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HERMENEUTIC DIMENSIONS OF COMPETENCY-BASED EDUCATION AND TRAINING

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Abstract

A distinctive feature of contemporary professional, vocational and continuing education is the prevalence of the 'competency' approach. So-called competency-based education or training (CBE/T) can be adopted as a basis for programs of learning, frameworks for development within occupations, or for national systems of vocational education. Its application is observed across a wide range of occupations – from gardening to teaching to piloting aircraft – and to diverse levels of expertise, from entry-level to continuing professional development. Although acceptance of the competency-based approach is widespread, there is still debate about its meaning and merits. Just as diverse applications can be cited, there are varying definitions and rationales for the approach. And while CBE/T appeals to common sense, there have been and continue to be challenges and criticisms from different disciplinary perspectives and with respect to its features and impacts. In this paper a special set of problems with CBE/T is examined. A model is

presented which differentiates three interrelated components: *competence*, *competency texts* and *CBE/T*. By separating the definition into three components, a little-understood characteristic of the approach is foregrounded – processes of interpretation that translate between these components. The model thus exposes 'hermeneutic' dimensions of the competency approach which are argued to be key to understanding a number of problems associated with CBE/T. The paper concludes that the hermeneutic features of the competency approach represent challenges for basic assumptions of the model.

Keywords Competence· Competency· Hermeneutics · Education · Training · Curriculum · Competency-based training

Introduction

Competency-based education and training (CBE/T) is a distinctive feature of contemporary professional, vocational and continuing education. The approach is modern. It took shape in the 1960s and 70s (Harris et al. 1995) and has burgeoned to the point where it can now be considered a mainstream option for those wishing to design programs and frameworks for learning. The competency approach is especially prevalent in post-compulsory professional, vocational and continuing education contexts (Mulder and Winterton 2017). However, there are examples of CBE/T being applied in other settings, too, such as schooling (Spady and Mitchell 1977) and higher education (Bowden and Masters 1993). Apart from application within diverse educational settings and fields, the approach is flexible in other ways. It can be applied to learning in a single program or in relation to a particular subject, whether a disciplinary area or occupation (e.g. the preparation of teachers), or to an industry (e.g. healthcare) or it can be extended to whole systems (e.g. the Australian vocational education system). Not only is it

flexible in terms of scope but also to the level of learning. Thus, the competency approach is applied to entry level programs through to the continuing education of practitioners. From this brief summary it can be seen that the approach can be regarded as a generic option in contemporary education and training with flexibility in relation to educational field, programmatic scope and level of expertise.

While CBE/T is a widely recognised option for contemporary professional, vocational and continuing education, there has been and still is disagreement about the nature of the underlying construct(s) of competence and merits of the approach. Weinert (1999) distinguished no less than 19 different ways competency is understood, and argument about definition is ongoing. Our goal is not to settle this debate but rather to demonstrate there is an additional feature of CBE/T that should be taken into account in any attempt to say what is distinctive about it as an idea and as a way of doing education and training. This additional feature – which we designate the 'hermeneutic dimensions' of the approach – allows us to better understand some of the criticism levelled at CBE/T and some of the challenges of the approach which are faced by both researchers and practitioners.

Characterising the Competence Approach

To make our case, we first situate our argument in the context of CBE/T scholarship by justifying our characterisation of CBE/T as an approach that takes some valued, skilled, knowledgeable *social practice* as its goal. At a general level, to adopt the term 'approach' is to acknowledge diverse understandings and applications that make a point of foregrounding the term *competence* or *competency* in the conceptualisation of learning needs and related educational endeavours. Yet at a theoretical level it is more problematic to speak of 'an approach' since, despite acknowledging practical diversity, the implication is that

there is some unity to be found and perhaps defined. Against such a unifying reading of CBE/T is the fact of deep differences of definition and application. Researchers who have tried to articulate fundamental understandings across multiple national implementations distinguish major variations, for example between behavioural, cognitive and generic (Mulder et al. 2007) or between

'American' and 'British' (Winterton 2009). There are holistic and more focused conceptions. For example, Winterton explains that in Germany, *Kompetenz* is an encompassing term which connects technical and generic skills, social skills and occupational identity. In contrast, there are implementations (generally found in Anglophone settings) which are more narrowly focused on skills (e.g. Winch 2011). There are other ways to draw basic distinctions among implementations, such as between those which emphasise the personal abilities that enable competent performance and those which place the stress on identifiable skills and knowledge that characterise discrete and valued human activity (Mulder et al. 2007).

Scholars sometimes take an etymological path to organising diverse definitions and applications. It is well-documented that the term 'competence' or 'competency' has a long history stretching back to Babylonian civilization (Mulder et al. 2007) but entered academic discourse as a distinctive focus around the middle of the twentieth Century. Discussions point to work by McClelland (1973) and others in the field of psychology that sought to replace the notion of 'general intelligence' with that of competence. An extended account of the emergence of the idea of competence in the social sciences is offered by Bernstein (2000), who refers to the work of Chomsky, Piaget and others. Bernstein's account is presented in the context of a sociological analysis of contemporary 'models' of education which finds that with the introduction of the notion of competence a new model of education was

founded. This ‘competence’ model contrasts with a long-established ‘performance’ model, so-called because that model involves both learning and demonstrating or performing pre-given knowledge and skills. The performance model applies as much to traditional disciplinary learning as to acquisition of skills in vocational settings. What is new about the competence idea is that learning is an achievement of interaction among innate, personal factors and a complex environment. To take an example, for Chomsky language learning is evidence of an inherent capacity activated by involvement in a language community (Chomsky 1965).

Bernstein’s account of contemporary models of education helps us locate an elision in the language of competence whereby one form of the performance model came to appropriate this language. It can be seen in the shift of language used to designate innovations in U.S. teacher education. What we know as CBE/T arguably had its origins in efforts to reform the training of teachers in America in the wake of the ‘Sputnik Crisis’ in the late 1950s (Tuxworth 1989). Perceptions that the Russians had stolen the lead in science and technology during the Cold War prompted several policy changes. One was policy to reconstruct education, as the site of formation of science and technology capability, and this reform effort extended to teacher education. An influential model that arose from this crisis was labelled ‘Performance-Based Teacher Education’, an explicitly behavioural approach that clearly embodies the principles of Bernstein’s performance model. But by the early 1970s, the same system was called ‘Competence-Based Teacher Education’ (Magoon 1976). A related development could be observed in Canada at the end of the 1960s in terminology used to refer to training programs designed to alleviate unemployment (Joyner 1995). This context saw the emergence of the ‘Develop A Curriculum’ (DACUM) method by which job requirements are rapidly determined through

consultation with a group of experienced workers. These requirements are described behaviourally – again instantiating Bernstein's performance model – but the outcome was labelled 'Competence-Based Training' (Joyner 1995). These historical examples illustrate the appropriation of the language of competence introduced by McLelland, Chomsky and others to educational methods focused on pre-given knowledge and skills. Of course, there is nothing wrong with using the word 'competence' to refer to behavioural- or performance-based educational models, but the usage does leave contemporary scholars with something of a conundrum. We suggest the appropriation of the language of competence for the performance model is what underlies some of the confusion around contemporary theory and practice of CBE/T. In other words, what from one perspective can be seen as distinctive approaches to education and training (i.e. Bernstein's performance and competence models) can, through fashions of language, be placed under the same heading.

Orientation to Social Practices

To ameliorate these challenges, we suggest that CBE/T is oriented towards reproduction of a social practice (Hager 2017). Social practice has become a pervasive way of understanding the embeddedness of individual humans and their learning in social enterprises that offer identities, possess an historical profile and socially valued trajectory, require skilled and knowledgeable participation, and exhibit power structures (Schatzki 2001). A seminal contribution to recognising the importance of the social practice concept to understanding learning was made by Lave and Wenger (1991). Their ethnographic case studies were of learning in occupations, the latter conceptualised as social practices. The advantage of positioning CBE/T as concerned with reproduction of social practices, such as occupations, is that it makes clear the focus of

this type of education and training is on knowledge and skills *in a practice* rather than on knowledge and/or skills alone.

Competency in this context can be regarded as full participation in a social practice, characterised by facility in operating under a certain identity with awareness of the historical mission of the practice, exercise of skills and knowledge relevant to the practice, and functioning within a social structure which requires negotiation around sharing skills and knowledge, teamwork, conflict, hierarchy and leadership. It is always possible to abstract some element of a practice for scrutiny and perhaps manipulation, and that extends to the knowledge component. Indeed, practices can be distinctive for their knowledge work, such as we see in the practice of mathematicians (an example of Taylor's (2004, p. 33) 'discursive practices of theorists'). In this case, the practice aspect of the knowledge can be overshadowed by the spectacle of knowledge produced, heightened by the value societies place on it. Nevertheless, the matrix of disciplinary knowledge is a social practice, and mastery of that knowledge is effected through participation in the practice.

Neutralisation of the problem set by Bernstein's (2000) distinction between competence and performance models follows from the nature of social practices as both the locus of realisation of innate capacities *and* repository of skills and knowledge. To go back to the example of Chomsky's theory of language acquisition, a language community can be viewed as engaged in a broad, diffuse social practice and entry into that practice as the stage for emergence of linguistic competence. At the same time, social practices preserve a body of skills and knowledge that appear to transcend particular individuals. In the context of linguistic competence knowledge and skills reside in such features as grammar just as occupational competence is evident in effective knowledge of techniques and social organisation. This body can become the object of education and training efforts, creating the

conditions of the performance model. In each case the social matrix of the acquisitions of the model may become obscured, as the object is taken either as an individual's achievement or a project of learning and demonstrating some body of skills and knowledge. However, if we expand our analytic horizon it becomes possible to consider both Bernstein's models, along with the fundamental challenges of definition identified by scholars such as Weinert (1999), Mulder et al. (2007) and Winterton (2009), as problems resolvable by taking social practices as the goal of CBE/T. We suggest that our argument does not obviate the sociological importance of Bernstein's distinction. Rather, we find that recognising social practice as the orientation of CBE/T allows us to understand confusion in the definition of CBE/T and makes clear the sense in which it has distinctive hermeneutic dimensions.

With this acknowledgement of definitional complexity, we also feel justified in speaking of a 'competency approach'. The competency approach is thus an educational endeavour that takes learning about and participating in a valued social practice as the goal of curriculum, teaching and assessment. It may emphasise mastery of skills and knowledge or may stress actualisation of individual capacities or some combination of the two. The competency approach need not announce the social practice character of the goal and indeed can down-play or ignore the social context of individual actualisation (Bernstein's competence model) or body of knowledge and skills (Bernstein's performance model). Nevertheless, features of the social practice character cannot be supressed. Knowledge and skills are taught as *knowledge and skills in practice* as part of the educational endeavour, or individual accomplishments are viewed in relation to the enabling context. In these cases, the difference between the competency approach and traditional education remains stark. The competency approach

highlights the contextualised acquisition and display of skills, knowledge and capacities.

Textuality of the Competence Approach

The educational goal of the competence approach is more than reproducing a valued practice. A second essential feature is the generation and dissemination of documents that inscribe and represent the practice for educational use. It is possible to facilitate reproduction of a social practice without documents. Lave and Wenger's (1991) case studies include some that have no textual basis such as an occupation practiced locally which is passed on to a small number of learners under the close guidance of experienced workers. However, when a social practice is extended beyond its local site maintaining uniformity of practice becomes problematic.

The practice of CBE/T assumes the need to replicate some ideal performance or realisation that is not limited to a single site. It may be that with changes such as the industrial revolution, occupations are massified (Billett 2011) and with that the problem arises of promoting consistent skills, knowledge and their application in diverse settings with shared equipment and production goals. Professions may face similar pressures of attaining consistent practice in the glare of societal scrutiny. Documenting competence is an obvious artifice to facilitate consistency across massified social practices – that is, practices for which the traditional mechanisms of reproduction described by Lave and Wenger (1991) are no longer trusted or practicable to achieve the objects now taken to transcend local practices.

The fundamental role of documents in the competency approach is perhaps not as well appreciated as it might be. Textuality, as a feature of CBE/T, is seen regardless of whether they are generated in connection with the more holistic and personal/ competence model or the more

narrow and external-referenced/performance model form. Although much could be said about the textuality of the competence approach, we draw attention to three aspects germane to the argument we are making about the relevance of hermeneutics. These are the disarticulating action of competence text production and maintenance, rules of representation guiding the types of information presented and structure of the documents, and the authority accorded the documents once they are produced.

Disarticulation through Documents

With respect to disarticulation, any implementation of the competency approach requires segmentation of the target social practice. There is no clear rule or theoretical basis for such compartmentalisation. Fundamentally, the same discipline or occupation could be differentiated into a lesser or greater number of separate units. Not only that, in practice a certain consistency in the focus, structure and quantum of each unit is evident in implementations of the approach.

There also needs to be commensurability among the different units. Instances of the performance model variant of the approach are relatively strict about this requirement. Occupational applications of the competency approach have frequently resorted the *task* as the basis for segmentation. From as far back as Smith (1776/1981) it has been conceivable to divide occupations into a set of interrelated but distinct tasks. This way of thinking was formalised by Frederick Taylor (1906) in his 'Scientific Management' theory which adopted the stance that workers' knowledge can and should be studied, analysed and rationalised by management. The 'task' was the basic unit of that project. Arguably, a more nuanced approach to consistency of disarticulation is adopted in the competence mode applications such as observed in Germany, where the units articulating aspects of identity

have a consistency of a different nature to that governing the segmentation of skills and processes relating to an occupation (Winterton 2009). Regardless of the level of uniformity among units, the competency approach is characterised by some form of disarticulation that atomises or segments a social practice for educational purposes.

An important corollary of the disarticulation process of the competency approach is that segmentation reflects ontological assumptions about the social practice. As indicated above, highly uniform chunking can follow a task analysis approach which in turn presupposes that the occupational practice is fundamentally a bundle of tasks. This is an ontological assumption: the occupation 'really' comes down to performance of some sequence of tasks. In the German variant, identity, processes and skills are taken to be what an occupational practice really comes down to. It is significant that ontological assumptions about a social practice come into play in the disarticulating action of the competency approach.

Codifying Competence

The second aspect of textuality central to the competency approach concerns the rules which govern the creation of the documents themselves. Having determined the underlying structure of disarticulation, capturing the resulting segments in texts is a significant activity in the implementation of the competency approach. The production of such texts involves notions about what kinds of social practice information can be communicated and about the optimal way to structure and encode that information. Assumptions about knowledge enter into the writing of competency texts. These assumptions have an important role as they underpin the uniformity or commensurability of the texts and represent some ideal of communicative effectiveness and economy.

An example of the epistemological assumptions evident in competency texts is the adoption of 'behavioural' categories of information about an educational goal (Kearns, Mavin & Hodge 2016). A behavioural approach may generate texts containing a description of the desired behaviour, an indication of 'level' of performance, and information about conditions in which the behaviour is to be expected (Mager 1962). This kind of presentation of information in competency texts includes general epistemological assumptions – that the important things to teach about the goal are those things that are directly observable – and specific assumptions about the categories of information that most effectively convey those important things. The behavioural approach characterised here is widespread, but other epistemological bases have been adopted for the construction of competency texts. An example is the German approach that adopts different structures, concepts and language depending on whether the unit of competency concerns skills, processes or worker identity. Thus, a more complex and challenging set of epistemological assumptions come into this version.

Authoritative Texts

The third aspect we consider relates to the authority vested in the texts that emerge from the processes of disarticulation and codification. A characteristic of the competency approach is that the documents which capture the social practice for educational purposes take on a special status. They become a powerful, perhaps sole, reference point for subsequent work in curriculum, pedagogy and assessment. The vagaries of personal interpretations of social practices by educators are overcome by an authoritative interpretation that establishes what is necessary to convey to learners.

The authority of competency texts is cemented in several ways. Experts

contribute to the documentation process, with approved techniques used to secure their insight, such as the consensus-oriented DACUM technique mentioned above (Joyner 1995) through to highly specialised methods such as Cognitive Task Analysis (Clark, Feldon, van Merriënboer, Yates and Early 2008). The starting point of competency text production thus lends an aura of legitimacy to the texts. This legitimacy is then shored up by expectations regarding proper use of the documents that emanate from professional bodies, industry regulators or governments.

These rules are clearly signalled to educators as the primary users of the documents but also circulate more widely so that students, employers and the public may become aware that there is this layer of documentation – which may be publicly accessible – to which educational efforts must refer. These rules may then be reinforced by auditing regimes through which governing bodies enforce proper use of competency texts.

A corollary of this process is that curriculum writers, educators and assessors find that their own expertise in the social practices is displaced or complemented in a distinctive way by the texts. This is a feature of the competency approach which decisively removes it from traditional ways of reproducing social practices. The means of reproduction described by Lave and Wenger (1991) in traditional practices whereby expertise was sufficient to guide the learning of newcomers (teaching curriculum) combined the efficacy of the inherent curriculum constituted by the patterns of knowing activity making up the practice (learning curriculum), are eclipsed under the competency approach.

The approach also contrasts with curriculum making as it has been known since earliest organised education, whereby educators would articulate and inscribe their personal understanding of some aspect of a valued practice for their own pedagogical and evaluative use. These inscribed understandings could be disseminated and even contribute to

the production of authoritative curriculum documents such as we see in instances of national curricula and standardised curriculum.

However, the competency approach is distinctive even in relation to these cases due to its blanket representation of the target social practice. Whereas curriculum documents are or should be a means of accessing the social practice, competency texts come to stand for the social practice as such. These texts thus function as a proxy for the practice of interest, the idealised reference point for the work of educators. This feature of the competency approach may reveal itself in a collapse of the difference between competency texts and curriculum proper such that educators and assessors effectively employ competency texts in a direct way to structure programs of learning and lesson plans.

Neglect of the Hermeneutic Side of the Competency Approach

The key features of the competency approach we have identified – of orientation to a social practice and textuality – mark it as an appealing educational model for contemporary learning needs. A practice orientation seems an obvious improvement over the traditional focus on apparently inert knowledge, while the textuality of the approach makes the goal of curriculum, pedagogy and assessment transparent to a wide range of parties interested in education systems. However, there is a different side to the competency approach. Critics furnish reasons for doubting the credibility of one or more of features described. The extensive critical literature presents a diverse but impressive thicket of objections (e.g. Broudy 1972; Ashworth and Saxton 1990; Edwards and Usher 1994; Wheelahan 2007; Gamble 2016). It is not our aim here to systematically review this literature–although we do detail selected criticisms. Rather, we seek to unravel a neglected complexity of the competency approach that is – it seems – effectively 'invisible' to its advocates but may be the basis of some criticism. This complexity

concerns what we refer to as the 'hermeneutic dimensions' of the approach.

Hermeneutics can be briefly introduced as the theory of understanding and interpretation. This theory has had different disciplinary locations. It first developed in the context of scriptural interpretation and has been elaborated in the contexts of historical sciences, qualitative research theory, legal studies and philosophy whilst retaining a role in theology (Schmidt 2006). The theory underwent significant development from the late nineteenth Century. Some major themes can be isolated. First, hermeneutics presents the processes of understanding and interpretation as related in a complex, dynamic structure that is implicated in our awareness and understanding of not only texts or historical artefacts, but of ourselves and the world. This is the broad claim of 'philosophical hermeneutics' which has evolved as an alternative to the empiricism dominant in the natural and human sciences (Gadamer 1975). Part of this argument is that we not only activate our interpretative skills upon encountering, for example, an unfamiliar, old, fragmentary or foreign text, but that interpretation acts on artefacts of all kinds. Some versions of the theory thus apply the term 'text' in a new and expansive way to indicate the fact that we 'read' all kinds of situations and people as well as written works (Ricoeur 1981). And the application of hermeneutic processes need not be confined to understanding texts and artefacts that are unfamiliar and strange. Even our interactions with contemporary, ordinary, well-known things and people involve, perhaps lightly and unobserved, the hermeneutic process (Taylor 2004).

Apart from this potentially very wide applicability of the theory, a central premise is that when we come to any process of interpretation, we always bring a set of assumptions about what we are interpreting (Palmer 1969). This is probably an uncontentious statement. The theory

goes on to give these assumptions a guiding role in constructing meaning. Specifically, we come to an act of interpretation with some pre-existing idea of what the text (document, situation, expression) means, and refine our assumptions through interaction with that document, situation or person, attuning them to constitute a closer account of what we are 'reading.' Things are not always as they appear, and the oscillation between our initial take and what we finally understand constitutes a distinctive 'circular' process that usually leads to a more serviceable grasp of the text. In hermeneutic theory, the shuttling back and forth between prior assumptions and the checking, challenging and confirming interactions with the object of interest is called the 'hermeneutic circle' (Ricoeur, 1981). A point to emphasise here is that this circularity, in principle, never resolves or terminates.

With these essential features of hermeneutics in mind, we find that the implementation of the competency approach exhibits some distinctive interpretative elements that are not often part of debate about its merits or shortfalls. To better comprehend what we are calling the *hermeneutic dimensions* of the competency approach, a three-fold structure is proposed as capturing important aspects of it that at the same time exhibit its hermeneutic aspects. The structure or model was first suggested in a study by the authors of the competency approach in the context of the aviation industry (Author et al. 2017). The model was presented diagrammatically. In the following figure we have revised the original but retained the three-fold structure and basic relationships (Fig. 1):

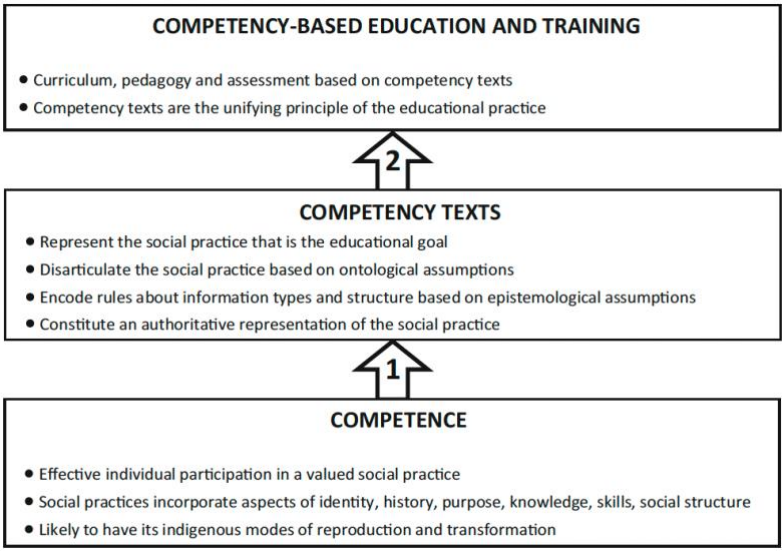

Fig. 1 Model of the competency approach. (Adapted from Author et al. 2017)

The three parts of the model articulate what has already been said about the features of the competency approach. The bottom box labelled 'Competence' draws our attention to individual participation in a valued social practice that is the educational goal of a competency-based system. This practice may be an occupation, a profession or a discipline. By making the social practice the educational goal, we are taking in a complex activity that involves what are called knowledge, techniques, materials and so on, but also the *purpose* of the activity that forms the 'magnet' (Dewey 1916) that pulls knowledge and other elements into an integrated whole. The middle box emphasises the fact already elaborated that in a competency-based system the social practice must be represented somehow in documents embodying rules and practices about: how the practice may be disarticulated, how knowledge and skills can be represented, and how the documents are to be used. Finally, in the top box entitled 'Competency-based Education and Training', the substantial activity of generating learning programs, of teaching and of

assessment under the competency approach is referenced. What is stressed here is that all such educational activity revolves around the competency texts. We ought to be able to examine any part of the implementation of a competency-based system and be able to identify the texts that guide implementation of curriculum, pedagogy or assessment.

So where do the hermeneutic dimensions lie in our model of the competency approach? The two arrows (labelled 1 and 2) linking the three boxes might seem to require little or no special explanation. Indeed, the significance of these translation points might be unsuspected in people's understanding of CBE/T. For example, the real difference between social practice and its representation in competency texts could go unrecognised in how the competency approach is understood by education practitioners. What we wish to do in this paper is establish that far from being simple, direct connections that require little or no attention, these arrows signify complex, rich activities in their own right that have serious ramifications for the coherence and practice of the competency approach. We are suggesting that these processes of translation are far from obvious and direct but rather, in their apparent simplicity, conceal much that is interesting and also problematic in the competency approach. They are usually 'background' processes with which individuals and groups separately and quietly struggle. These invisible or barely visible processes are too easily set aside as having no special significance. Assumptions like these we seek to challenge. We will address each of the up-arrows, representing hermeneutic processes, in turn, starting from the bottom with arrow 1.

First Hermeneutic Dimension: Translating Social Practices to Texts

Representing an occupation or discipline for the purpose of reproducing it on a large scale – i.e. education and training – is a relatively recent

endeavour in human history (Billett 2011). Yet it is worth considering that before formal education emerged, social practices were successfully reproduced for millennia. As discussed earlier, researchers (such as Lave and Wenger 1991) have demonstrated that participation in social practices is a traditional way individuals have acquired competence. When such participation conforms to a reproductive logic – such as an initial phase of 'legitimate peripheral participation' – we see a sophisticated educational process with multiple yields. Such a complex phenomenon as participation in a social practice can have powerful, multifaceted educational efficacy, without necessarily involving formal edu- cational processes. A kind of hermeneutics is foreshadowed here. This is what we could call a *practice hermeneutics* that characterises any effort to develop, maintain and share *understanding* of a social practice. In a sense, what we call 'learning' overlaps with the notion of practice hermeneutics. This hermeneutics can be facilitated in various ways and potentially leads to modification and acquisition of abilities which enable more effective participation in a social practice. Practices possess mechanisms of reproduc- tion, which suggests that a practice hermeneutics at the individual level can rely on a pre-existing framework of support which may be explicit. The mechanisms of legiti- mate peripheral participation and the contextual 'learning curriculum' (in contrast with an intentional 'teaching curriculum') explicated by Lave and Wenger (1991), and workplace 'affordances' distinguished by Billett (2001), are accounts of support frame- works inherent in practices without which they would disintegrate. Institutional edu- cation extends or supplants such endogenous practice-reproductive mechanisms (Choy & Hodge 2017).

The location of educational activity in places away from the practice – in schools, colleges or universities – and execution in ways unfamiliar to practice insiders signals a fundamental shift in the way we approach the

reproduction of practices. The massification and delocalisation of many practices during the industrial revolution has been cited as a factor (Billett 2011). Successful practice in this case assumes some common elements – machinery, materials, terminology and techniques – although the meta-practical nature of these elements may go unrecognised by practitioners. The delocalisation of some practices has gone on much longer. For instance, the practices of astronomy, music, agriculture, medicine, metal production and mathematics have each transcended local application for millennia (Hodge, Atkins & Simons 2016). In these cases, travel by practitioners is central to the translocation of practices. Codification – reflected in artefacts, symbol systems and oral and material texts–is also an element in the spread of practices in multiple sites. Delocalisation of practices facilitated by codification underpins the possibility of institu- tional education, a specialisation that as a consequence becomes conceivable away from the practices that form the educational goal.

From the perspective of our argument, competency texts constitute a case of such codification. The latter process is, according to that argument, founded on a practice hermeneutics. An individual or group articulating the practice hermeneutics can produce such codification. It is probable that practice codification, carried by artefacts, pedagogies, stories and texts, has always been present in sustained social practices and its expressions have ever been a support for the efforts of practice insiders to pass the practice on to newcomers. By viewing the translation of the social practice into competency texts in this way, it becomes possible to put part of the operation and criticism of the competency approach into perspective. From a critical perspective we can identify arguments to the effect that the practice codification we witness in the competency approach generates either a partial or distorted representation of the goal practice. In the argument of this paper, these criticisms amount to claims of hermeneutic dysfunction by which

translation leaves out important aspects of the practice or it misrepresents. Not all implementations of the approach warrant this type of criticism. Compared with, for example British and Australian versions of CBE/T, German and French versions surveyed by Winterton (2009) rest on a more complex ontology of practice with the result that more of the richness of practice finds its way to textual representation.

An example of argument revealing hermeneutic dysfunction was elaborated by the American philosopher Harry Broudy. In his critique of 'Performance-Based Teacher Education' (PBTE) (as noted, a model later renamed 'Competence-Based Teacher Education'), Broudy (1972) distinguished three fundamental aspects of teaching: didactics, heuristics and philetics. The first concerns those skills required to present knowledge and skills to learners. Heuristics relates to the ability to help learners learn by themselves. Philetics is building rapport with learners to foster learning. In Broudy's estimation, the PBTE approach could only convey the didactic part of teaching and, if successful, would produce competent 'didactical technicians' (Broudy 1972, p. 14). But the heuristic and philetic parts of the practice would be neglected or devalued or left to chance. Why would that be so? Not because some decision has been made to relegate these aspects. Rather, the process of creating documents that represent relevant practices somehow filter out heuristics and philetics.

Broudy explains that there are assumptions built into the PBTE approach that produce the didactically-weighted picture of teaching which emerges from performance-based curriculum. The key assumption for our purposes is that teaching comes to be regarded as the *sum of performances* into which it is analysed. Here, a behavioural account of teaching – what can be objectively observed in relation to it – places a filter upon what can be recorded in descriptions of performances. Since the didactic part of teaching can be most directly

observed, it becomes the part that is foregrounded in the documents. Heuristic and philetic aspects are lost or inadequately represented in this reductive process because what they are is only partly manifested in observable performances. For Broudy, the practice of teaching with its three constituent elements is something that can only partially be captured in descriptions of observations. He also problematises assumptions around what constitutes a 'performance unit' or module (the ontological assumptions of disarticulation and epistemological assumptions of textuality discussed earlier). Responding to the question 'what shall count as a performance?', Broudy observes that,

> The term can cover as simple an episode as ringing the school bell or writing a lesson on the chalk board and operations as abstruse as explaining the proof of the binomial theorem or the principle of oxidation and reduction. Are there agreed- upon classifications of and criteria for the scope and cognitive level of performance units in analyzing teaching for teacher education? Or is this simply a matter of preference? (1972, p. 3)

As he goes on to explain, there is little consensus on this deeper question about what constitutes good teaching and therefore no straightforward way of determining the boundaries of the performance units that guide the process of generating performance descriptions.

A more recent echo of Broudy's (1972) analysis may be found in the critical work of Wheelahan (2007). She is quite explicit about what is lost in the translation from an occupational practice to competency texts. Skilled occupations often draw on disciplinary knowledge. For example, the work of electricians involves mathematical operations. A body of knowledge such as mathematics requires a structured approach to developing proficiency up to the level required in electricians' work,

and particular operations used in this work make sense against the background of this body of knowledge. Yet the competency approach does not orient to disciplinary *knowledge*. Rather, knowledge of mathematics would only come into view as part of a parcel of knowledge required to perform a particular task. Here, ontological assumptions underpinning disarticulation disrupt the coherence of the epistemological component of the task. Such knowledge becomes a subsidiary element significant only for its immediate use for the task in hand. The coherence of the body of knowledge from which this fragment of mathematics is drawn is irrelevant. For Wheelahan, this leaves electricians educated using the competency approach without the sense of what their operational mathematics is a part of and cuts them off from participation in the field of mathematics as experts of a kind. Problems that arise include an inability to build on a coherent knowledge of mathematics as electrical work becomes more complex and, at a social level, blocks whole occupations from meaningful participation in disciplinary knowledge. From our perspective, Wheelahan supplies another account of loss in the construction of competency documents.

Our selection of criticisms of the competency approach reflect doubts about the capacity of competency texts to adequately represent their practices. Broudy (1972) is clear about what can be conveyed. The observable parts of a practice can be codified. For her part, Wheelahan (2007) is certain that broader knowledge structures are systematically neglected. Ashworth and Saxton (1990) evoke a 'descriptive exercise' that potentially has little to do with what is really producing observable performances. In the language of our argument, these critics are suggesting the codification in competency texts of practice hermeneutics – the representation of what is understood about a social practice based on ontological and epistemological assumptions – is partial at best and misleading at worst.

These observations can be taken a step further by considering what hermeneutic theory conveys about the process of interpretation as such.

As discussed above, in modern hermeneutic theory the complexity of interpretation is recognised, with the notion of simple translatability in particular being exposed as naïve (Schmidt 2006). In the light of hermeneutic theory, the attempt to translate some skilled and knowing practice into written form must be a complex, multi-faceted process. While some of it seems amenable to documentation – for instance terms and concepts used in the discourse of the practice, or measurable aspects of distinctive performances – other aspects are not so. How can practice identities, traditions, narratives or ethos be reliably and usefully documented? Again, if we concede that practices are not entirely visible, that is, if there are parts such as embodied knowledge, subtle affect and tacit communication, a felt sense of the value and mission of a practice, then the challenge of translating the practice is heightened. At this point we can say, from the perspective of hermeneutics, only some of the practice that is the goal of a competency-based education may be captured in texts. Other parts seem either difficult to translate or are not known in an explicit enough way to be conveyed in written documents.

Hermeneutic theory thus furnishes a grounding for some criticisms of the competency approach and makes clearer the general difficulty of writing a practice into texts. At best, parts of a practice that are amenable to codification can be inscribed. It follows that the competency approach inherently neglects other parts of a target practice because they defy easy documentation. Probably, the suggestion that competency texts cannot capture everything relevant to participation in a practice would not be contentious to an advocate. Potentially, it would be conceded that there are aspects of practices that must be gained within the practice itself. Indeed, implementations of competency– based education are characterised by the expectation that learners will participate in the goal practices as part of

their preparation. What is contentious, however, is the evaluation of what is neglected. For critics, what is neglected includes important factors in the practice, while for advocates the point is likely to be that if anything is omitted it is not decisively important or can be made up through timely participation in the goal practice. The hermeneutic account of the situation falls on the side of the critics, and perhaps goes further in that what can be committed to paper is unlikely to record what is of the essence. If this analysis has any validity, why would the competency approach ever appear to work? Why wouldn't its supposed hermeneutic deficiencies have rendered it impracticable from the start? We note but cannot pursue these questions here. They are difficult questions that go to the heart of the educational project.

The first main hermeneutic dimension has thus been delineated. The translation of understanding of a valued practice for educational purposes generates some form of codification. That process can take place internally to a practice and can be seen as the process by which local practices have always been more-or-less effectively reproduced. At this level, codification may assume diverse forms, such as favoured stories and examples, commands and instructions handed down, modes of demonstration and opportunities for imitation. The first hermeneutic dimension allows us to group some criticisms of the competency approach which pick up on problems of codification. We have characterised them as either highlighting that which must be neglected or throwing the whole endeavour of codification into question. But there is a second important hermeneutic dimension that is foregrounded by the competency approach. Again, it is a unique feature of the approach which makes this particular hermeneutic dimension (arrow 2) plain.

Second Hermeneutic Dimension: Translating Competency Texts to Educational Activity

In the competency approach the central role of those texts which document what is deemed important to teach and assess is accompanied by an expectation that the authoritative status of the texts is regarded as such by those whose job it is to translate them into teaching and assessment. That is, the competency documents are to be considered the fundamental reference-point for the work of educators. Now, in all *systems* of education there is some production and use of documents – to share what is taught and how (as discussed earlier) – but they are in many cases thought of as documents that guide and focus attention on aspects of the education goal. Of great importance here is that in such contexts educators are expected to consult the educational goal itself – discipline, occupation – in their interpretation and implementation of curriculum, drawing on syllabus documents in a dialogical way to attune their understanding of the goal. Prior to the competency approach, vocational educators would reflect on their own understanding of the goal – for example the occupation in which they have expertise – and where syllabus documents were available use the latter to help articulate their grasp of the goal. In this type of education, the goal is authoritative, and documents serve to guide and structure attainment of the goal. With the competency approach, in contrast, a disconnect opens between the goal and the work of the educator. The competency texts themselves become authoritative and the goal becomes an ambiguous reference point for educators. Indeed, it becomes unclear what status the educator's prior expertise in the discipline or occupation has in the process of translating competency texts into teaching and assessment. Hodge (2016) has argued that the competency approach can be alienating for educators because the authoritative status of competency texts serves to downplay the importance and role of expertise educators have in the target practice.

Be that as it may, with the shift of authority from an understanding of the practice to texts that represent an understanding of the practice in the competency approach, a distinctive hermeneutic demand is laid upon educators. To return to the idea of the social practice as the goal of education and training, under the competency approach, it is no longer a practice hermeneutics in which educators engage to create a course of instruction but rather a hermeneutics which fastens on a codification (in competency texts). That is, the hermeneutic task shifts from practice as such to a practice *code*. Such educators can be said to engage in a *practice code hermeneutics* to guide their work rather than, or sometimes alongside, a practice hermeneutics as such. With this shift, the work of educators aligns more obviously with the traditional hermeneutic tasks of those who interpret scriptural, legal, literary and historical artefacts. This second major hermeneutic dimension of the competency approach has received little attention despite the obvious textuality of the approach.

Compared with what research and theory can contribute to elucidating the first hermeneutic dimension, the second has little to draw on. Some research exists with implications for this second hermeneutic dimension. With the recurrent interest of policy makers and other stakeholders in 'teacher-proofing' school curriculum (Romey 1973), there has been research and analysis that raises questions about the effectiveness of such measures. Schubert (2008) summarises this vein of curriculum research that has considered differences between the 'intended' or 'official' curriculum on the one side and 'taught' or 'enacted' curriculum on the other. This summary hints at the difficulties of clarifying in a systematic way what occurs in this hermeneutic process, with diverse methodologies employed in the attempt to shed light on it. For Schubert, questions remain. He asks whether 'differences between taught and intended curricula were due to teacher misunderstanding of guidelines or to creative insubordination…' (2008,

p. 408). This question indicates the richness and complexity of this hermeneutic dimension, underlining the fact that interpretation and understanding is involved, and that agency can be exercised – raising the fresh question of what alternative sources of guidance are accessed by educators departing from the letter of the official curriculum.

Research on teachers' work occasionally indicates a process of interpretation that introduces some play into the transition between curriculum intentions and implementations (e.g. Goodlad and Associates 1979). This possibility is treated positively by some researchers who promote the professionalism of teaching, such as Connelly and Ben Peretz (1980) in terms of 'active' curriculum implementation and curriculum development partnership. Other researchers have sought to classify teacher activities with respect to curriculum implementation and efforts to align intended and enacted curriculum. Sherin and Drake (2009), for instance, distinguished processes of omission of curriculum content, replacement of content or creation of content. For his part, Porter (2002) developed and advocated methods for measuring the extent of alignment among curriculum elements. In recent doctoral research, Ross (2017) describes processes followed by teachers faced with the task or implementing new national curriculum. In this setting, the school system attempted to assist in the transition to the new curriculum by offering learning plans and materials (the so-called 'Curriculum-to-Classroom' initiative). The research found that teachers tended to produce their own gloss on the official curriculum or the system-level interpretation of the official curriculum or both. Hermeneutic activity by teachers appears to be something that cannot be avoided. In the contributions cited, the second hermeneutic dimension comes into the picture, but is not examined and theorised as a distinctive process. Rather, the interpretative activity of teachers is placed in the context of a transactional series commencing at an official level and

terminating in the experiences of learners. Within this context, the educator's hermeneutic endeavours are viewed either as a simple process barely worth considering, or in deficit terms ('slippage' between intended and taught curriculum) or as signs of professional creativity or resistance to a deficient regime.

Research that explicitly addresses the second hermeneutic dimension of the competency approach was undertaken by Hodge (2014, 2016, 2017). His qualitative interview-based project sought to understand interpretation practices used by vocational educators working within Australia's national vocational education system. The latter is a strict and extensive implementation of the competency approach. Hodge's research indicates that educators bring diverse assumptions about the nature of competency documents to the process of interpretation, that they read the texts in a range of ways, emphasise different parts of the documents, and comprehend the structure of the documents in different ways. The interviews also suggest educators may defer to their own experience and knowledge of their occupation to resolve interpretative difficulties. Again, in terms of the language of our argument, the educators appeared to shift between a practice hermeneutics (direct interpretation of the occupation based on their own experience) and a practice code hermeneutics (interpretation of the authoritative texts – units of competency – that encode an official practice hermeneutics). From the perspective of the Australian system, this is an uncharted zone of interpretation, yet is one that is enjoined by a central rule of the system: that VET educators be competent practitioners of the occupation they teach. The system sets up this special kind of hermeneutic circularity (shifting between personal experience of an occupation and a focus on the content of units of competency), but at the same time expects the competency documents – the product of official practice hermeneutics – to serve as the authoritative reference point of teaching

and assessment. The research described experiences of tension between the two hermeneutic modes: the stated official (practice code hermeneutics) and the enabled yet ambiguous (practice hermeneutics).

Although comprising a smaller and less developed field of research and theory, by it the second hermeneutic dimension is made discernible. The implications are significant, if not fully explicit at this point. What can be taken from the theory and research on the second hermeneutic dimension as it stands is that diversity of interpretation should be expected as educators interact with competency texts, simply because much is brought to the acts of reading and interpreting by interpreters. It is likely the product will always be an amalgam of the intent of the text and the experience of the reader. The extent to which educators are obliged to focus on the text in the competency approach heightens the effects of the second hermeneutic dimension. An assumption that is not clearly declared but can be inferred from the policy of competency systems is that educators will have become conversant in the practice hermeneutics of the goal practice. This adds complexity to the second hermeneutic dimension, giving educators recourse to an alternative hermeneutics and thus potentially creating tensions within the interpreter. Hodge's (2014) research presents instances of such deferral to an experiential reference point as a way to resolve interpretational difficulties that carry a sense of ambiguity through consciousness of the authoritative claims of the competency texts.

Conclusion

Our brief examination of what we are calling the hermeneutic dimensions of the competency approach is designed to raise awareness and questions. To entertain the idea that complex hermeneutic operations are inherent in the implementation of CBE/T is to challenge assumptions about the linearity or alignment of phases from analysis of an occupation

or discipline, to documentation, to curriculum design, to teaching activity and assessment procedures. It is an assumption which is conveyed in the conviction that competency documents effectively represent important features of the education goal (such that they can be advanced as authoritative representations) and in the belief that educators can, as a collective, make their curriculum, teaching and assessment work respond to the documents in a uniform way. We can surmise, then, that it would be a challenge to the rhetoric of CBE/T to entertain unavoidable divergence of interpretation at the translation points we have identified. This is a general observation about the competency approach as such. Our examination also generates questions about aspects of the approach. The first hermeneutic dimension draws attention to the process of creation of competency texts out of an understanding of practices. From a hermeneutic perspective, this is unlikely to be a straightforward process. Rather, practices possess a richness that make them a challenge to represent for educational purposes. It can be asked whether we currently possess powers of representation adequate to the complexity of practices. Just that of which we are conscious amounts to a substantial range of features, from terms, concepts and techniques, through to stories, values and identities. But then there are the tacit and embodied levels of a practice that to an unknown extent resist and withdraw from formalisation in documents. There is reason to suppose we simply cannot represent practices in a textual way that does not select, distort or omit. Also, from a hermeneutic perspective arises the question of the 'pre-understanding' or prior knowledge and assumptions brought to interpretation of practices for the purpose of creating competency texts. Our examination suggests that in current implementations, assumptions drawn from behaviourism often prime the representational efforts of those who create competency texts. Such creators are perhaps likely to be predisposed to 'see' the practice in terms of elements, performance criteria and conditions of

performance. Someone with cognitivist presuppositions will see something different. An ethnographer or storyteller or photographer will observe other aspects again of the practice. An expert practitioner is likely to see many of these angles and more again. We are left with the question of whether we can ever reduce the creativity of competency text production to the point where we obtain an impartial and correct description of what is important to convey and learn about a practice.

The second hermeneutic dimension for its part raises the question as to whether we should ever expect uniformity of interpretation among those who design programs, teach, and assess in a competency-based system. The pre-understanding just cited as a diversifying factor in the production of representations of occupations and disciplines operates as well in the second dimension, presenting the possibility that there will be as many unique interpretations of competency texts as there are practitioners implementing the approach. In this dimension, different pre-understandings derive from unique experiences of occupations and disciplines. The question arises here about how such differences can be conceptualised. Different pre-understandings will then be activated differently as practitioners approach the hermeneutic task itself. Research indicates that there is variation in the extent to which practitioners adhere to competency texts in their interpretation or defer to prior experience of the target practice (Hodge 2014). Then there is variety that stems from differences in attention to different features of competency texts. For example, practitioners might emphasise descriptors, elements, performance criteria or other categories of information as they build their understanding of the text. The second hermeneutic dimension thus presents a cluster of questions and problems that compounds those that can be raised in relation to the first dimension.

Although the analysis we have pursued may trouble assumptions about alignment implicit in the competency approach, it cannot

diminish the core attraction of the model: the focus on practice. We suggest that a hermeneutically aware focus on social practices offers a way forward for the competency approach. The analysis indicates that new ways to represent practices may need to be developed that better respond to the complexity and uniqueness of occupational and disciplinary practices. The analysis also points to the need to reconsider how educators and trainers are involved in the modern enterprise of reproducing practices consistently on a large scale. While ever we deny the hermeneutic dimensions of the competency approach, this way of passing on practices is likely to fall short of educational expectations.

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