Philosophical underpinnings of the integrated conception of competence

Paul Hager
University of Technology, Sydney
and
David Beckett
University of Melbourne

Introduction

With the recent resurgence of interest in competency standards for occupations, philosophers of education have rightly attacked the unsoundness of narrow conceptualisations of competence. This raises the question of whether an educationally sound conception of competence is possible, and, if so, what such a conceptualisation looks like. The first half of this paper will propose and illustrate some criteria that we claim educationally defensible competency standards should meet. The criteria for such competency standards include, first, the integration of key intentional actions with personal attributes, second, holism of several kinds, and, third, the encompassing of cultures and contexts. It will be argued that a certain conception of competence can meet these criteria, which have been defended by, amongst others, Gonczi, Hager & Oliver 1990; Hager 1993, 1994; Preston & Walker 1993; and Walker 1992, 1993a. The main philosophical underpinnings of this approach to competency standards will be made clearer by considering and answering, in the second half of the paper, a range of recent critical responses to competency standards. The example of law competency standards will be used to illustrate major points in contention.

The integration of attributes with key tasks

The first criterion arises from our claim that sound competency standards involve an integration of attributes with key tasks of an appropriate level of generality, based on the logic of the concept of 'competence'. One indication of this is that dictionary entries on 'competence' typically refer to 'ability to do something' or 'capacity for carrying out tasks'. Thus, abilities/capacities (what we have called 'attributes') are fundamental to competence. Likewise abilities/capacities are not limitless or unrestrictedly general; they enable the performance of some tasks and not others. Hence both attributes and tasks are logically necessary to the concept of competence, a point that too often has been overlooked. (For more on this see Hager and Gonczi 1993.)

Since abilities or capabilities are central to the concept of competence, occupational competency standards that omit to incorporate attributes such as knowledge, skills, attitudes, values, etc. are akin to a zoo without animals. Failure to take account of this necessary feature of any satisfactory conception of competence is the prime reason why so many people assume that a narrow view of competency standards is the only possibility. However, while attributes are logically necessary for competence, they are not by themselves sufficient. As we have seen, the concept of competence includes the notion of the abilities or capabilities being applied to the performance of some tasks. However, for the development of competency standards that are educationally valuable, 'tasks' should not be interpreted in an exclusively narrow sense. All occupations involve performance of some relatively specific tasks, but equally, if not more, importantly, they involve performance of broader, more generic tasks such as planning, contingency management, etc. At their broadest, tasks include such things as performing in accordance with an overall conception of what one's work is about, working ethically, etc. Just as abilities or capabilities were necessary, but not sufficient for competence, so the performance of tasks is also necessary, but not sufficient for competence.

So any satisfactory account of competence must cover both attributes and tasks. Likewise any plausible set of occupational competency standards should include both attributes and tasks. This point can be summarised by saying that the concept of competence is relational, i.e. it links together two disparate sorts of things. Competence is essentially a relation between abilities or capabilities of people and the satisfactory completion of appropriate task(s). This is why we favour the 'integrated' approach to competency standards, so-called because it integrates attributes with key tasks. Likewise we have consistently attacked approaches to competency standards that focus exclusively on either tasks or attributes. Such approaches ignore the essential relational character of competence. In so doing they omit one of the two key ingredients of competence, thereby leading to inevitably impoverished

competency standards. Only by taking proper account of the essentially relational nature of the concept of competence can the holistic richness of work be captured in competency standards.

One further consequence of the logic of the concept is that competence is inferred from performance, rather than being directly observed. While performance of tasks is directly observable, abilities or capabilities that underlie the performance are necessarily inferred. This means that assessment of competence will inevitably be based on inference from a sample of performances. In requiring that the sample meet criteria that will make the assessment valid, assessment of competence is in the same boat as other kinds of assessment. This point will be taken up later.

Holism / reductionism

The second criterion arises from consideration of holism/reductionism and is, perhaps, the main philosophical issue in the paper. Let us try to put the argument in a nutshell. 'Holistic'/'reductionist' are relative terms when applied to competency standards. By that we mean that neither absolute holism nor absolute reductionism is a plausible option. As Bradley's philosophy illustrates, whatever problems a monistic holism might face in trying to talk about the whole, it is quite unable to talk coherently about the parts, or 'atoms'. The equivalent for occupational competence is the claim that 'I know a competent teacher (say) when I see one, but nothing coherent can be said about what constitutes teacher competence'.[1] At the other extreme, Russell's logical atomism was able to speak comprehensively about the independent simple parts, but, notoriously, was unable to account for how a complex could be more than a mere set of simple atoms.[2] The equivalent for occupational competence might be those extreme versions of competency-based teacher education that produced thousands of discrete teacher behaviours. There were instances where people could perform each of the thousands of behaviours, yet somehow still couldn't teach. Hence the view presented in this paper that plausible professional competency standards will need to be holistic in some respects and atomistic in others.

There are at least four important senses in which integrated competency standards are holistic.

Firstly, they integrate and relate attributes and tasks as discussed in the previous section.

Secondly, the holism of integrated competency standards is reflected in the requirement that key intentional actions must be at an appropriate level of generality. An example of such an action is a lawyer advising a client to proceed in a particular way. Note that this is an intentional action which is

itself multi-intentional in that any given instance of it will involve a variety of more specific intentional actions. The relative complexity of the actions can be gauged from the fact that the professional competency standards developed in Australia typically include 30–40 key intentional actions at this more general holistic level.

Thirdly, the holistic character of such competency standards is due also to the fact that the tasks (or intentional actions) are not discrete and independent. For example, actual professional practice will often simultaneously involve several of these intentional actions.

Finally, these integrated competency standards are holistic in that the intentional actions involve what Walker (1992) calls 'situational understanding', i.e. the competency standards include the idea that the professional performers take account of the varying contexts in which they are operating. A more general cognitive perspective is called on to frame a skilled intentional action appropriate to the context. Beyond taking account of context, it is also important to recognise that skilful occupational performance occurs within varying workplace cultures. These vital aspects of holism are the subject of further discussion in the next section.

Cultures and contexts

Alongside formal competency policies and their implementation and assurance are equally powerful but covertly cultural determinants: rules, rituals and conventions, for example. These lend themselves to the metaphor of the language-game not because they appear in their intangibility all the more capricious, but for quite the reverse. Their intangibility makes them elusive, and their elusiveness tends to mask their power. Cultural determinants by definition start right under our noses, with what we say and the way we say it—and our ability to conceive of our daily beliefs, values and attitudes otherwise than through what we find familiar is very difficult. Polanyi, for example (1958: 113) discusses the problem of the open-texturedness of language-games: how can the same term apply to a series of indeterminately variable particulars, if its meaning is merely convenient? In cultural contexts, we may similarly ask how the same rule, ritual or convention can carry any determinate meanings for any people who share the culture. Polanyi's justification of the regulative force of language, and, by inference, of culture in general is this:

> My own view admits this controlling principle by accrediting the speaker's sense of fitness for judging that his words express the reality he seeks to express.
>
> (Polanyi 1958: 113)

This moves the locus of justification to an ontological, if not metaphysical basis, and, while it seems to remain individualistic, opens the way for a socially-situated meaningfulness for individuals whose epistemology is inevitably contextual. Professional activities reflect this model, and professional competence is, as we have seen in various ways, a continuum of judgments of 'fitness' as well as an implicit endorsement of the practitioner's 'fitness for judging' how the world seems to be. Such judgments are informed by values, and because of this, they are not only context-bound, but culturally-driven. These two aspects jointly colour the ontology (what there is) and the epistemology (how we come to know it) of a professional's judgments.

Professionals' competence is underpinned by an emergent concept of cultural formation. Professionals are becoming more involved in locating their professional values and knowledge in broader social settings, instead of inheriting, replicating and distributing a professional heritage. The heritage necessarily exists, but is itself mediated by the individual's reading of the context of his or her practice, and, as we have seen, this is now more likely to include richer social purposes and epistemologies resulting from collaborative association amongst one's peers.

This process is deliberately and simultaneously to lay oneself open to cultural formation, and to participate in it. However, the extent of the cultural arena will be perceived variously. Some practitioners and their peers will concern themselves with a professional culture, within broad social and public values they acknowledge but wish to keep at arm's length. For example, legal and accountancy practices may be increasingly collaborative, but have no greater sense of broader purposes other than the amelioration of injustice, corruption and inefficiency. These are assuredly social virtues, but they do not require for their fulfilment an activist stance; they fit an epistemological and ontological framework shaped by an acceptance of the *status quo*. Education and nursing, by contrast, lend themselves to a wider arena of social involvement. The territory of practice comes contested to the individual practitioner when the field is entered. He or she has to set the epistemological and ontological boundaries, mainly because for these enabling professions, the definition of the pursuit of social virtues is more contentious. In this way, the 'enabling' professions lend themselves to broader activism, albeit in the new collaborative forms of association.

Thus the reading of contextual factors will be a universal feature of professional competence, but to move beyond that to a recognition of one's own profession's location (or 'situatedness') is to acknowledge a symbiotic formative process. What such a culturally-formed professional practice looks like will vary depending on the perception of the extent of the arena of social involvement, as has been briefly indicated. But wherever the profession is on a spectrum of such perceptions, the new professional will be adept at learning from and contributing to collaborative peer association. In brief, the new

professional recognises and contributes to his or her 'construction' as a professional. We may call this process 'cultural formation'. The social origins of this professionalism means that individual practice is more likely to overtly display an eclectic epistemology, and a sensitivity to a shared ontology. This is simply the point that one's cultural formation will reflect a variety of influences—on which knowledge counts as essential, and on how reality is perceived by someone who is inevitably sharing a set of professional activities. So we may conclude that this new professional will own his or her workplace identity in a rich and substantial sense, because it will connect individual practice with social and cultural phenomena at several levels, and in manifold modes.

Integrated competence

Let us now summarise the integrative nature of these criteria of competence. At its most general, cultural formation, as explained above, is the most convenient point of entry to consideration of professional practice in general and competence in particular. To put the same point more ideologically, cultural formation is the way to approach 'best practice'. This pursuit of quality performance is usually found in the sort of policy analyses and social commentaries which outline the international competitiveness now expected of Australia and all other similar nations. Whatever one's view of this policy agenda, we argue that what we have outlined here as 'integrated competence' moves beyond the mere listing of tasks (what is done in the job), by adding the two holistic dimensions: the practitioner's attributes (what is brought to the doing of the job) and the characteristics of the context, or 'situatedness' (where the job is done).

Cultural formation, then, is an enlightening approach to best professional practice, because, in starting with the social nature of learning, it deals centrally and holistically with the complexities and dynamics of values, both individual and social. These, as we have shown, underpin epistemological and ontological judgments for professionals. But the whole approach hinges on the integration of the three essential dimensions of workplace performance, which, taken together, justify the inference of competent practice.

An example of the application of professional competency standards

Before going on to discuss a range of criticisms that have been directed at competency standards, it will be helpful for the discussion if we have before us an example of competency standards being applied to a profession. Too often, by being totally divorced from practice, debates about competency standards centre on issues that have little connection with actual practice, while ignoring key theoretical issues that do inform practice.

The Law Society of NSW in 1993 has created the designation of specialist lawyer in four specialisations, viz. family law, criminal law, small business law and personal injury law. They have developed integrated competency standards for each specialisation and devised and implemented in each case an assessment strategy based on the competency standards.[3] Prior to the adoption of competency-based assessment for the accreditation of the specialist lawyers, the proposal was to use the traditional methods of unseen examinations and referees reports. This proposal attracted considerable criticism from both inside and outside of the legal profession, mainly on the grounds that it would do little to identify those lawyers with a genuine capacity to perform at the specialist level in the identified areas. Accordingly, integrated competency (or performance) standards were developed for each of the specialisations and an assessment strategy was designed and implemented based on the content of the competency standards. In each case, the assessment strategy features a knowledge exam and referees reports as well as two other assessments that focus on performance within the specialist area. For example, in family law candidates are required to carry out simulation exercises centred on conducting a first interview with a person acting in the role of a client. This simulation, of approximately 60 minutes duration, is videotaped and the videotape assessed by the examiners. The various versions of this simulation have been constructed so as to assess a wide range of the contents of the competency standards including those related to interaction between the solicitor and the client, taking instructions and giving advice, assessing facts and legal options, canvassing the options with the client, and developing the initial plan. Underpinning attributes tested by the simulation include communication, evidence gathering skills, and acting ethically, as well as various kinds of knowledge and their application. Thus the simulation was developed with elements and performance criteria from a variety of units in mind. While depicting different clients, situations and problems, the six simulation exercises that have been developed all have the same basic structure: an immediate need; long term issues; information not disclosed unless appropriate questions are asked; client's hidden agenda; presentation of a problem that requires non-legal solutions, (including some of a

religious/cultural kind that require sensitive handling); an ethical issue; and a query on costs.

In family law, the other performance-based assessment activity requires the candidate to complete specified tasks on a mock file compiled by the examining committee. This provides assessment evidence on various aspects of the competency standards, including legal analysis, presentation of various options to the client, and preparation of court documents. The combination of simulated client and mock file might suggest that a more valid assessment strategy would employ a real client and a real file. It is true, in general, that assessment of performance of real work situations is more valid than of simulated work situations. However practical and ethical considerations, the relative weight of which varies with the nature of the occupation, can sometimes tip the scales in favour of simulations. In the medical and paramedical professions, for example, simulated patients are likely to be much less satisfactory than real patients for purposes of performance assessment. However, simulated clients have distinct advantages in the field of law. Provided that the person playing the role of the client has been well trained, thereby minimising relevant differences from a real client, it is possible to employ carefully designed cases that are much richer from an assessment point of view than are typical real cases. Thus a well-designed simulation and mock file can readily yield data that is much more cumbersome to obtain from an appropriate combination of real cases.

This sort of combination of performance assessment supplemented by more traditional types of assessment that is being used to accredit specialist lawyers, is not, of course, something totally new. Clinical assessment of this kind features in the final years of the university degree courses for many health-related professions. String quartets and the like commonly fill vacancies by trialling in actual performances those applicants selected by interviews. Driving licences are commonly issued on demonstrated capacity to drive in actual road conditions with successful completion of a knowledge test being a prerequisite for taking the performance test. It is noteworthy that whatever the limitations of assessment procedures of this kind, suggested improvements usually relate to making the performance assessment more demanding rather than to replacing it by traditional exams (say). What is most novel about the law example is how the performance assessment was developed from integrated competency standards. The competency-based assessment strategy ensures that evidence is collected on all aspects of what is considered crucial to overall effective performance in the respective specialist areas.

Criticisms of the integrated conception of competence

The main philosophical underpinnings of this approach to conceptualising competence will be made clearer by considering some reasons that critics have advanced for opposing competency standards. Our response to the various criticisms will be illustrated by drawing on the law example.

The 'closet behaviourist' argument

This argument erroneously claims that all conceptions of competence inevitably collapse into behaviourism, not least because their generalisability is thought to be inchoate. These two aspects of the central point are teased out below, and considered further, but the force of the argument itself is represented by Cairns.

Discussing attempts to develop a richer kind of competency standards, Cairns argues as follows:

> The key element emphasised in all the definitions and all the various documents ... is that a competency or a set of competencies is demonstrated by a behaviour or a performance. Further, the performance is gauged against some pre-set 'standard' which is deemed to be acceptable in declaring that the performer has the competence. The concession to attitudes or knowledge aspects is only in terms of their inference from performance.
>
> (Cairns 1992: 15)

From this Cairns concludes that all notions of competence should be lumped together as inescapably behaviourist.

The first difficulty with the Cairns position is that by assimilating all performance to behaviour and, by the fallacy of equivocation, identifying this with behaviourism, he proves far too much. As Eraut has pointed out:

> performance evidence should refer to performance in the workplace under normal or near-normal conditions; because the notion of a performance-based qualification becomes meaningless if the meaning of the word 'performance' is stretched too far, perhaps even to include performances on a written examination.
>
> (Eraut 1993: 15)

Cairns' otiose understanding of behaviourism thus renders all assessment procedures behaviourist, thereby discrediting them according to his own

criteria. Taking a more charitable position and accepting his argument as an attack on performance-based assessment as usually conceived, the Cairns argument is still extremely unconvincing. It accepts traditional assessment methods such as written examinations, but rejects all performance-based assessment as tantamount to a commitment to behaviourism. Cairns thereby condemns the law simulations and mock files, the assessment of clinical competence of (say) novice optometrists, the string quartet's trialling of possible new members, or the road testing of novice drivers. The logic of his position is that in all cases we should return to the interview or knowledge test as the appropriate assessment device, a recommendation that is obviously ludicrous.

The real problem for Cairns is his equating of behaviourism with performance evidence. What is objectionable about behaviourism is not its use of performance evidence as such, but rather its denial that there is anything other than behaviour, thereby dismissing mental and related phenomena such as knowledge, values, etc. except as they have behavioural manifestations.[4] Thus the employment of carefully chosen samples of performance to infer knowledge, values, etc. has little or nothing to do with behaviourism as the above examples show.

The inference is important here. Two criticisms result if the inference is dispensed with.

1   First, it is clear that, without the integrative inference, the integrated
    approach would collapse into a naive behaviourism, because all that
    would be available is observable, i.e. behaviour.

2   Second, it may be argued that the inference of generalisable or generic
    competence is unwarranted, because the practices are particular, and the
    probability of transference beyond the particular can, like all inductive
    argument, only give probability, no stronger warrant of existence.

For the integrated approach to professional competence, the problem is: it may pin down the specific outcomes (on which inference is based) so succinctly that professional discretion is eliminated from the requirement to make unique judgments. This in turn means the *sui generis* nature of much professional action is also eliminated. In this situation, not only (1) naive behaviourism, but also (2) the inability to justify generalisable competence (and hence remaining with the 'here and now') exhaust whatever experiential richness the integrated model of competence was intended to capture. We are left with mindless role-modelling: not the image of the professional in any century, nor in any field of practice! Walker has made this the basis for a more subtle way of charging the integrated approach to competence with closet behaviourism.

Let us further address these two criticisms. First, the justification of integrative inference.

Professional competence, construed in the integrated sense, is, according to this central, united criticism, nothing more than closet behaviourism, concerned with what is observably being done right here, and right now. Taking, first, the closet behaviourism tangent, Walker makes the following contrast:

> ...[O]ccupational competence cannot be distinguished in principle from competence in the knowledge base, the values, attitudes and philosophy of the occupation. These may not be sufficient for each and every occupational competency, but they are necessary. They are part of, not separate from, occupational competency, whether the separateness is postulated in terms of a base or anything else... Holists have fallen into the trap of accepting sufficient of the behaviourist trap to reinforce the distinction.
>
> (Walker 1993b: 20)

He goes on to argue that the integrated model is circular because it defines competence in terms of competency, and, if that is not intended, nevertheless:

> ... it reinforces the gap between theory and practice that behaviourism trades on to eschew theory, and that technicist versions of occupational (including professional) competence use to reject wider doctrines of professional responsibility.
>
> (1993b: 20)

How could the integrated or holistic model be defended against these claims of technicism, circularity and closet behaviourism?

All three claims can be engaged and overcome through the deployment of the analysis of professional practice as cultural formation. In this, our third criterion of integrated competence, we noted that particular professions will evolve a filtering, or mediation of their epistemological and ontological frameworks, and that practitioners will develop their individual versions of these as specific workplaces (or 'locations') are made sense of in the daily round of decision making and judgments which substantially constitute the 'acting intentionally' of professionalism. Furthermore, prior to this, we identified holistic qualities which are thought, at least currently, to typify certain workplace decision making. And, finally, the new professional was marked out by collaborative forms of association learning from and contributing to the very shaping of professional practice for the individual and his or her peers.

This detailed and rich display of sociocultural phenomena and some of their interrelationships can generate its own judgments of what is, in Kultgen's terms, 'professional proficiency' (Kultgen 1988). What makes a right

judgment thus and so? In the broad and inclusive sense that proficiency consists in the technical skills, the social virtue and the ability to make appropriately justifiable decisions, 'integrated competence' is what a profession's peer group says it is.

In these cases, the inferences that are made from observable criteria to the ascription of competence are identical in logical form to those made in academia of a student's learning, from the evidence of outcomes such as theses, essays and tutorial presentations. In practical work (laboratory classes, field trips, practica and micro-teaching assignments) the inference of educational competence from observable behaviour is even more direct, and incontrovertible. Indeed, one of the staunchest reasons for the persistence of public examinations is so that an individual can be seen (sic) to be doing his or her work—that is, can 'show' the extent of his or her competence.

Similarly, in the judicial system, the accused's demonstrations of remorse and admissions of guilt are key behavioural influences on the judge's calculation of the likelihood of recidivism, and are reflected in sentencing. On a lighter note, when a convicted criminal, off to imprisonment, makes the riposte to the judge to the effect that 'that's only your opinion, Your Honor', we laugh. In the context of the law court, His Honor's opinion is the authoritative one. And when a football commentator announces that 'Rangers were the better team, on the day', we should immediately recognise that the context of the football field during the game is, literally, the appropriately authoritative arena for deciding an evaluative outcome like a football trophy.

So what do the critics of integrated competence want? They imply that there is available some other way of deciding professional competence other than through a holistically-sensitive, collaborative and particularistic methodology, but we do not know what it is meant to be like. Meanwhile, the richness of the approach we have summarised as integrated professional practice, and supported by an analysis of cultural formation is neither technicist, circular nor behaviourist. It is acknowledged that technical knowledge, observable (i.e. public) behaviour and definitional integrity are all components of this view of competence, but the same can be expected of any complex human activities, such as academic learning, judicial process and sporting prowess.

In these three cases, to press the point of integrative inference further, we infer qualities which can be derived from the nature of the activities themselves. We even tend to identify the qualities by their appropriateness to the activities: respectively, scholarship, remorse and athleticism are all inferred at the right time and place, through technical knowledge, behaviour and at least implicit definitional agreement. Integrative competence and cultural formation as complementary and explanatory analyses of professional practice, do no violence to the 'facts' of best practice. On the contrary, they justify not merely the particularities which are judged the 'best' by

professionals, but also the practices from which value judgments like that can be drawn.

One possible interpretation of Walker, which we follow here, is that he can only agree with this conclusion. He wants holism to work: the preceding discussion has shown that it can. And in another document (Walker 1993a) he expressly supports a 'performance model' of competence for the teaching profession, which emphasises the actions of teachers in making 'situational judgments'. The similarity of this performance model to the integrated model of competence is noted by Hager (1994), drawing on Kerr and Soltis (1974) who state:

> ... one applies the adverb 'competently' only to those movements which a person intends as a particular type of activity ... Thus, while it is possible to describe teaching, or any other human activity, as either action, which necessarily involves intended activity and appeals to a person's reasons and goals to explain the activity, or as behaviour, which can be specified directly in terms of observable movement, and appeals to causes for explanation, our interest in competency advises an action description.
>
> (Hager 1994: 4–5)

Having established integrative inference, we turn now to the second aspect of the 'closet behaviourism' argument: the generalisability of the generic competencies themselves.

Here our ally is, surprisingly, Walker. He draws upon the well-known adult educator Cyril Houle (1980) and on Nowlen (1988) in supporting an action description, although he uses the term 'performance'. This, as we noted earlier, concentrates on professional practice as intentional action, (or more accurately on 'acting intentionally': see Beckett [1992]). Walker (1992: 97–100) could be dealing with culturally-sensitive workplace leaders anywhere when he writes:

> Thus in planning professional education and professional development account needs to be taken of the importance of the environments and cultures of organisations and groups, and of the desirability of promoting the capacity for organisational as well as individual learning ... Given this practical human and organizational context of professional development, and the need for the professional to develop the capacity for judgment within it, sound professional performance will require knowledge of applied human relations and life skills as well as critical skills of mind.
>
> (1992: 98)

He is keen to identify teaching's generic competencies. But any professional group can attempt to specify what it is about its best performers which is generalisable, without collapsing into mindless role-modelling. At the other extreme, it will be recalled that the particularistic (i.e. context-dependent) nature of the integrated approach cannot generate any valid generalisable, or generic, competencies, because it can only deal with what is right here, right now. So how, between hopelessly specific role-modelling, and hopelessly generic competencies, can integrative inference gain some purchase on what competent practice actually consists of?

Clearly, the response to the criticism seems to hinge on the individuation of the generalisability of the competencies. Walker, for example, states

> ... we can identify, within a structure of competence, generic competencies present in good teaching in all teaching roles and sectors, though they will be combined and exercised in a variety of ways in different ways and by different teachers with different teaching styles ... Not all competencies are generic. There are specific competencies relevant only to specific teaching settings. Generic competencies have meaning and value in all settings, but are not necessarily by themselves sufficient for competent performance in any setting.
>
> (Walker 1992: 95)

Recent empirical work on practical intelligence has shown, regarding intelligent functioning, for example, similar generalisability of competencies, but only in occupation-specific combinations. Klemp and McClelland ask:

> Does what we have found among managers relate to intelligent functioning in other occupations? The answer to this question is most certainly yes ... we have found considerable consistency in the applicability of certain competencies. Outstanding performers in the helping professions—physicians, counsellors, social workers, teachers—all rely on a high degree of planning/causal thinking and diagnostic information seeking in collecting and interpreting observations and data and making recommendations on the basis of their conclusions ... [etc.] But what makes successful senior managers different from successful people in these other occupations is the specific combination of intellectual and other competencies that they require and the behavioural manifestations of these competencies in the appropriate context...
>
> (Klemp & McClelland 1986: 49)

Wagner and Sternberg, investigating tacit knowledge as an aspect of practical intelligence, note limited but clear empirical support for this type of distinction:

The evidence in support of a general ability for practical tasks will be more convincing when generalised individual differences similar to those found in the two career pursuits examined here [academic psychology and business management] are found for other career pursuits ...

(Wagner & Sternberg 1986: 77)

Similar scepticism about the breadth of the generalisability of competence is expressed by Marginson:

Research being conducted at the University of Melbourne's Centre for the Study of Higher Education suggests that the claim about universal transferable generic skills needs critical scrutiny. Employers are using the same words in very different contexts.

(Marginson 1993a)

He is mainly concerned with academic-to-work-skills transferability but the substantive point holds: different contexts have different cultures—what counts as skill, even as a generic skill (like 'oral communication') in one context (say, a tutorial) may appear as a deficiency in another (say, a workplace team meeting) (Marginson 1993b).

Generic competency, then, is a shaky construct beyond the practice or even performance which assembled it. There seems to be empirical and conceptual support for generic competency within a professional field, with limited prospects for transferability. Part of the evidence for that is the agreements professional peers can and do reach about 'best practice'; there are individuals we have in mind when we make these generalisations. We can move beyond their role as models of best practice, but not so far as to uncouple the practice from its situation at that time and in that place. Hence the centrality of cultural formation to the conceptualisation of integrated competencies.

The professional judgments made as best practice will vary across the range of best practitioners, and, as we have remarked before, this is to be expected and esteemed as evidence of the discretionary freedom professionals exercise. But the freedom is both bound by and bound up in the cultural formation of those practices. It follows that the integrated model of competence can produce generic competencies, but it should not be expected, in so doing, to move beyond the culturally-characterised practices in which these competencies, diverse and discretionary as they hopefully are, can flourish.

Let us now summarise the response to the argument based on 'closet behaviourism'. We have dealt with two aspects of this central criticism of the integrated model of professional competency. These were, respectively:

1   that the integrative inference from behaviour to competence was
     unsupportable as it was 'closet behaviourism', technicist, and
     definitionally circular; and
2   that the identification of generic or generalisable competence was not
     warranted on the basis of specific practices.

Both of these aspects meet over the central area of professional
discretion—the judgment-in-individual-cases—where it is essential that
interpretative and associative modes of knowledge be retained as constitutive
of practice. The dissolution of this single central criticism was accomplished
by the extrapolation of how professionals' cultural formation supports
practice, by both enabling collaborative peer negotiation of 'best practice' and
also by marking the boundaries of generalisability of particular practice. These
imply an integrated, or holistic, understanding of professional competence.

The utopian pre-conditions fallacy

A very common strategy adopted by critics of competency standards is to
assert (incorrectly) that competency standards claim to meet some impossible
ideal, thereby facilitating their rejection on the grounds that they fall short of
the ideal. What is never pointed out is that any arrangements, including
existing ones, also fall far short of this ideal, usually much more so than the
competency standards option. Thus, for example, Soucek (1993: 168) asserts
that ' ... the competency-testing approach simply cannot anticipate all possible
permutations of occupational situations'. Hence, it is claimed, this approach is
fundamentally flawed. The fact that proponents of competency standards
never pretended that they would be comprehensive in this way is simply
ignored. Nor does Soucek explain how existing or alternative arrangements
solve this alleged problem except to assert rather cryptically, without further
argument, that knowledge rather than performance is needed ' ... to equip the
future practitioner with the capacity to deal effectively with unforeseen,
situationally specific problems.' (1993: 168).

In the law example discussed above, the option of knowledge testing cum
referees reports was rejected after criticism from both inside and outside of the
legal profession that this would be a very poor indicator of specialist
capabilities. Instead the preferred assessment strategy incorporated
knowledge testing and referees reports together with performance assessment
activities such as simulations and mock files. For both the knowledge testing
and the referees reports, the competency standards provide a detailed basis for
framing questions to be asked of candidates and/or referees. Do Soucek and
others really want to argue that unspecified knowledge testing is a better
guide to performance on unforeseen demanding professional problems?

Perhaps they view 'surprise' questions in traditional examinations as a suitable preparation for such circumstances? If so, they are obviously unaware of the growing literature on how expertise is acquired. This whole discussion of unusual circumstances not covered by the competency standards is an example of the competency debate being centred on issues that have little connection with actual practice, while remaining ignorant of the key theoretical issues that do inform such practice.

A variant of the utopian pre-conditions fallacy asserts that because evidence gathered in performance assessment is particular, nothing general can be validly inferred from such evidence. This is a version of the problem of induction discussed in the previous section. Apart from the obvious rejoinder that particular evidence can falsify relevant general statements, this criticism conveniently overlooks the fact that all assessment processes use particular evidence as the basis of their inferences. As the law examples illustrated, the competency-based assessment strategy was preferred over the traditional alternative because the inference in the former case was thought to be much more soundly based.

The technology of testing argument

An interesting objection to competency standards comes from those who worry that ' ... technologies of assessment and measurement are in danger of being raised to heights beyond their limits in these reforms' (Porter *et al.* 1992). Educators have rightly objected to technologies of measurement becoming ends in themselves in education. The quest for scientific objectivity in testing has led to an overemphasis on statistical tests and the reification of single measure test scores. IQ testing has provided a case study of the abuses that can result from such thinking. Nevertheless, the worries voiced by Porter *et al.* are indicative of widespread lack of understanding that competency-based assessment represents a different assessment paradigm. As against the scientific measurement model that has taken over traditional assessment, the assessment model underpinning competency-based assessment is a different one, more akin to a legal model:

> The decisions that we should be making in assessing competence are more like those that are made in a court of law than those made as a result of performance in an examination room. We need to construct assessment events which are capable of demonstrating a competence (or its absence) as clearly and quickly as possible ... One of the best features of a judgmental model of assessment is that we can call for more evidence in a doubtful case: we don't have to rely on making inferences from a fixed and predetermined set of data. We need, if we adopt such a method, to devise appeal procedures also,

because these can act as safeguards against the known dangers of bias.
Another excellent feature of judgmental models is that assessment becomes a
dialogue between the person being assessed and the assessor: there is a case
for the defence and even, perhaps, room for some self assessment.

(Bailey 1993: 6)

Competency-based assessment is not alone in its adoption of a judgmental
model of assessment to replace the scientific measurement one. Other recent
educational developments that do likewise include problem-based learning,
education for capability, portfolio-based performance assessment of teaching
(Shulman 1987), and the increasing concern by cognitive theorists to assess
how students go about solving problems as well as the solutions that they
reach. These are but some examples that reflect widespread attempts by
educators to reform assessment practices so as to encourage more effective
learning (Wolf *et al.* 1991, Ewell 1991). Eisner (1993), noting the increasing
interest amongst educators in 'more authentic approaches to educational
assessment', outlines and discusses eight criteria that distinguish what we
have called the judgmental model from the scientific measurement model.
These differences between the two models seem to us to be great enough to
constitute a paradigm shift in educational assessment.[5]

The law specialist accreditation procedures discussed above include
several of the features outlined by Bailey and Eisner. Thus, rather than
necessarily taking existing preoccupations with technologies of measurement
to unprecedented heights, as Porter *et al.* fear, competency-based assessment is
part of a much wider reaction to the limitations of traditional approaches to
assessment. Based on a judgmental model, it represents a different approach
to assessment in which learning and assessment are much more closely linked
than has usually been the case. In the law assessments, for example,
unsuccessful candidates learn much more about their own strengths and
weaknesses than do the unsuccessful candidates in traditional law
examinations. It is a mark of the grip of the scientific paradigm of assessment
on the minds of even its critics, that many find it hard to conceive that an
alternative paradigm might have something to offer to education.[6]

The alleged undervaluation of knowledge

As part of a wider attack on what he sees as the behaviourist foundations and
imprecision of the British approach to competence, Hyland (1993) further
claims that it grossly misunderstands the nature of knowledge. Specifically he
charges that:

> ... competence strategies are guilty of two cardinal errors: first, they separate
> the mental and the physical components of performance, and attempt to
> appraise these separately; secondly, they mistakenly give performance pride
> of place in evaluating competence, and seriously underestimate the role of
> knowledge and understanding.
>
> (Hyland 1993: 63)

In response to Hyland's first charge, the integrated model of competence asserts just as strongly as does Hyland that any rigid separation of the mental and the physical is misconceived (for detailed discussion see Hager 1994). Instead, the integrated approach recommends holistic assessment activities that simultaneously assess the various components that contribute to competence. According to Hyland, separating the mental and the physical results in the assessment of performances that involve mere behaviour and dispositions, thereby leaving no place for 'acts of judgment' which 'presuppose the possession of a wide range of other capacities of a logical, linguistic and conceptual kind' (Hyland 1993: 64). However, it is precisely because the integrated approach insists on holism that such 'acts of judgment' and the like are crucial to successful performance in, e.g., the previously described 60-minute simulated interview for assessment of specialist family law candidates. Thus Hyland's first charge is simply irrelevant to holistic assessment situations of this kind.

Our response to Hyland's second charge, that evaluation of performance seriously underestimates the role of knowledge and understanding, would be that it greatly depends on how holistic is the performance that is being assessed. The trialling of potential new members of string quartets in actual performances is the kind of holistic performance assessment that will normally detect the presence or absence of the required levels of knowledge and understanding. So the problem lies not with performance assessment as such, but with the kind of performance assessment that assesses discrete physical skills independently one by one. Once again, the integrated model of competence agrees with Hyland in rejecting such assessment methods. In fact, as Harre (1979: 131) points out, there are two ways in which we can ascribe knowledge to persons on the basis of their performance: we can infer the level of knowledge on the basis of the performance itself and/or on the basis of how the persons account for and justify the performance and related actions. Both ways are important in integrated competency-based assessment strategies (see Gonczi, Hager & Athanasou 1993). Given that actual integrated competency-based assessment strategies, such as the law example discussed earlier, often include traditional knowledge tests as well as holistic performance assessments, there is no basis for any general claim that assessment of competence necessarily undervalues knowledge.[7] While no doubt fatal to

various narrow approaches to competence, Hyland's charges in effect support the integrated model of competence.

The alleged omission of values, attitudes, etc.

It is difficult to imagine any occupation where attitudes or values are not important. However, attempts to measure values and attitudes are notoriously unreliable. Despite this, Cairns (1992: 15) thinks that this is a particular problem for competency standards: 'Is it to be assumed that one can perform a value?'. This way of posing the problem demonstrates the mindset so common amongst critics that competency standards must be inherently atomistic. On this view, adherence to equal employment opportunity principles (say) is yet another box to be ticked. This way of thinking has led some people to assert that competency standards should be restricted to assessment of knowledge and skills. Such a conclusion poses an apparent dilemma for competency standards—omit attitudes and values and be invalid, or include them and be unworkable.

   Once again, the integrated approach to competence provides a solution. In this approach, attributes appear in the performance criteria for various aspects of the occupation. There is no major difficulty in describing occupationally relevant attitudes and values in a general way, nor in explicating their import in given workplace contexts. Experience has shown that where attitudes such as 'empathising with the patient' are important, they can readily be written into the performance criteria for appropriate elements. In fact 'empathising with the patient' is not difficult to assess in real holistic work contexts where it is an important part of the overall performance.[8] What is difficult is assessing 'empathy' in the abstract. Likewise the law competency standards discussed above include assessment of various attitudes and values within the holistic assessment activities such as the simulations.

   Valid assessment of attitudinal factors will also be assisted by longitudinal and multiple assessments that gather evidence of attitudes and values from a variety of sources. Far from being a weakness of competency-based assessment, it may well turn out that a major advantage of well-constructed competency standards of the integrated kind is that they facilitate more reliable assessment of attitudes and values than other alternative approaches.

Conclusion

At the start of this paper we proposed several criteria that educationally defensible competency standards should meet. It has been argued that integrated competency standards, which conform to these criteria, evade various common objections that have been directed against competency standards. Competency-based assessment founded on standards of this sort appears to have gained major acceptance in a range of occupations. Since we conclude that employment of competency standards in an educationally sound way is possible, we would like to see more philosophers of education taking the lead to influence current policies and practices in this direction. In our view, for the competency agenda to be effective, the integrated, holistic approach to competency standards needs to be adopted at all occupational levels. Unfortunately, due to the continuing influence of the vocational education/general education dichotomy (see Hager 1994), there are those who believe that, as long as it is kept out of the universities and professions, a narrow behaviourist approach to competency standards is adequate for other occupations. As more and more nations go down the competency standards track, what is urgently needed is a more sophisticated international debate about these issues.[9]

Notes

1   Leicester (1994, p.115) proposes another possible basis for this sort of 'retreat into obscurantism'. Her suggestion is that someone who rejected behaviourism in favour of a dualist theory of the mind would thereby hold that a person's knowledge and understanding were inaccessible to others. Hence, she concludes, they would be committed to assessment being, at least in part, an inescapably intuitive activity.
2   See Griffin (1993) for an illuminating comparison of Bradley's and Russell's work in these terms.
3   The apparently successful implementation of this accreditation process has led the Law Society to establish a further four specialisations in 1994.
4   Leicester (1994) warns that in their concern to vehemently reject narrow behaviourism, philosophers of education can easily fall into a dualism that denies that performance provides any evidence about a person's level of knowledge and understanding. Leicester's alternative to these flawed options is a Wittgensteinian theory that accords closely with the position defended in this paper.
5   For an intriguing illustration of the significance and impact of this paradigm shift in educational assessment practices see Mackenzie's discussion of crucial-point testing (Mackenzie 1994).

6   For principles of competency-based assessment see Hager, Gonczi & Athanasou 1994. For practices of competency-based assessment see Gonczi, Hager & Athanasou 1993.

7   For further discussion of the place of knowledge in competency-based assessment see Wolf 1989.

8   For discussion of the appropriateness and feasibility of testing a person's values by what they do rather than by what they say see Mackenzie 1994. See also Chappell and Hager 1994.

9   This paper was first presented to the Annual Conference of the Philosophy of Education Society of Australasia, University of Sydney, October 1993 and then at the Fourth Biennial Conference of the International Network of Philosophers of Education, KU Leuven, Belgium, August 1994. It has benefited from various comments by members of the audience on both of those occasions, as well as from the comments of two anonymous referees from this journal.

References

Bailey, M. (1993) 'Theoretical Models and the Assessment of Competency' Paper presented at the *VEETAC National Assessment Research Forum*, Sydney, April.

Beckett, D. (1992) 'Straining Training: The Epistemology of Workplace Learning', *Studies in Continuing Education*, Vol. 14, No. 2, pp. 130-42.

Beckett, D. (1993) 'Dancing With the Ugly Sisters: What Kind of Democratic Culture Should Adult Education Develop?' *New Zealand Journal of Adult Learning*, Vol. 21, No. 1, pp. 77-97.

Chappell, C. and Hager, P. (1994) 'Values and Competency Standards', *Journal of Further and Higher Education*, Vol. 18, No. 3 (forthcoming).

Cairns, L. (1992) 'Competency-Based Education: Nostradamus's Nostrum', *Journal of Teaching Practice*, Vol. 12, No. 1, pp. 1-32.

Eisner, E. (1993) 'Reshaping Assessment in Education: Some Criteria in Search of Practice', *Curriculum Studies*, Vol. 25, No. 3, pp. 219-33.

Eraut, M. (1985) 'Knowledge Creation and Knowledge Use in Professional Contexts', *Studies in Higher Education*, Vol. 10, No. 2, pp. 117-133.

Eraut, M. (1993) 'Implications for Standards Development', *Competence & Assessment*, Issue 21, pp. 14-17.

Ewell, P.T. (1991) 'To Capture the Ineffable: New Forms of Assessment in Higher Education', *Review of Research in Education*, Vol. 17, pp. 75-125.

Gonczi, A., Hager, P. and Oliver, L. (1990) *Establishing Competency-Based Standards in the Professions*. National Office of Overseas Skills Recognition Research Paper No. 1, Department of Employment, Education and Training. Australian Government Publishing Service, Canberra.

Gonczi, A., Hager, P. and Athanasou, J. (1993) *The Development of Competency-Based Assessment Strategies for the Professions*. National Office of Overseas Skills Recognition Research Paper No. 8, Department of Employment, Education and Training. Australian Government Publishing Service, Canberra.

Griffin, N. (1993) 'Terms, Relations, Complexes' In Irvine, A.D. and Wedeking, G.A. (Eds.), *Russell and Analytic Philosophy*. University of Toronto Press, Toronto.

Hager, P. (1993) 'Conceptions of Competence', *Proceedings of Philosophy of Education*, Vol. 49, University of Illinois Press, Champaign-Urbana, pp. 355-64.

Hager, P. (1994) 'Is There a Cogent Philosophical Argument Against Competency Standards?', *Australian Journal of Education*, Vol. 38, No. 1, pp. 3-18.

Hager, P. and Gonczi, A. (1993) 'Attributes and Competence', *Australian and New Zealand Journal of Vocational Education Research*, Vol. 1, No. 1, pp. 36-45.

Hager, P., Gonczi, A. and Athanasou, J. (1994) 'General Issues About Assessment of Competence', *Assessment & Evaluation in Higher Education*, Vol. 19, No. 1, pp. 3-16.

Harré, R. (1979) *Social Being: A Theory for Social Psychology*. Basil Blackwell, Oxford.

Houle, C. (1980) *Continuing Learning in the Professions*. Jossey Bass, San Francisco.

Hyland, T. (1993) 'Competence, Knowledge and Education', *Journal of Philosophy of Education*, Vol. 27, No. 1, pp. 57-68.

Kerr, D.H. and Soltis, J.F. (1974) 'Locating Teacher Competency: An Action Description of Teaching', *Educational Theory*, Vol. 24, No. 1, pp. 3-16.

Klemp, G.O. and McClelland, D.C. (1986) 'What Characterises Intelligent Functioning Among Senior Managers?'. In Sternberg and Wagner (Eds.).

Kultgen, J. (1988) *Ethics and Professionalism*. University of Pennsylvania Press, Philadelphia.

Leicester, M. (1994) 'Competence, Knowledge and Education: Reply to Hyland', *Journal of Philosophy of Education*, Vol. 28, No. 1, pp. 113-18.

Mackenzie, J. (1994) 'The New Professor of Theology', *Journal of Philosophy of Education*, Vol. 28, No. 1, pp. 5-16.

Marginson, S. (1993a) 'Generalists on the Career Path', *Australian*, 7 April.

Marginson, S. (1993b) 'Are Students Ready for the Real World?', *Australian*, 12 May.

Nowlen, P.M. (1988) *A New Approach to Continuing Education for Business and the Professions*. Collier Macmillan, London.

Polanyi, M. (1958) *Personal Knowledge: Towards a Post-Critical Philosophy*. Routledge & Kegan Paul, London.

Porter, P., Rizvi, F., Knight, J. and Lingard, R. (1992) 'Competencies for a Clever Country: Building a House of Cards?', *Unicorn*, Vol. 18, No. 3, pp. 50-58.

Preston, B. and Walker, J.C. (1993) 'Competency Standards in the Professions and Higher Education: A Holistic Approach'. In Collins, C. (Ed.), *Competencies: The Competencies Debate in Australian Education and Training*. Australian College of Education, Canberra.

Shulman, L.S. (1987) 'Assessment for Teaching: An Initiative for the Profession', *Phi Delta Kappan*, Vol. 69, No. 1, pp. 38-44.

Soucek, V. (1993) 'Is There a Need to Redress the Balance Between Systems Goals and Lifeworld-Oriented Goals in Public Education in Australia?' In Collins, C. (Ed.), *Competencies: The Competencies Debate in Australian Education and Training*. Australian College of Education, Canberra.

Sternberg, R.J. and Wagner, R.K. (Eds.) (1986) *Practical Intelligence: Nature and Origins of Competence in the Everyday World*. Cambridge University Press, Cambridge.

Walker, J.C. (1992) 'The Value of Competency Based Education' In Hattie, J. (Ed.), *The Effects of Competency-based Education on Universities: Liberation or Enslavement?* University of Western Australia/Murdoch University, Perth.

Walker, J.C. (1993a) 'A General Rationale and Conceptual Approach to the Application of Competency Based Standards to Teaching'. In Schools Council (National Board of Employment, Education and Training) (1993) *Agenda Papers: Issues Arising from Australia's Teachers: An Agenda for the Next Decade.*

Walker, J.C. (1993b) 'The History and Philosophy of the Competency Movement in Australia'. In Lucardie, D. (Ed.), *A Question of Competence.* Dept. of Continuing Education, UNE, Armidale.

Wolf, A. (1989) 'Can Competence and Knowledge Mix?'. In Burke, J.W. (Ed.), *Competency Based Education and Training.* The Falmer Press, London.

Wolf, D., Bixby, J., Glenn III, J. and Gardner, H. (1991) 'To Use Their Minds Well: Investigating New Forms of Student Assessment', *Review of Research in Education,* Vol. 17, pp. 31-74.