is room for the qualified practitioner to develop further to the 'expert' level. It should perhaps be noted that the idea of 'level' in this kind of scale is closer to the concept of 'grade' than reflecting qualification levels, so that it is possible for instance to be an expert in a role represented by a level 3 qualification, or a novice in one that appears at level 7.

### **Linking competence standards and qualification levels**

The idea of competence does not need to be linked to certification, and both NOS and professional standards frameworks have a number of uses other than qualifications or licensing. However, most frameworks of both kinds have been developed with certification as one of their aims, which raises the question of how they link to qualification levels. A simple levels framework was introduced in 1986 for NVQs, consisting initially of four levels, later extended to five<sup>38</sup>, roughly spanning EQF levels 2 to 7. Initially NOS and NVQ units were developed independently of levels, then levels were assigned to whole qualifications based on how they mapped to the level descriptions. An alternative also emerged where suites of units would be created at specific levels around a common structure. The more recent orthodoxy is that NOS in their raw form are not widely used as qualification units, but units are developed from them to match to a specific level in one of the UK qualifications frameworks.

Professional competence standards are more commonly used for awarding qualified status (e.g. a chartered or accredited title, or a qualified level of membership), so they do not generally have a formal relationship with qualification levels; the standards are written to reflect what is needed in the profession, rather than any predefined notion of level. Some professions use more than one level in their standards, such as the technician, incorporated and chartered levels in engineering, or four bands of seniority in personnel and development; but these will reflect the needs of professional roles rather than be designed directly to match to qualification levels. Where it has been useful to map qualified status to a qualification level, for instance to enable practitioners to progress to (or obtain credit into) higher degrees, it has usually proved relatively simple to assign a best-fit level from the relevant qualification framework.

While it is common practice to develop educational qualifications to fit to a known level, experience from occupational and particularly professional standards suggests that attempting to write competence standards in this way can distort the standards away from meeting the needs of the occupation. When matched to qualification level descriptors, occupational roles tend to have an uneven profile where the activities involved do not all map against the same level. This suggests that where occupational or professional competence frameworks need to be related to qualification levels, this is done afterwards via a best-fit process.

### **Conclusion: what lessons can be learned from the UK?**

The UK has created a considerable body of pioneering work on occupational competence, and has been a major contributor to promoting external approaches to competence worldwide. Nevertheless, as is sometimes the case with early leaders, there has been a tendency to look inwards and defend original conceptions and models long beyond the point where they need to be revisited and reworked; and at least in the early stages of the NVQ movement, this was exacerbated by organisational politics and territorialism among the various agencies involved in VET<sup>39</sup>. The early state-led approaches can be seen in retrospect to have been excessively detailed and rigid, and cost a large amount of time and effort for users in terms of interpreting and working around competence standards and qualification requirements. There has also been an unfortunate legacy in the sense of failed attempts to create standardisation through grand projects of reform, the second of which – represented by the Qualifications and Credit Framework<sup>40</sup> – is only now working through to a point of exhaustion.

In practical terms, a major contribution of the UK's external approach is its focus on competence as the ability to practise effectively, rather than as the outcomes of a programme of learning. Importantly, this is distinct from seeing competence either as a set of attributes, or in the more legalistic sense as the extent of a person's work responsibility. As indicated earlier, there is a danger in creating over-detailed and inflexible descriptions of external competence, and although there are some good examples of NOS, the better descriptions now tend to come from professional bodies. In particular, the best professional examples question whether it is always necessary to have detailed standards for occupational roles; instead, they focus on what might be termed core professional capability. Evidence from using this second-phase professional approach (the current conservation standards for instance have now been in use for over twelve years) suggests that it is at least as robust as the more detailed, occupationally-oriented one, while proving substantially more able to accommodate different organisational and work contexts, and more durable in terms of evolving practices, roles and work environments.

To conclude, there are some worthwhile learning points that can be extracted from the UK's three decades of experimenting with the idea of competence, but many of these are cautionary, and examples and methods useful for standards developers are more likely to come from the less constrained approaches of leading professional bodies rather than the more uniform VET standards programme. Equally, UK approaches will benefit from being challenged by alternative conceptions, particularly where these can bridge between occupational approaches to competence and the broader idea of professional capability.

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