Editorial for special issue: After competency-based training

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After competency-based training: deepening critique, imagining alternatives

Australian Vocational Education and Training (VET) has been ‘competency-based’ for more than 25 years. Meetings of government ministers in 1989 and 1990 mandated the competency approach for the new national system then taking shape (Harris, Guthrie, Lundberg & Hobart, 1995). The reconceptualisation of Australian vocational education that continued through the 1990s was one of a number of reforms implemented by the government to give the nation a fighting chance in the new world of the global economy. These changes were typical of a wave of ‘neoliberal’ reforms sweeping the Western world at around the same time (Harvey, 2007). In this period, vocational education systems in ‘advanced’ economies received especially close attention. It was reasoned that vocational education was well-placed to develop the highly skilled workforces that would be needed in transformed economies but that existing practices were ill-suited to the new conditions (Finegold & Soskice, 1988). The instrumental picture of vocational education in the minds of policy makers and economists carried with it a set of implications. Foremost was the idea that VET is inherently about addressing the skill requirements of employers and therefore must be designed in such a way as to be permanently attuned to their needs.

The competency-based approach appears to offer the ideal mechanism for realising the essence of vocational education as the latter was understood by neoliberal reformers. The approach, developed in the US and Canada (Tuxworth, 1989; Joyner, 1982), gives documents a central position. Occupational experts would determine and describe activities typical of competent workers, with their deliberations recorded in texts that follow a uniform format. Different instances of the implementation of the competency approach use different formats for structuring the documents, but over time and across implementations ‘behavioural objectives’ theory (Mager, 1962) has been highly influential. According to this theory, an effective textual representation of competent work will include a description of a key part of the job in terms of an observable performance and an indication of the standard or criterion of performance along with the conditions typical of the context of the performance. Once the competency documents have been validated in some way, they become the reference-point for vocational educator work. Educators in a competency-based system are obliged to take the documents into account when they design learning, teach and assess. The Australian implementation of ‘competency-based training’ (CBT), like implementations elsewhere, demands that educators rigidly adhere to the documents as they go about their work. The documentary basis of the competency approach, when accompanied by strict rules concerning their use by educators, allows unprecedented levels of control over the educational process by central authorities and employer interests, and accounts for its appeal to reformers keen to secure the contribution of vocational education to the needs of the economy.

Policy makers did not underestimate the need to articulate the value of CBT to affected parties. In Australia, a centre for CBT was established which produced detailed resources to explain and facilitate implementation (Harris, 1993). Considerable effort went into developing a vanguard of educators imbued with the evangelistic spirit of the ‘Training Reform Agenda’, capable of pointing out the flaws of the old ways and demonstrating the new. A major administrative innovation called ‘Training Packages’ was introduced from 1997 that brought together all competencies relating to an
‘industry’, along with descriptions of combinations of them that created modular qualifications and other industry-specific instructions such as special rules for assessment (Smith & Keating, 2003). With the introduction of Training Packages the curricular revolution of training reform was complete, although the initiative has served to obscure the fact that the system is competency-based and that Australian VET rests on the production, dissemination and use of competency documents.

Among the world’s competency-based curriculum implementations, Australia’s national VET system stands out today as one of the most extensive and comprehensive. An OECD report on the system in 2008 estimated that 80% of occupations in Australia were covered by the system (Hoekel et al., 2008). In 2015 there were 18,151 nationally-endorsed competency documents with another 2,993 competencies endorsed at the state level. These competencies were gathered into 82 Training Packages, a figure indicating the number of discrete industries served by the system. In terms of the number of students in these competency-based programs, the National Centre for Vocational Education Research (NCVER, 2016) estimated that in 2015 there were 4.5 million enrolments. Considered in relation to the population, this number of enrolments represents about 26.8% of all Australians aged 15 to 64 years. Year on year, starting in the early 1990s, a very large number of people in Australia have been educated using the CBT model.

When the competency-based approach began to be taken up in national systems of vocational education, researchers raised concerns about the educational value of the approach and its social ramifications. What is at one level a masterpiece of centralised control appeared to be, at the level of learners and learning, problematic. In the US in the early days of ‘Performance-Based’ and ‘Competency-Based Teacher Education’, Broudy (1972) warned of the ‘fragmenting’ effect of the approach. He thought that separating out tasks, describing them in documents, and then basing education upon the documents would give students bits and pieces of knowledge and skill and no sure way of bringing them into a whole. This fundamental criticism is still articulated, such as we see in Buchanan, Yu, Marginson and Wheelahan’s (2009) analysis of the Australian VET system. If Broudy’s criticism concerns the way the competency approach refracts expertise with problematic educational consequences, another type of criticism addresses the way knowledge and skills are represented within the documents themselves. Insofar as they employ the theory of behavioural objectives, education based on competency documents is susceptible to the charge that it neglects subtle, non-observable factors that contribute to competent work performance. Ashworth and Saxton (1990) detailed this criticism in the context of UK training reform. Analyses of occupational knowledge indicate that a focus on narrow categories characteristic of the competency approach can also strip curriculum of reference to higher-level categories that are essential to a sophisticated grasp of the occupation. Gamble’s (2006) analysis, for instance, demonstrates that a sufficient vocational curriculum would address both practical and conceptual forms of knowledge. The CBT approach, however, systematically neglects development of the latter.

Other researchers have made the social and individual consequences of what they see as flaws of the competency-based model of vocational curriculum the key to their critiques. In an argument that echoes those of Broudy (1972) and Gamble (2006), Wheelahan (2007) explains that because competency documents are not designed to convey knowledge (their focus is intrinsically on observable performance) they do not give students a chance to acquire the ‘powerful’ knowledge that would allow them to benefit from and contribute to the valued knowledge work of the modern
economy. Because VET is traditionally the preserve of particular social groups, a competency-based VET will tend to function as an obstacle to these groups sharing in the benefits of powerful knowledge. The problem posed by CBT’s effect of constricting knowledge also impacts on the learning career of those students who move on from vocational education into higher education (Bathmaker, 2013). Some criticism of CBT focuses on its effects on individual identity. In the UK in the wake of the implementation of the competency approach during reforms to vocational education there, Edwards and Usher (1994) highlighted the way the approach facilitates centralised control of educator and student activity and a sense of being continuously exposed to bureaucratic scrutiny. Analysing the situation using the ideas of Foucault, Edwards and Usher suggest that learners and educators are trained in such a system to watch and discipline themselves in a way that happens to suit the architects of the new economy.

These and other criticisms of the competency approach were circulated in the early years of VET reform. At the same time, new theories of learning were emerging that undermined the theoretical foundation of CBT. For example, the theory of ‘situated learning’ (Lave & Wenger, 1991) showed that learning is vitally connected with participation in social endeavours or ‘practices’ such as occupations. Theories of learning like this cast serious doubts on the assumption that occupational competence could be effectively represented and communicated in documents. Skilled contribution to an occupational practice was understood by the new learning theories as something that resists formal representation and can not be effectively learned outside the practice context. This point was reinforced by developments in workplace learning theory, with the workplace emerging as a source of curriculum in its own right (Billett, 2006). This kind of curriculum contrasts with a competency-based model in several respects, raising new questions about the effectiveness of CBT for preparing learners for work.

It is clear that the bureaucratic and political attractions of CBT have been winning out against the objections of researchers. But what of the analyses and criticisms of these researchers? Does the existence of a large, functioning competency-based VET system and regular survey results that employers are largely satisfied with it suggest that researcher objections were not well-founded? If the question is decided by the fact that the system is functioning, that ‘the wheels are not falling off’, then perhaps the concerns of researchers have not been well-founded. However, if the question is framed in terms of whether VET is working as well as it might, then it is more difficult to decide on the value of CBT and the relevance of researcher concerns. If the question is framed like this, then a very wide range of stakeholders would surely concede that the system is not working as well as it might. Indeed, given the rhetoric that accompanied the shift to CBT, one might expect the system to be working a whole lot better. However, there can be little doubt that at many levels there are concerns about the ‘quality’ of the system. Governments have instituted reform after reform to VET since the Training Reform era brought in CBT. These latter ‘reforms’ have left the curriculum model at the core of the system intact, focusing instead on issues such as governance, regulation, competition policy, funding, etc. Yet quality concerns continue to surface. The quality of VET educators has been questioned, and so has the quality of basic processes such as assessment. Questions have been raised whether quality is compromised by the proliferation of short-duration programs that have steadily replaced the longer courses common before CBT. In short, questions have been raised by many stakeholder groups that suggest those closest to the system think it is not working as well as it can.
Very few of the concerns about quality of VET in Australia are directed at the competency-based curriculum model itself, although upon closer inspection, at least some of the perceived problems may go back to the model at the core. For example, assessment quality, teaching quality and program content and duration are all areas that are fundamentally shaped by the underlying curriculum model. If CBT is part of the reason VET is not working as well as it might in Australia, then what can be done? What role can researchers play now? It would appear that criticisms of the competency approach were easily shrugged off or ignored. But one kind of contribution remains open, and it is education researchers who are uniquely placed to make it. In recent research with VET educators and in VET community engagements I have discovered that the idea of alternatives to CBT is an especially puzzling one. That is, those in the system and with responsibility at different levels appear to find it difficult to imagine alternatives to CBT. The Canadian philosopher Charles Taylor (2004) coined the term ‘social imaginaries’ to highlight the way that what start out as theories can become entwined in practices and eventually become part of the ‘social imaginary’, or the commonly held moral and practical framework of a society by which it understands itself. In the process of a theory becoming installed in the social imaginary, it becomes more and more difficult, according to Taylor, to imagine alternatives. I wonder whether Taylor’s analysis can throw light on the difficulty of imagining alternatives to CBT among those involved in VET. The theory of CBT was imposed on VET practice through training reform, and has in the years since become a normal part of the way VET is done. In this process has the idea of CBT become part of the VET imaginary so much so that it seems the only way to do VET?

Whether Taylor’s analysis applies to Australian VET or not, awareness of alternatives to CBT is not common among system stakeholders. Somehow it has become difficult to imagine alternatives to CBT. A new role is thus indicated for researchers who hold concerns about CBT as an educational model. What are alternative curriculum models and how might they look in the VET context? Education researchers should be among the best placed to identify such alternatives and suggest ways vocational education could be reconceptualised in their light. At the same time, VET stakeholders may also need to be reminded of the problems with the competency approach that were so vociferously proclaimed in the early years of training reform. From my own discussions with people working in VET it is clear to me that many are not aware that CBT was once subject to intense criticism, let alone being able to articulate details of the arguments. At this time, then, the work of imagining alternatives to CBT might usefully be accompanied by a review of those criticisms.

This special edition of the *International Journal of Training Research* begins this work of recollection and imagination with reference to the kind of competency-based curriculum model we find in Australian VET. Contributors to debates about CBT and standardised models of education more broadly have been asked to revisit criticisms and make suggestions about alternatives to CBT in the light of critical insights and positions on the nature of human learning. In looking forward to a post-CBT future, the contributors were invited to outline considerations, principles, warnings or models that could stimulate debates about curriculum alternatives for VET. What emerges in the following pages are perspectives on competency-based and standardised approaches to vocational education that restate and deepen critique. We are reminded of the flaws and consequences of models like CBT. What also emerge are visions for vocational curriculum that avoid or overcome the flaws of CBT. Together, the papers of this special edition should give those passionate about VET a basis for confidence in the future of the sector. In the category of ‘those passionate about VET’ I include
policy makers and senior stakeholders who are currently wrestling with seemingly intractable problems of ‘quality’ in VET.

The papers

The special edition opens with a contribution from Leesa Wheelahan. The paper makes a clear critical point: that many of the problems with Australian VET actually stem from CBT. These problems with ‘quality’ are addressed in various ways by policy makers but miss the mark because they do not recognise the underlying problem. The paper also introduces criticisms Wheelahan has made of the competency-based approach for nearly two decades. These criticisms are two-pronged, with both epistemological and sociological elements. On the one hand, CBT sanctions neglect of the knowledge that sits behind individual competent performances. By focusing the attention of educators and learners on descriptions of particular performances it is difficult to appreciate the fact that theories and concepts are at play in occupations. Wheelahan dismisses the suggestion that listing ‘required knowledge’ or ‘knowledge evidence’ alongside descriptions of performances overcomes neglect of the knowledge dimension since such lists only serve to fragment larger, coherent conceptual structures that ought to be an explicit focus of VET. The social aspect of her criticisms concerns the fact that certain social groups are concentrated among the learners in the VET sector. If the educational model of CBT is flawed then large-scale social consequences follow with disadvantaged groups in particular denied the opportunity to develop the powerful knowledge that is made available to many learners in higher education. Wheelahan suggests that the capabilities approach may offer an alternative to CBT that overcomes the latter’s flaws and social fallout. This approach derives from the work of Amartya Sen whose analyses of economic policy has stressed the need to take into account not only what people can do, but what they might be, and considers well-being as well as more traditional notions of economic wealth in the construction of policy (Sen, 1999).

The next paper by Stephen Billett offers a substantially different critique and prescription. Another long-time commentator on Australian VET and critic of CBT, Billett takes this opportunity to develop an ‘education science’ approach to vocational education that draws primarily on psychology. From this perspective, units of competency prove to be capabable only of communicating knowledge and skills ‘from the lower end of the scale’, i.e., routine behaviours and basic recall. A key component in Billett’s argument is that statements of educational intentions like competencies would be more effective if they attended to complex processes rather than simply behaviours. In terms of what intended curriculum should address, Billett highlights a range of important determinants of competence including canonical occupational knowledge, principles and practices, and a range of underlying capacities. A picture of occupational complexity emerges that is poorly served by the simplifying, reductive rules of CBT. Billett’s education science is complemented with a social-historical critique of the influence on the design of educational provision for occupations by elites with a restricted understanding of work. Philosophers, scientists and policy makers are among those who have taken an interest in vocational education with consistently unhelpful consequences for learners and workers. CBT is but a recent version of this imperious cultural practice.

Jeanne Gamble’s paper is empirically situated in South African vocational education but develops an argument that sheds light on Australian VET with implications for post-CBT curriculum frameworks. For Gamble, understanding what is problematic about CBT as a model for vocational education
curriculum requires an understanding of the relationships between work and education, and she indicates different levels of relationship and different views on the nature of these relationships. On the one hand there is the view that a direct relationship exists such that it is possible for vocational education to facilitate direct entry into the labour market. On the other hand there are those, including Gamble, who envisage a more complex and indirect relationship. The implications of the latter view are profound for the question of vocational education curriculum. The latter needs to take into account the different ‘logics’ of work and education, and, if preparation for work is taken as the goal of vocational education, the logic of work must inform the design of curriculum. Analysis of the labour process yields insights for vocational curriculum, including the value of including four different types of knowledge: ‘how to’ knowledge, craft knowledge, systems knowledge and scientific knowledge. Her research into occupations including baking, boat building, film production and mechatronics finds that all four types of knowledge are required, contrary to some perspectives on artisans’ knowledge that downplays the knowledge dimension. In contrast, the competency approach, which assumes a direct relationship between education and work, operates with a deficient view of work informed by Human Resource Management thinking that seeks to base work on Standard Operating Procedures and the knowledge typical of that contained in manuals. The notion of ‘competence’ emerges as problematic due to its ‘amphibious ability to move between education and work and to misrepresent each domain to itself.’

The next paper by the editor and colleagues Liz Atkins and Michele Simons sprang from the recognition by Simons that the new ‘threshold concepts’ approach to curriculum and learning could be a way to help conceptualise curriculum challenges that emerge at the interface of VET and higher education. Since CBT as a curriculum model contrasts with most curriculum approaches in higher education, students moving between the two sectors may experience discontinuity at the deeper level of forms of knowledge and practice. The threshold concepts approach is a way of understanding and renewing curriculum and pedagogy in higher education that nevertheless articulates with more traditional concerns in higher education with the integrity of disciplinary and professional bodies of knowledge. Threshold concepts are central, guiding concepts that consistently create difficulties in learners that can lead to transformation of learner identity. The paper by Hodge, Atkins and Simons touches on the question of how threshold concepts may relate to the experience of learners crossing the boundary between VET and higher education but moves on to explore the potential of the threshold concepts approach for VET as such. In doing so the paper develops a perspective on the way CBT relates to knowledge and practice in the multiple occupations covered by the curriculum model. It is argued that CBT carries its own epistemological assumptions – assumptions about what can be known and represented – about occupations, but that stakeholders do not necessarily realise how these assumptions impact on the way occupations are understood, taught and assessed within VET. The argument is that the ‘epistemic’ impact of CBT is too strong and that knowledge and practice structures that belong essentially to occupations can be distorted or lost when translated into the format of units of competency. In the light of this argument, the search for alternatives to CBT might be guided by the principle of ‘epistemic neutrality’, or the idea that however curriculum is conceived across VET it should always be sensitive to the deeper knowledge and practice structures of occupations. The threshold concepts approach is examined as a possible way to renew curriculum in VET that is open to the indigenous epistemological and practical features of occupations.
The last paper in the special edition could well have been the first because in it, Richard Edwards sets out a profound case for experimentation in VET curriculum. In the process he undertakes a surprising demolition of his own early critical position on CBT. Working with the late Robin Usher in the early 1990s, Edwards applied the critical ideas of Michel Foucault to the new CBT approach that was taking hold in the context of VET reform in the UK. Foucault’s studies reveal how knowledge and social control or ‘power’ are not opposites but always intertwine in peculiarly modern ways that include practices of surveillance. But Foucault is not a conspiracy theorist in the average sense. The connections between power and knowledge are implemented by all of us in the way we work in the complex structures of modern society and watch and guide ourselves and each other in conformity with impersonal norms. Edwards and Usher (1994) showed that CBT is a particularly effective mechanism of surveillance of self and others. Units of competency encode knowledge about us, and processes of curriculum, teaching and assessment in such a system allow unprecedented levels of recording and reporting on ourselves and others. In the present paper, Edwards argues that we need to move beyond such critiques because all critiques create obscuring concepts rather than clarity and unhelpfully separate those who know from those who are the victims. Edwards’ paper calls for a new approach to curriculum in VET in which all parties have a productive role and in which experimentation is promoted rather than solutions, however well informed they are by critical analysis. Edwards’ paper sends a shockwave through the contributions to this special edition, prompting questions about the accessibility of critical arguments, the role of practitioners in overcoming problems, and the extent to which experimentation is engaged. It is for readers to determine whether the papers here open critical dialogue in which they may participate and throw up possibilities for moving beyond CBT that ignite interest in what VET may become.

This special edition culminates with an ‘Afterword’ by Anthony Martire and Jean Lave. Since the early 1990s a new understanding of learning has been made accessible to a wide audience through the seminal book by Lave and Wenger (1991) titled Situated Learning: Legitimate Peripheral Participation. In this book the idea is developed that it is by direct participation in social practices – such as occupations – that learning occurs. The basic argument is familiar to many people in VET in the guise of the theory of ‘communities of practice’ popularised by Etienne Wenger in the late 1990s. In the Lave and Wenger book, learning is seen in its most basic form when someone new to a social practice is slowly drawn into and absorbs the knowledge and social fabric of a shared undertaking in concrete settings such as a workplace. Here, the learner not only acquires knowledge, but ‘becomes’, for example, a tailor, taking on a new identity and contributing eventually as an insider to the production and reproduction of the occupation/social practice. On this view of learning some modern methods of education appear highly artificial, with learning conceptualised as the achievement of isolated individuals who acquire knowledge in institutions designed for knowledge transmission, measurement and credentialing. In this context, CBT is just one way in which knowledge is extracted from work and workers and codified for later instruction and assessment. The critique of CBT implicit in the Lave and Wenger’s (1991) study is worth drawing out and at the same time the implications of the social practice take on learning should be considered when envisaging post-CBT options for vocational education. In their Afterword, Martire and Lave revisit the understanding of learning entailed by the social practice approach and indicate ways CBT falls foul of this understanding. They also hint at ways of thinking about the future of vocational education that take into account the fundamentally social and situated nature of human learning.

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**References**


