

Beyond Knowledge and Competence towards a framework for professional education

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Capability 1 (3) 44-52, March 1995

One traditional view of professional practice is that it involves applying a body of expert knowledge to known situations in order to produce rational solutions to problems. However, in a rapidly changing post-industrial or information-based society practitioners increasingly need to respond intelligently to unknown situations and go beyond established knowledge to create unique interpretations and outcomes. As a result, it is no longer adequate to base professional development on transmitting existing knowledge or developing a predefined range of competences; instead, practitioners need to be able to construct and reconstruct the knowledge and skill they need and continually evolve their practice. An alternative approach which achieves this is based in the processes of reflecting, enquiring and creating which underpin both creative professional practice and academically rigorous learning.

Introduction

Professional education and development are at a crossroads. Traditional syllabus-driven models of professional training are criticised as being too theoretical and for failing to meet the demands of practice, while newer ones based on skills and competence are called into question for being atomistic, controlling and confined to the predictable. Professional bodies uphold their curricula and codes of practice, while educational institutions stress the importance of adequate theoretical understanding and Governments expound the need for practical competence and improved performance. However, the arguments often miss a vital point about developing professionals for the 21st century: it is no longer adequate to concentrate on developing people for roles which are based on industrial-age ideas about professional work. Given the thesis that there is a net movement from relatively stable industrial societies to ones which are rapidly changing, post-industrial and information-based (cf Schön 1971, Ackoff 1974, Toffler 1980, 1990, Reich 1991), the thesis must also be considered that a fundamentally different approach is needed to helping practitioners develop.

Two views of professional practice

If ways of thinking about professional work can be characterised simply, the prevailing approach throughout the industrial era can be termed the technical-rational model, or what I shall call Model A. This model is based on a view that practice involves working with solvable problems which yield to logic and the application of knowledge. Accordingly, professional work is seen as chiefly concerned with applying expert knowledge objectively to analyse problems and provide the solutions.

This problem-solving approach to practice is essentially governed by logic rather than values. Within it, the practitioner is concerned with the means of getting things done rather than the validity of the results, with analysing and solving problems rather than first identifying and constructing them, and with applying knowledge rather than

developing or questioning it. The deeper, value-based questions of what outcomes are desirable, how situations are framed as problems (and by whom, and to whose advantage), and what constitutes valid professional knowledge and competence are assumed to lie beyond the individual practitioner, either with the profession as a body or with some external agency.

Model B: post-industrial practice

A post-industrial approach to the same questions is less at ease with working from a base of logic alone, and concerns itself also with the values and perspectives that determine which logic is used. Again, to characterise it simply, it may be identified as a creative-interpretive model of professional work, or what I will call Model B.

From this Model B viewpoint, the practitioner is seen as working in a complex, dynamic system in which there are less often neat problems than 'messes' which defy technical solution (Ackoff 1974:21). Before being able to apply logical solutions, s/he must first theorise the situation with which s/he is faced in order to construct the problems which are to be solved. The practitioner operates reflectively and intelligently in these 'messy' situations to design and create desired outcomes, rather than just solving problems. S/he will certainly use analysis and expert knowledge, but the key tools will be synthesis, situational and ethical understandings, and the ability to interpret the meanings of situations from a range of perspectives and standpoints.

Model B is based on holism and an appreciation for the interconnectedness and value-based, divergent nature of problems rather than the reductionism of the technical-rational model. It treats the construction of problems, the nature of desired outcomes and the validity of knowledge all as problematic and therefore as real, practical issues in each individual practice situation. It sees methods and outcomes as interdependent and interacting a cycle of problem-setting and solving, and knowledge as existing in a cyclic or spiral relationship with practice in which it arises from doing and informs further action which in turn generates new knowledge (Schön 1987:35-6). The construction of problems and desired outcomes becomes critical, and depends on perspective or world-view: they are always somebody's problems and somebody's outcomes, and it is the responsibility of the professional to make informed but ultimately value-based judgements about the decisions s/he takes concerning them.

Implications for professional identity

There are two challenges to current conceptions of professional definition and identity implicit in this model. Firstly, it moves the responsibility for defining acceptable professional behaviour and competence from the profession as a whole to the individual practitioner in negotiation with the other participants in his or her practice situation. Secondly, it questions current notions of professional boundaries. Interprofessional and multi-disciplined approaches to practice are already commonplace in some professional areas, but from a creative-interpretive viewpoint, rigid notions of 'profession' based on predefined areas of expertise are increasingly less appropriate, even in some cases as starting points. The implications of this are not yet fully apparent, but it does suggest that while the industrial era provided fertile ground for the rise of professions with clear boundaries and distinct bodies of knowledge (Larson 1977), a postindustrial society will see the professional

practitioner less as a member of a definable occupation than as a capable, learningful individual with an evolving portfolio of experience and ability.

Rather than replacing the technical view of professional practice, the creative model subsumes it and puts it into perspective as one component of practice. Model B operates at the level of values and perspectives, giving the practitioner choices and decisions about outcomes as well as methods, and about which knowledge and which logic to use as well as how to use it. As such, it represents a significant broadening of perspective about what professionals need to be able to do. In turn, this provides a fundamental challenge to the ways in which we currently assist both would-be and practising professionals to develop.

Developing the knowledge-base

The dominant approach to professional development in the 20th century is what Bines (1992) and others term the technocratic model, based firmly on a Model A view of practice. It typically consists of three broad stages: acquisition of the profession's fundamental knowledge-base, relating this knowledge to cases and puzzles, and finally applying it through some form of supervised practice or internship. Assessment normally reflects these stages even if it is not always arranged in a direct sequence with them, the classic pattern consisting of written examination, case-studies or some other form of semi-applied exercise, and often also a final test of professional competence or evidence of satisfactory experience.

Variations of this model exist in which the stages are less distinct or where the first two are followed as part-time study alongside practice, but the same basic pattern is normally present: first acquiring a given knowledge-base and set of values, and then applying them to practice. The same approach has also heavily influenced continuing professional programmes (cf Houle 1980), particularly where further development can be associated with a reasonably predictable step-change in the practitioner's career such as acquiring general management responsibility.

Technocratic approaches to development have gained pre-eminence for several reasons in addition to their consistency with Model A. Rigorously acquiring and demonstrating a body of scientific or quasi- scientific knowledge provides a degree of respectability and perceived quality assurance in the eyes of the layperson, client or employer (Schön 1983). It also helps distinguish 'professionals' from members of less prestigious occupations, and therefore provides a tool for occupations to gain perceived professional status (Larson, op cit). Persuasive arguments can therefore be generated in favour of the technocratic approach, both on academic and practical grounds. However, the academic arguments rely on a somewhat degenerate notion of academic validity and rigour which accepts the relatively uncritical acquisition and application of knowledge within a defined set of values and assumptions, at the level of what Cox (1980) terms problem-solving theory. Similarly, the practical ones are based on a presupposition of Model A practice, and on questionable assumptions about the relationship between knowledge and practice.

Limitations of the knowledge model

While there is little argument that knowledge (even if tacit knowledge) is a necessary ingredient of practice, simply mastering a syllabus of received knowledge makes a surprisingly low contribution to increased professional effectiveness (Klemp 1977, Eraut 1990). Argyris & Schön (1974) further demonstrate that practitioners tend to use formal or external knowledge to develop theories for rationalising and explaining their actions (espoused theories), which can differ markedly from the theories implicit in the same actions (theories-in-use). Adding to espoused theories is therefore no guarantee that theories-in-use (and therefore practice) will be modified; indeed, it may only lead to further rationalising and the apparent lesson that theoretical knowledge has little bearing on practice.

The technocratic model therefore produces Model A technicians and administrators, but it has severe limitations and disadvantages as a tool for developing interpretive, creative Model B practitioners. As Reich points out (1991: 231),

"An efficient educational process, it is assumed, imparts knowledge much as an efficient factory installs parts on an assembly line. Regardless of what is conveyed, the underlying lesson is that it is someone else's responsibility to interpret and give meaning to the swirl of data, events and sensations that surround us. This lesson can only retard students' ability to thrive in a world brimming with possibilities for discovery".

Competence and beyond

Over the last 20 years or so various approaches to development have grown up which emphasise the skills and competence inherent in effective practice rather than concentrating on knowledge directly. Several different skill and competence models are in common currency, working variously from behaviours and skills or the outcomes of effective practice, and at a range of levels from tasks and functions to major job roles (or even career paths). Briefly, the McBer approach widely used in the USA (McClelland 1976) is primarily behaviourally based and applicable at both broad and narrow levels, while the UK National and Scottish Vocational Qualifications (N/SVQ) model is in principle (if not always in practice) concerned with outcomes and works down from whole job roles to precise functions (Training Agency 1988, Mansfield 1989).

The benefits of competence-based approaches stem first from their concern with practice directly rather than with practice as an application of knowledge, and secondly from their use of practice situations to derive objectives for development - whether through identifying the behaviours and strategies of effective job performers (as in the McBer model) or working deductively from the outcomes required of a competent practitioner (as in the N/SVQ approach). Their appeal lies quite legitimately in the greater confidence inspired by someone who can demonstrate their competence in practice rather than simply espouse knowledge.

However, whether competence-based approaches are sufficient for meeting the demands of professional practice is highly questionable. Explicitly identifying skills and competences needed by practitioners can be a powerful means of assisting

development, but attempting to encapsulate the entirety of practice in a list of skills or competences is a doubtful enterprise: it ignores practitioners' roles in "creating and defining their own task" (Burgoyne 1989:57) and undertaking intelligent and reflective practice which involves "worldmaking" (Schön 1987) as much as accepting the world as others define it. This limitation suggests that, while competence models seek to move beyond the restrictions of technocratic knowledge-bases, they are nevertheless based firmly in a Model A philosophy (cf Fish 1995).

Metacompetence

These limitations can be overcome by moving beyond the skills and outcomes which relate directly to practice situations, and working at the level of what Brown (1994) and others call metacompetence: the more or less generic ability which provides the resources to develop competence in specific situations. Effective Model B practice is dependent on a wide range of abilities at the meta-level, for if practitioners are to "create and define their own task" and become involved in "worldmaking", they must also be able to develop the abilities they need to operate in these tasks and worlds of their own construction. While technocratic and competence-based development are generally concerned with the answers to questions posed by predictable tasks in known worlds, metacompetence is about the ability to ask the right questions, construct problems from problematic situations, and develop the means to resolve them.

A common approach used at this level is to define specific meta-abilities and assemble them as a 'metacurriculum' or agenda of outcomes to be achieved. Readily available examples include Klemp's (1977) three cognitive factors (the ability to conceptualise and create themes and patterns from complex information, the ability to understand complex issues and resolve conflicts of information, and the ability to learn from experience by reflection, theory and the synthesis of alternatives) and at a more specific level the core professional criteria developed by Winter and Maisch (1991), and others can be developed by using the McBer approach at a generic level (cf Elliott 1991:125-128). Although this approach can be extremely effective, it ultimately suffers the same restrictions as any curriculum-based system in that it seeks to define what needs to be learned and therefore limits possibilities at the meta-level; although it avoids restrictions at the level of immediate practice, it simply shifts the limiting structure up to the next level. Furthermore, defining a finite metacurriculum begs the question of what happens when the abilities it describes are mastered. Are they assumed to provide a sufficient toolkit to develop practice throughout professional life, or does the metacurriculum itself need to be continually expanded and rewritten? Model B suggests it does.

A process model: integrating practice and development

While the metacurriculum enables situational knowledge and skills to be developed without defining them in advance, it is also possible to move beyond its limitations by working with fundamental processes of learning. Various ways of framing these are possible, but the model I use is based on reflecting, enquiring and creating, as these are also key processes of Model B practice.

The Model B practitioner will need to reflect on his or her own practice, both through maintaining an ongoing self-critical dialogue and through stepping back from and reframing practice in order to question it in the light of experience, knowledge and theory. S/he will also need intermittently to seek out new knowledge, theories, and ways of doing things, experiment with different approaches and try out hunches in order to overcome challenges and realise opportunities. And finally, s/he will be involved in synthesising ideas, knowledge and resources to create desired outcomes and generate new possibilities. All of these things are central to effective Model B practice, but they are also central to learning, and offer the potential to construct professional development within essentially the same frame of reference and set of processes as effective professional practice.

Double-loop learning

However, one qualification is needed before progressing. Reflecting, enquiring and creating can all be done relatively uncritically, at a problem-solving or 'within-frame' level of thinking, and while this may be appropriate in some of the situations a practitioner may encounter it fails to precipitate the reframing, holistic synthesis and worldmaking which is essential to effective Model B practice. Equally, this level of learning may be ephemeral and leave old beliefs and theories-in-use unchallenged. Reflecting, enquiring and creating therefore need to involve critical thinking and the reframing and questioning of basic assumptions as much as working at a surface or pragmatic level, and result in new personal theory as well as changes to immediate practice. They also need where appropriate to engage critically with existing theory in order to enable learning from the practice, research and ideas of others. As well as facilitating situational learning and decision-making, the processes therefore need to operate at a deep level akin to "double-loop learning" (Argyris 1993) in which underlying assumptions and theories-in-use are brought into the open, questioned and then changed or adjusted.

Defining the framework

To formalise the three processes as a structure for development they can therefore be expressed as critical reflection on practice and theory, critical enquiry into practice and theory, and the creative synthesis of practice and of theory. Together, they form a content-neutral framework for professional development and practice which integrates and sets up a dialogue between theory and practice, and recognises the role of the practitioner in generating new knowledge and theory as well as the role of theory and knowledge in contextualising and challenging experience. They also make no distinction between learning which is programme-based and that which is an integral part of practice: both kinds of learning result from an experience of one kind or another and are equally subject to the same processes (for instance, an enquiry may be conducted in a library, in the workplace, or both, and reflection can encompass a lecture as much as an episode of practice).

The philosophy of this framework is essentially constructivist, i.e. the individual practitioner makes sense of and 'constructs' the world of his or her practice, without taking for granted the descriptions offered by syllabi, competence frameworks or traditional conceptions of professional roles. It is based like Model B practice at the level of perspectives and values, which frame the logics, outcomes and thence

methods of practice; it therefore leaves open the possibility that there are always other logics as well as other methods from which to operate. It also views initial and ongoing development on a continuum, so that reflection, enquiry and creative synthesis are developed from the outset rather than just being the preserve of the experienced or 'extended' professional.

Existing approaches

In practice, there are three well-established approaches which can be applied to be consistent with the process model: action learning (see for instance Revans 1971, 1980, McGill & Beaty 1992 and Gosling & Ashton 1994), action research (McNiff 1988, Elliott 1991 and Zuber-Skerritt 1992 among others, and Deming 1993:134-136 in the context of practical management), and reflective practice (Schön 1983, 1987). These methodologies provide effective ways of integrating theory and practice in the cyclic or spiral relationship referred to earlier, and are equally applicable to practice and explicit learning situations. However, a strong caveat is needed in that all three can be applied at a problem-solving level rather than at one which is critical and creative.

Briefly, Revans describes the action learning process as involving both programmed knowledge ("P") and questioning insight ("Q") in a dialogue between theory and practice, but the dialogue needs also to develop new personal theory at a critical level as well as lead to learning which solves immediate problems. Similarly, while Elliott describes action research as "studying a ... situation with a view to improving the quality of action within it" (1991:69), the study needs to go deeper and question the assumptions and ethics underlying the situation itself in order to generate at least an awareness of the possibilities and pressures for more fundamental change. Schön's reflective practitioner model can also be used relatively uncritically to generate progressive improvement through reflection-in-action, but reflecting in a Model B sense includes stepping back and reflecting critically on underlying assumptions in order to generate possibilities for step-change.

Creating

Beyond these methodologies, a major gap exists in the area of creating. Creating involves the generation of new theory and practice by synthesis or leaps of imagination, and is the active process which results in new theories, ideas, proposals and practices; it may be planned, open-ended, spontaneous or even unconscious. One learningful, rigorous and effective methodology for creating is the personal mastery model described by Senge (1990) and Fritz (1991). Briefly, it involves developing and maintaining a vision of a value-congruent and meaningful future state, enquiring into and clarifying the current state or starting-point, and constructing a consistent, practical route between the two which enables the use of "creative tension" as a driving force for achievement. Its emphasis on knowledge of the starting point (as opposed to untested conjecture) and having a consistent and compelling vision require a deep level of thinking and enquiry in which underlying assumptions, values and issues are brought to the surface and resolved, along with continuing reflection to review progress and identify and respond to change as well as benefit from unplanned learning and opportunities provided by the journey (cf Schön 1967). Once again, it is this deep level that is important, so that creative action is not distorted to the

superficial level of attaining predefined or dogmatic goals uncritically and without openness to other possibilities.

Completing the picture

The process framework as I have described it thus far can be viewed as fitting well with current post-technocratic notions (and in some cases, practices) of extended professionalism and continuing professional development, particularly in primarily interpretive occupations such as management, education, and training and development (Lester, 1995a). Accordingly, it could be argued that at present Model B is nearer to realisation in extended professionalism than it is in initial practice, and a constructivist approach to professional learning is therefore appropriate at, but not before, continuing development. However, this argument contradicts the basic philosophy of both Model B practice and the process approach itself, and it is also counterproductive to expect practitioners to somehow suddenly cast away limiting Model A beliefs once they have completed their initial training.

The message is therefore that an approach embedded firmly in the process philosophy is needed from the outset in order to develop Model B practitioners effectively. This however raises two major questions. Firstly, practitioners do need to master recognised areas of practice in order to satisfy common expectations, ensure safety or a minimum standard of service, or meet legislative requirements, and these are often not open to construction or negotiation at any given time. The extent to which this applies varies between different areas of application, and while it is most prevalent in the technical, clinical, financial and legal professions it may occur to some extent in all occupations. Secondly there is the question of accreditation, for qualifications as an apparent hallmark of professionalism - both in general and, perhaps in Model A tradition, to define membership of a particular profession - are still in growing demand.

Guidance structures: maps and safety nets

The question of guidance and minimum standards may be answered by adding two basic structures to the process framework. The first is a broad 'map' of the field which serves as a guide to what people in the profession do and to the type of values, theories, knowledge and abilities employed, rather than as a prescriptive framework. The second is a 'safety net' or set of details of the minimum requirements for acceptable practice in different areas - in terms of safety, legality and where absolutely necessary, common expectations. As this latter is prescriptive it should be kept to the absolute minimum, and kept rigorously up to date; it is a recognition of essential standards, not an attempt to create exhaustive ones. These structures could be presented in a way which draws on the N/SVQ approach, but clearly and explicitly to provide descriptions which are pragmatically useful, sufficiently precise, and provoke reflection and enquiry rather than suggest absolute standards. The broad map structure is not a syllabus to cover or set of standards to achieve, but one way of representing a territory of which exploration is encouraged until sufficient experience and confidence are gained to redraw the map or extend its boundaries. The minimum requirements or safety net structure is somewhat different in that it represents a threshold to be attained before independent practice can take place, although its standards will still be subject to reflection, enquiry and perhaps over time, re-creation.

Fundamentally, the two structures are framed from a constructivist perspective, so that they are seen by the developing practitioner from the outset as pragmatically useful guidance rather than as givens. The extent to which the frameworks are adhered to or redefined through questioning and synthesis is part of the continuum between the novice and experienced practitioner, for although the novice will be encouraged to adopt a critical and creative approach from the outset, s/he is likely to derive much support from the structures, while the experienced professional will largely be constructing his or her practice through reflection, enquiry and action, but will still need to refer back to minimum requirements particularly as they become changed or updated. Consequently, the value of a period of initial training which is quite separate from practice becomes questionable, unless it is a 'content-free' introduction to process abilities; Model B professional development is a lifelong activity which is part of and inseparable from professional practice, and engagement with practice (even in the limited sense of what Schön calls the reflective practicum) is needed from the outset in order to enable student or novice professionals to establish a dialogue between theory and practice before the former becomes dogmatised and starts to establish espoused theories on a divergent path from theories-in-use.

Accreditation and academic validity

The question of accreditation can be answered using this overall framework. There are two dimensions to accreditation - content-specific or "vertical" (Lester 1994, 1995) and process-based or "horizontal" (ibid) - which differ at a fundamental level. Vertical accreditation can be related to the minimum requirements structure as representing a form of licence to practice: the certificate-holder can act safely and legally, and within reason avoid major mistakes. Although this 'driving licence' type of certificate might qualify for the term 'competence-based', it represents a minimalist approach of essentials only rather than attempting the wasteful and ultimately impossible task of ensuring competence across an entire occupation (however that might be defined). It may also be unnecessary in occupational areas where there is no justifiable reason for having a licence to practice.

The horizontal dimension relates to open-ended development and to extending capability. It also encompasses a legitimate form of academic validity which is based on process rather than content, i.e. on the ability to create and maintain a dialectic between practice and theory which involves reflection, critical enquiry, and creative synthesis. By using appropriate criteria which relate to each of these three processes, a basis is created for accreditation which is academically rigorous, supportive of practice, open in terms of what it applies to, and allowing of open-ended development. The point here is not to create a metacurriculum in which proficiency in reflecting, enquiring and creating are seen as ends in themselves, but to support and validate development through the processes. Because they are open-ended and lifelong, they can be applied to increasing levels of complexity to follow the practitioner's development, and could relate for instance to qualifications at sub-degree, graduate, master's and doctoral level.

Conclusion

While effective practice requires both knowledge and competence, approaches to development which are based on learning received knowledge or developing specific occupational competence are insufficient for developing practitioners for the future. This does not deny that knowledge and competence are vital to practice, but that predefined notions of the ingredients and outcomes of effective practice are inadequate guides for enabling practitioners to develop and work effectively throughout their careers and meet the challenges of change and uncertainty which can be expected to characterise 21st-century practice.

Instead, a framework is needed to support lifelong learning and development which is unbounded and doesn't limit itself to the known or the presently imaginable. This type of framework does not lend itself to being constructed within the paradigm of technical professionalism as an 'add-on' to current methods of development, but instead requires a change in thinking at a fairly basic level about how professionals are assisted to develop. This 'new' paradigm sees learning as a process parallel to and embedded in practice, where the traditional distinction between working and learning is transcended and continuous, lifelong learning becomes the norm. Within this process knowledge and competence are gained by various means, but they are always potentially transient and subject to modification and reconstruction according to changing circumstances and situational demands.

To take forward this thinking I have proposed a framework of reflecting, enquiring and creating which overcomes two traditional dichotomies in professional development. First, it removes the distinction between learning processes and processes of practice, enabling a continuum between initial and continuing development and between work and learning. Secondly, it provides an appropriate base both for effective practice and academic rigour by integrating critical, academically rigorous thinking with everyday practice. Without compromising its integrity, the academic both informs and learns from practice, rather than working in a distant, chiefly one-way relationship; and the practical is raised from unreflective here-and-now pragmatism to being concerned with theory, learning and creativity, but in a way which increases rather than dilutes its economic and social value.

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This article was first published in March 1995 in *Capability* vol 1 no 3, pp 44-52. *Capability* is published by [Higher Education for Capability](#); authors' and publishers' copyright reserved.

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