

Professional accreditation and National Vocational Qualifications: an exchange of experience

Stan Lester, Stan Lester Developments, Taunton, UK

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Abstract

The Professional Accreditation of Conservator-Restorers (PACR) is a practice-based accreditation scheme which draws on some of the principles established in the UK's framework of occupational standards and National Vocational Qualifications (NVQs). The emergent success of PACR shows that these principles can be adapted into a professional context and gain credibility within the profession and among its client constituency.

PACR also offers experience that might be transferred back into NVQs. The PACR standards are more focused and concise than most occupational standards; they reflect a more holistic view of competence and professionalism than do many occupational standards; and the assessment process aims to examine practice in an integrated, focused and efficient manner. The success of PACR in an area where NVQs have seen little uptake also begs the question of whether it is always appropriate to package competence-based qualifications as NVQs, particularly at the higher levels.

Introduction

National and Scottish Vocational Qualifications (here abbreviated to NVQs) were introduced in the UK in the late 1980s. They are based on occupational standards developed by government-sponsored, industry-led bodies (National Training Organisations during the period relevant to this paper), and assessed primarily through evidence of proficient workplace practice. NVQs conform to a standard set of design principles, and are regulated by the Qualifications and Curriculum Authority (QCA) and its partners in Scotland, Wales and Northern Ireland. NVQs can be claimed with some justification to be part of a qualifications revolution (Jessup 1991) which, particularly at further education level, has created an emphasis on workplace performance rather than success on prescribed courses. While the reality of the way the qualifications have been implemented is frequently less revolution than evolution, they have opened up significant new opportunities particularly to create individual routes to qualifications and enable experienced workers to gain credit for their proficiency.

NVQs have made a much smaller impact in the arena of higher-level qualifications; only 3.3% have been awarded at the upper two levels (4 and 5), with most of these being in business and management (Qualifications and Curriculum Authority 2000). Various factors have contributed to this including the dominance of university and established professional qualifications, doubts about the validity of occupational standards and NVQ design principles at the higher levels, and resistance from professional bodies and employers (e.g. Elliott 1991, Sims & Golden 1998, Hillier 1999). However, there has been gradual acknowledgement at higher levels of the value of some of the principles on which NVQs are based, even if the overall package represented by the qualifications does not meet the full range of needs at these levels.

One profession that has recently adopted some of the principles of NVQs is that of conservation (of cultural heritage and works of art). The Professional Accreditation of Conservator-Restorers (PACR) is a practice-based accreditation framework operated by three of the UK professional bodies for conservators, the UK Institute for Conservation, the Institute of Paper Conservation, and the Society of Archivists, with oversight and development responsibility resting with the profession's umbrella body, the National Council for Conservation-Restoration (NCCR). Accreditation is based on standards of professional practice (themselves partly based on the occupational standards used in the conservation NVQs), and assessed in the workplace. While many established conservators have entered the profession through an apprenticeship-type route, there has been a move over the last ten years or so towards graduate and (increasingly) postgraduate entry, positioning PACR - which requires substantial practical experience - in a similar position to the post-graduate professional practice examination in professions such as architecture and surveying. The development of PACR and the principles underpinning it are discussed by Lester (2000).

Issues in the design and implementation of NVQs

NVQs have been highly successful in altering the qualifications map in the UK, and in establishing principles for occupationally-based qualifications which while not totally new were not widespread before the 1990s. Perhaps most significantly, they have gained broad acceptance of the principle that qualifications can be awarded for what a person can do without reference to the education or training route that they have followed: the NVQ, like a proficiency test, is a specification for assessment rather than a curriculum for a course. Secondly and despite pressures to revert to traditional means they have led a shift in assessment methods away from examining performance in prespecified tests and assignments towards assessing work activities and products. Thirdly, the assessment criteria used in NVQs are based at least in principle on occupational rather than educational standards: i.e. they reflect what a competent person needs to be able to do rather than what can be achieved at the end of a specified course.

Despite their success, NVQs have suffered from some problems both of design and of implementation. Some of the more visible problems relate to concerns about the consistency and quality of assessment, uncertainties about the level of competence being sought, difficulties in understanding the qualification standards and assessment criteria, and a trend towards excessive reliance on paper-based evidence to ascertain candidates' competence. There are also issues relating to the way occupational standards are constructed and expressed which are particularly significant in relation to higher-level or professional work.

Implementation issues

Issues of consistency and quality of assessment have been raised in relation to NVQs, particularly where results-based funding creates pressures to 'pass' candidates quickly. The assessment principles used in NVQs mean that greater emphasis is placed on quality assurance in the form of the professionalism and competence of assessors and verifiers than is the case in public-examination assessments, which are more amenable to quality control measures. Up to a point this has created pressures for more standardised and verifiable assessment methodologies (see for instance National Council for Vocational Qualifications / Scottish Qualifications Authority 1996), although there is also recognition that assessment needs to remain valid in terms of assessing work practice.

A second assessment issue concerns a degree of uncertainty about the level of competence - in the sense of progression from novice to expert - required to achieve an NVQ. In principle, the qualifications are awarded for a full working level of competence, but in practice the widespread use of level 2 and 3 NVQs as exit qualifications for training programmes, effectively replacing part-time further education certificates, has created pressure to assess at threshold levels of competence (e.g. Lester 1999). This tension can result in a tendency for employers and others in some sectors to regard NVQs as representing a level of ability some way off workplace competence (ibid).

Difficulties associated with the language and presentation of NVQ specifications is sufficiently well-known almost to need no mention (e.g. Beaumont 1996, Hillier 1999). Conception of occupational standards as work standards (rather than as the results of individuals' action) resulted in a passive, impersonal style of language which as well as making for difficult reading has led to confused interpretations in which it is not always clear whether some actions need to be performed by candidates, or supervised or merely recorded by them. Over-detailed specification of some standards has also led to problems in application, with many candidates having difficulties in interpreting the standards into their situations despite having relevant work roles (e.g. Lester 1994, Payne 1997). Although recent standards have improved and guidance from QCA and its partners has promoted greater flexibility, these problems continue to exist.

Finally, there has been a widespread tendency for NVQ assessment centres to require candidates to produce paper-based evidence of competence, even for jobs which generate little paper in their own right. This kind of portfolio-based assessment can be effective and give a degree of control to candidates, but it is not always the most valid form of assessment particularly for interpersonal and practical skills. It can also create a major barrier for candidates, whether they are manual workers who struggle with paperwork or busy professionals whose schedules and inclinations mitigate against assembling folders of retrospective evidence (e.g. Boddy *et al* 1995, Priddey & Williams 1996). More recently, some NVQ centres have developed alternatives based on assessor visits and examination of evidence *in situ* (e.g. Fowler 1997, Cullum & Sykes 1998), and experience with these methods suggests that these are proving attractive and leading to high completion rates.

Issues of substance

As well as these implementation issues, there are also substantive problems affecting NVQs. The functional model which drove occupational standards development throughout the 1990s has been criticised as resulting in inflexible, atomistic standards that fail to capture the values, ethics, and judgement associated particularly with higher-level work, and for imposing a single paradigm on all occupational areas regardless of their ethos or need (e.g. Boddy *et al* 1995). According to Blackmore's typology of approaches to occupational analysis (Blackmore 2000), functional approaches tend to oversimplify complex areas of work and look for definitive answers in situations where broad interpretations may be more appropriate. At an immediate level this has resulted in a tendency to downplay the role of intelligent judgement and the need for practitioners to negotiate standards in the practice situation (cf Elliott 1991, Burgoyne 1989). In the terms used by Schön (1987), despite their practical intentions occupational standards are based more in the "hard, high ground" of technical-rational decisions than the less determinate "swampy lowland" where the difficult problems of everyday practice occur.

More insidiously, standards can rationalise and impose particular views of a profession or occupation, while purporting to be objective and impartial. As Elliott (op cit) indicates, occupational standards are not culturally or socially neutral, but embody the values and assumptions of their authors; similarly, Issitt (1999) comments on the tendency of standards to perpetuate styles and approaches that can be inherently discriminatory. The practice of developing standards through deductive processes involving a small group of experts (see for instance Mansfield 1991, Mansfield & Mitchell 1996) means that they do not always reflect what practitioners actually do, and in the worst cases reinforce values and assumptions that are of questionable validity. Again, while there are signs that some of the earlier dogmatism associated with occupational standards is disappearing, it is taking time for changes to permeate through to all involved in their development.

A further issue that has arisen in NVQs is the separation of action and knowledge. Occupational standards are currently specified in terms of what a practitioner is expected to do, with a separate statement of 'underpinning' knowledge and understanding. While in some cases this can encompass essential factual or procedural knowledge, it often amounts to a relatively fragmented list of things that an expected practitioner is assumed to need to know; alternatively it can represent what is in effect an educational syllabus packaged up to match relevant components of the qualification. From the viewpoint of devising courses to support NVQs this is not necessarily a problem, but where the qualifications are used to certificate work-based competence, the specification can impose a requirement to demonstrate standardised, formal knowledge rather than respecting the working understanding and knowledge-in-use (Argyris & Schön 1974) of the practitioner.

The PACR framework

The Professional Accreditation of Conservator-Restorers is based on a practice-based assessment of professional proficiency, explicitly detached from practitioners' training routes and methods of entry into the profession. In this sense it has the advantage of being purely a schema for assessment and accreditation, without being distracted by the needs of validating education or training courses. The framework was developed with two concerns uppermost: to provide a widely-acknowledged criterion for professional practice which would promote high standards in the care of cultural heritage and provide a point of reference for clients, and to establish a common standard across the various specialisms of conservation that would help in drawing them together as a credible profession. It is 'owned' by the profession through NCCR, with decisions about standards and implementation being made by people most of whom are full-time conservators.

The assessment standards used in PACR can currently be regarded as provisional, in that they were largely adapted from two pre-existing sources: the Museum Training Institute (MTI) occupational standards at NVQ level 5 (Museum Training Institute 1996), and the European FULCO project (Foley & Scholten 1998). The MTI standards were used as the basis of the PACR 'functional' standards, which describe key functions of conservation practice. The FULCO project contributed a framework of general professional criteria, covering areas such as ethics, professional judgement and managing value-conflicts, intelligent practice, ongoing development, and respect for cultural heritage and the values of others; the format of these standards was influenced by the ASSET programme in social work, a well-documented development which integrated a competence-based qualification with an honours degree (Winter & Maisch 1991, 1996).

In adapting the MTI standards, three key principles were followed. The first was to remove trivial detail, both in terms of things not critical to competent action and specifications which unnecessarily restricted the discretion open to the practitioner. Secondly, essential understanding was integrated with details of action, so that each functional area (approximately equivalent to an element of competence in NVQ terms) was represented by a single, concise set of statements. Finally, the wording of the standards was made clearer and they were converted into active rather than passive language. Together, these changes allowed specifications that typically ran to two sides of A4 paper to be condensed to short, paragraph-length statements (see box 1).

The general criteria or common professional themes used in the scheme aim to reflect the qualities required of a professional practitioner, over and above technical competence. Although the NVQs for management had used a broadly analogous approach in the form of a 'personal competence model' (see Management Charter Initiative 1997), there has been considerable confusion about the interpretation and assessment of these less tangible criteria, with varied views from seeing them as the most critical part of the specification, to regarding them as vague, not measurable and therefore not assessable. In practice it has proved reasonably straightforward for assessors to make what appear to be reliable inferences about the PACR general criteria, typically through taking into account a wide range of evidence from across a spectrum of activities. The general criteria are also appreciated as central to the ability of the framework to represent professional practice as opposed to purely indicating functional competence.

Assessment in PACR

Early on in the development of PACR, consultees gave a strong message that the portfolio-based assessment being used in the conservation NVQs was inappropriate for professional accreditation; it was seen as time-consuming, inefficient and not sufficiently robust to make valid decisions about practical competence. The method favoured in the consultations was for assessors to examine and discuss evidence - objects, records, equipment, reports and so forth - in the candidate's workshop or studio, or on site.

The assessment process centres on a single, full-day visit carried out by two qualified conservators, one of whom is from the same specialism as the candidate, and who have had training in work-based assessment. Before the visit takes place the candidate completes a detailed application and assessment form, which includes describing current and recent work and relating it in some detail to the standards. The application is vetted by an accreditation committee, who advise the candidate on any weaknesses that need addressing, and then passed to assessors who are selected to reflect the candidate's specialism and whether he or she is in private practice or institutional employment. Following the assessment visit, the form (now with assessor decisions and detailed comments) is returned to the accreditation committee, who act as a moderation board and if needed can question the assessors and candidate before recommending (or otherwise) accreditation to the candidate's professional body. The process is designed to be open and visible, with all comments accessible to the candidate, and backed by a clear appeals procedure.

The PACR assessment model aims to be as open and fair as is possible. However, there is a much higher level of criticality involved in a single application and assessment visit than in phased assessment through indirect methods, and there is therefore a greater burden placed on the

competence of the assessors. In the early stages of implementation as assessors gain experience it is inevitable that there will be teething problems with a proportion of assessments, and this appears to be one of the disadvantages to be offset against what is proving to be a valid, rigorous and efficient process (see Lester 2001).

Box 1. Specification of a PACR functional standard

Professional standards / functional criteria

2. Developing conservation strategies

This is about developing strategies for the conservation (interventive and / or preventive) of objects or collections. While some conservator-restorers need to produce written options and strategies, for instance in proposing work to be undertaken on a collection or valuable object, others will carry out this process more intuitively as part of deciding on the treatments to undertake. In either case, you should make your thinking and reasoning explicit to the assessors on the day.

2.1 Explore options for conserving items

This involves identifying a range of options for conserving items or collections which you have previously examined. The options need to be appropriate to the items' condition and current and intended use, and take into account present and future environmental factors likely to affect the items.

At least some of the items to which the options relate must present complex conservation problems.

You will need to show:

- your knowledge of relevant materials and treatment methods
- knowledge of the resource implications or costs of the different options
- that you have assessed the health and safety implications of the different options
- that you have taken into account the limitations, risks and likely effects of the different options.

2.2 Develop conservation strategies

This involves developing a strategy for the conservation of an object or collection, balancing its conservation needs with the requirements of the holder. At least some of the items to which the strategy relates must present complex conservation problems.

The strategies can take the form of recommendations, plans for others to put into action, or plans for you to carry out.

You will need to show that you have:

- considered how to achieve your objectives in a way which minimises intervention and maximises reversibility
- developed an appropriate conservation strategy or plan, including recommendations for re-evaluating the plan at a later date
- ensured that the plan balances the requirements of the objects, the context, and the holder
- checked that the outcome, risks and resource implications are understood by the holder of the object(s)
- taken account of relevant health and safety precautions and any other relevant legal requirements.

from National Council for Conservation-Restoration 2001b, drawing on Museum Training Institute 1996 and Foley & Scholten 1998

Outstanding issues within PACR

Although PACR appears to have overcome some of the problems inherent in or commonly encountered in the implementation of NVQs, some issues remain and others have arisen due to the way the scheme is organised and specified.

The PACR standards as used for the first two full cycles of accreditation (2000 and 2001) were designed for practising conservators (i.e. those who treat objects and artefacts directly), and required all candidates to meet the same set of standards. The rationale was that the scheme was designed to provide a known minimum standard that potential clients could trust; the 'core and options' approach used in many NVQs was ruled out for this reason. However, it has caused problems in excluding conservation advisers, scientists and environmental specialists from accreditation, as well as imposing too wide a set of standards on practitioners in attempting to capture the breadth of the profession. Current discussions point towards retaining a single accreditation route for practising conservators, with adjustments to make the standards match work roles more closely, while adding one or more further routes for practitioners specialising in advisory, scientific or managerial work.

The functional standards used in PACR were adapted from the Museum Training Institute's occupational standards. As such they were developed deductively through 'expert' workshops, as normal for NVQ standards. During the assessment cycles the shortcomings of some of these standards were revealed in terms of how they matched with work practice in the field, and revision based on feedback and primary research is planned in order to revise the standards for use in 2002/3.

The issue of *level* of competence, discussed as threshold or working competence in relation to NVQs, also has relevance to PACR. In training assessors for PACR, there was initial concern that the 'standards', like those used in NVQs, do not actually specify a *standard*: they are descriptions of work activity, not qualitative judgements about the level at which it needs to be performed, and they could be interpreted in ways that applied equally well to the work of a new graduate as to that of a seasoned professional. Indications of level are provided in PACR through reference to things such as complexity and professional judgement, and a feeling for level can also be obtained by considering how the general professional criteria apply across the practitioner's work. There is also general guidance about level in the scheme documents, for instance:

"accreditation is pitched at the level of an experienced practitioner capable of working on their own initiative, making independent professional judgements, organising their work and professional development, and taking responsibility for their decisions"
(NCCR 2001a p3.9).

Nevertheless, the assumption made in the scheme - and in NVQ assessment - that there is a single level of competence does need closer scrutiny. By contrast the Dreyfus model of skill acquisition (Dreyfus 1981, Dreyfus & Dreyfus 1984) uses five qualitative levels of competence, with progression from 'novice' to 'expert.' The model was found useful by assessors, and has recently been incorporated in the scheme guidance (see box 2). In relation to these levels, an agreed interpretation is that assessment should look for an overall level of practice which is at least 'proficient,' with at least some evidence of 'expert' ability in areas where the candidate is most experienced.

Finally, the PACR assessment model carries with it penalties as well as advantages. Assessment is relatively cheap if it results in a 'clear pass,' but if the costs associated with referral or reassessment following appeal may be high; during 2000-01 three cases were encountered which for various reasons needed partial reassessment through additional visits. In practice, there is a facility for the accreditation committee to request portfolio-type evidence if this is valid for assessing the area of referral. The bottom line is the validity and trustworthiness of the assessment, and referrals need to be considered on this basis. On the same principle, a case can be made for exploring whether it is always necessary to carry out the main assessment through the present methods, or whether alternatives - prescribed or, as in the NVQ system, open to circumstances - should be allowed.

Feedback for NVQs

The PACR scheme, by operating outside of the NVQ framework, has been able to adopt practices that would be ruled out, or at least assumed to be inappropriate, for NVQs. While PACR cannot claim to offer a model that is superior in any general sense to that used for NVQs, it does appear to be successfully translating some of the principles of NVQs into the context of a high-level practice-based professional qualification. As a result there may be lessons that can be transferred from PACR back to NVQ development and implementation.

Developing standards

Experiences with the PACR standards suggest that there is a greater need for research into what practitioners actually do before occupational standards are finalised. Expert workshops and consultation processes appear to have variable success in developing standards that match real work roles or describe things in a way that relates well to practice, and there would appear to be benefits in moving the emphasis from deductive processes such as functional analysis to inductive ones based on field research and role mapping. The survival of what have proved to be incorrect assumptions about roles and practices through both the Museum Training Institute's development process and the PACR consultations and trials illustrates that even quite thorough consultation processes can fail to identify flaws in standards. This may be due to a 'response effect' (Borg 1981) where consultees tend only to suggest minor modifications to the standards they are presented with, rather than root-and-branch changes.

A second point relating to standards is the issue of devising a format which while being assessable is appropriate to the complex and open nature of professional work, capturing a "more holistic and integrated notion of competence" (Field 1995, p41) than do the majority of current occupational standards. The approach adopted in PACR, as in the ASSET programme, has been to develop general criteria or common themes that attempt to reflect the notion of professionalism, and are applied across the various activities making up the conservator's work. This format coupled with the emphasis in PACR on discussing projects rather than focusing piecemeal on individual standards does appear to result in a deeper appraisal of the candidate's practice than is often the case in NVQ assessment, although this issue could usefully be explored further.

Further, the PACR functional standards are considerably more concise and less detailed than the MTI standards on which they were based, and than the majority of occupational standards as used in NVQs (see box 1). This has had two major advantages: first that they are regarded as less

prescriptive and less focused on non-critical detail, and secondly that they have been better received in terms of clarity and ease of understanding. The fear that they would be too general to assess consistently has proved unfounded, both in the trial and the first round of live assessments; in fact the feedback that has been received suggests that simplifying the standards has helped assessors focus on critical issues of professional practice and avoid being sidetracked by trivia. While different occupational areas will vary in the level of detail it is appropriate to specify for assessment, this is an area in which many occupational standards might benefit from review.

Finally, the need encountered in PACR to provide greater attention to the *level* of competence required may also be worth exploring in relation to NVQs. This could for instance take the form of explicit statements of the level of judgement and self-sufficiency required of a successful candidate, or the use of a progressive scale of competence such as the Dreyfus model.

Assessment

The application and assessment process used in PACR offers a number of benefits particularly compared with indirect or portfolio assessment. It is arguably a more valid and rigorous way of assessing practice, with less opportunity for candidates to hide inadequate practice, and more opportunity for assessors to see 'live' evidence first-hand and make holistic judgements about the candidate's competence and professionalism. Although the application documents used in PACR are no small task to complete, they provide a structured format and a deadline which initial evidence is suggesting is leading to a high completion rate (i.e. from beginning to work on the application to the assessment decision). While the approach used in PACR is not without disadvantages, it provides an efficient and valid option that can be drawn on for NVQ assessment. This is particularly likely to be the case for assessing experienced candidates who are seeking validation of their competence, as well as where NVQs are offered through development programmes but it is desired to carry out a separate summative assessment of practice, possibly by assessors who have not been involved in the candidate's training.

In terms of quality assurance, the use of moderation boards in PACR rather than the individual internal and external verifiers of the NVQ system ensures that all assessments are scrutinised by a panel who have not had close contact with the candidate, and allows a consistent overview to be applied to all the assessments within each professional body. While the numbers of candidates for many NVQs would make this totally impractical at the level of the awarding body, it offers an approach that could be drawn on by NVQ centres, possibly with representation from awarding bodies.

Credibility and ownership

Although the number of candidates going through PACR is relatively small - 16 assessments were carried out in 2000 and 21 conservators had applied by the close of the mid-2001 round - the scheme can be regarded as successful compared with the largely abandoned conservation NVQs. While part of this is due to the more contained and focused process, the main reason is likely to be connected with the credibility and value of the credential. PACR is owned by the profession through NCCR, and awarded by professional bodies rather than by a generalist awarding body. It is also essentially practitioner-led and endorsed by key agencies in the sector, and leads to a credential that

early indications suggest is becoming valued as rigorous and relevant, both within the profession and among major employers, clients and agencies in the cultural heritage sector.

The emergent success of PACR, a practice-based accreditation framework drawing on and adapting many of the principles used in NVQs, in a field where NVQs themselves have largely failed, raises some questions for higher-level NVQs. Although there are niches in which level 4 and 5 NVQs are well-supported, as well as a gradually growing market at level 4 (QCA 2000), as previously noted the impact of NVQs at these levels is small. In some fields greater credibility and therefore uptake is likely to attach to qualifications or awards to which a professional designation is attached rather than an NVQ title, and where ownership and control are seen to be in the hands of appropriate professional organisations.

Conclusions

The development and tentative success of the PACR scheme acknowledges the value of the principle of practice-based assessment which has become established in the UK largely through the emergence of NVQs during the 1980s and 1990s. The development of PACR outside of the NVQ framework, and therefore free of some of the regulations applied to NVQs, has enabled these principles to be adapted to meet the needs of the conservation profession in the UK. As a result, there are a number of approaches and principles established through PACR that are likely to have benefits if fed back into NVQ design principles and development strategies, at least at the higher levels if not more generally. These include greater flexibility in the development and presentation of occupational standards, greater clarity about the level of competence needed, and approaches to assessment which are based in the workplace and aim to assess practice holistically.

The success of PACR in a field where NVQs have struggled suggests that the development and promotion of higher-level NVQs and occupational standards may be an inappropriate strategy in some occupational areas. As an alternative, there are likely to be benefits in diverting some of the effort currently put into higher-level occupational standards and NVQ development into exploring how the principles of practice-based assessment and accreditation, modified as appropriate, can be taken up by professional and similar bodies and applied to existing qualifications or used in developing new awards or accreditation systems when these are needed. The recent publication by QCA and its partners of a set of design principles for higher-level vocational qualifications other than NVQs (QCA *et al* 2000) suggests an opportunity for public recognition of a more requisite variety of awards at these levels, and potentially for greater promotion of developments in a similar vein to PACR. Overall, a greater sharing of experience between models based in differing conceptions of competence, professionalism and accreditation can only promote the enrichment, relevance and quality of developments concerned with developing and recognising professionalism and competence.

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Acronyms

ASSET	Accreditation of Social Services Experience and Training
FULCO	Framework of universal levels of competence
JAG	Joint Accreditation Group (of the Conservation Forum)
MTI	Museum Training Institute (now Cultural Heritage National Training Organisation)
NCCR	National Council for Conservation-Restoration
NVQ	National Vocational Qualification
PACR	Professional Accreditation of Conservator-Restorers
QCA	Qualifications and Curriculum Authority

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Box 2. Levels of competence and expertise

<i>Level</i>	<i>Stage</i>	<i>Characteristics</i>	<i>How know- ledge etc is treated</i>	<i>Recognition of relevance</i>	<i>How context is assessed</i>	<i>Decision- making</i>
1	Novice	Rigid adherence to taught rules or plans Little situational perception No discretionary judgement	Without reference to context	None	Analytically	Rational
2	Advanced beginner	Guidelines for action based on attributes or aspects (aspects are global characteristics of situations recognisable only after some prior experience) Situational perception still limited All attributes and aspects are treated separately and given equal importance	In context			
3	Competent	Coping with crowdedness Now sees actions at least partially in terms of longer-term goals Conscious, deliberate planning Standardised and routinised procedures				
4	Proficient	Sees situations holistically rather than in terms of aspects Sees what is most important in a situation Perceives deviations from the normal pattern Decision-making less laboured Uses maxims for guidance, whose meanings vary according to the situation		Present	Holistically	
5	Expert	No longer relies on rules, guidelines or maxims Intuitive grasp of situations based on deep tacit understanding Analytic approaches used only in novel situations or when problems occur Vision of what is possible			Intuitive	

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