Higher apprenticeships and the shaping of vocational knowledge

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Abstract

Higher apprenticeships are celebrated in current policy discourses as an alternative to traditional higher education, with the claim that they will prepare higher apprentices for their future careers and enhance industrial productivity through higher skill levels. This paper aims to scrutinise these claims using notions developed by Bernstein and related work in the sociology of educational knowledge, identifying how the formulation of higher vocational knowledge will affect how apprentices work, learn, and access knowledge. It is suggested that the socio-epistemic processes through which 'regions' of professional and vocational knowledge are constituted, and the manner in which knowledge is recontextualised, give rise to specific knowledge articulations and curriculum decisions. Drawing on an analysis of the structure of apprenticeship frameworks and their associated qualifications, and interviews with professional bodies, the research will demonstrate how certain types of knowledge are foregrounded as a result of sectoral and professional dynamics and the imperatives of knowledge structure. In some sectors and professions, key concepts associated with disciplinary knowledge may be downplayed or obscured, reducing what Wheelahan and others have described as 'epistemic access' for apprentice-students, with a potential impact on progression opportunities and the ability to provide valuable input in the workplace. In others, higher apprenticeships may continue longstanding traditions of higher vocational formation, involving educational institutions, employers and practitioners in constituting productive vocational knowledge and practice, albeit within a macro-context that may not promote practitioner influence over the circumstances of formation.

Introduction

In 2011 the coalition government published 'The Plan for Growth' which contained within it a commitment to further develop apprenticeship provision in England, with the pledge to provide *'funding for 75,000 more adults to start an Apprenticeship than under the previous Government's plans*' (HM Treasury 2011, 38). This commitment needs to be seen within the broader context of the rhetoric of coalition politicians, which demonstrate a scepticism about the forms and organisation of vocational education that grew throughout the New Labour era, and foreground some nostalgic conceptions of vocational practice that eulogise the passing of knowledge and skill through generations and ' the beauty of craft' (i.e. Hayes 2011; Gove 2011), while also asserting that 'practical learning' is more appropriate for some young people than 'pseudo-academic' qualifications (Gove 2011). Apprenticeships are seen as an ideal route towards vocational formation, with coalition politicians playing on the high regard with which the notion of apprenticeship

continues to be held. This is of course nothing new, as a similar approach was taken by many New Labour politicians in celebrating the revival of the apprenticeship, and indeed by the previous Conservative administration (Payne 2002; Fuller and Unwin 2003a). It is essential to distinguish, however, between apprenticeship as a model of learning (i.e as set out by Guile and Young 1998) and apprenticeship as an institution, as constructed and experienced in particular socio-economic and political contexts (Fuller and Unwin 2009; 2011b). While much may be labelled 'apprenticeship', how and what apprentices learn may be extremely varied, and in many cases this may deviate considerably from any ideal models of learning.

Current prevailing models of apprenticeship in England have been heavily influenced by antecedent policies that sought primarily to manage youth unemployment (Fuller and Unwin 2009; Hogarth et al. 2012), and have been impoverished by an excessive focus on narrow models of competency rather than broader conceptions of vocational formation that would include engagement with disciplinary knowledge (Young 2006; Brockmann et al. 2008, 2010). Apprenticeships at 'higher levels' could theoretically provide both the structures for progression for those who have completed other apprenticeships and represent a framework for higher level vocational formation that could be particularly important in certain sectors where technical or managerial ability is at a premium (Hordern 2014a). However, numbers of apprentices working at these 'higher levels' have historically been comparatively small and frameworks of achievement were not necessarily linked to other forms of apprenticeship (Hall et al. 2010), with development primarily in companies where work processes demanded advanced levels of technical knowledge and skill. Whereas expanding numbers of higher apprenticeships seemed almost an afterthought for New Labour with the formal introduction of the term only in 2009 (Fuller and Unwin 2012), the coalition government has appeared more determined to make progress. This was demonstrated with the launch of the higher apprenticeship fund (HAF), which pledged £25m for projects across a range of industrial sectors focused on instigating new forms of higher apprenticeship (NAS 2011).

This paper builds on research undertaken into the higher apprenticeships policy of the UK government, and analysis of how apprenticeships are located within structures of vocational and professional formation (Hordern 2014a). The discussion in this paper shifts the focus to more detailed issues of the types of knowledge and curriculum incorporated in qualifications within higher apprenticeships, aiming to elaborate both the social and the epistemic means by which vocational knowledge is constituted. This is undertaken with attention to the notion of the 'region', a socio-epistemic entity into which knowledge is recontextualised from disciplinary sources in accordance

with the purpose of practice (Bernstein 2000; Muller 2009; Barnett 2006). Elements of the constitutive process, and the knowledge and the curriculum that emerges, are illustrated through two case studies drawn from professionalising occupations that have recently developed higher apprenticeships.

Frameworks, qualifications and knowledge content

Higher apprenticeships could be seen as a form of higher education, and as a potential challenge to 'traditional' or 'academic' higher education (Helyer 2012). The use of the term 'higher', rather than any other term, suggests that such apprenticeships could be seen as a type of vocational formation that offers parity with existing higher education programmes, and perhaps as a route into those (Hordern 2014a). Progression to higher education amongst those who have completed apprenticeship programmes has historically been weak, (Fuller and Unwin 2012; Hall et al. 2010) despite the assertions of politicians, with the flexibility of apprenticeship structure and the low requirements for knowledge content in qualifications not enhancing the recognition of apprenticeships in university admissions offices. The 2011 version of the Specification of Apprenticeships Standards (DBIS 2011) stated that higher apprenticeships should contain both knowledge and competence qualifications, or qualifications that integrate the two components, with minimum knowledge requirements of 10 credits and a minimum competence requirement of 10 credits, with an overall minimum of 37 credits on the Qualifications and Credit Framework (QCF) (except when incorporating a separate Foundation Degree, HNC or HND). Lists of approved qualifications, their structure and the rules of combination for individual units, in addition to the approximate duration of an apprenticeship, are set out in Apprenticeship Frameworks that are agreed and approved by key partners and the relevant issuing authorities for the sector. The SASE was updated in 2013, with the effect that the minimum requirements for higher apprenticeships at levels 4 and 5 were substantially increased to 90 credits, while continuing to include knowledge and competence elements, or an integrated qualification(DBIS 2013). However these changes are unlikely to be the last, as recent government policy is promoting further radical change to the structure of apprenticeships, including to the role of qualifications within them (DBIS/DFE 2013). Higher apprenticeship frameworks have been developed in all shapes and sizes, ranging from those that incorporate foundation degrees and have a minimum duration of upwards of two or three years to shorter highly flexible approaches that have minimal knowledge elements and can be completed in less than 12 months. As an illustration of this, Table 1 below outlines seventeen higher apprenticeship frameworks that had been developed and agreed by 'issuing authorities' (usually sector skills councils) by January 2013, of which eight formed part of apprenticeships with a

minimum duration of two years, five between 12 and 24 months, and four 12 months or less. In terms of content five frameworks included a knowledge qualification (or component if an integrated qualification) that contained at or in excess of 120 credits (nominally equivalent to a year of undergraduate study) while seven frameworks had minimum knowledge content between 25 and 50 credits, and three had a minimum knowledge content of less than 25 credits (the knowledge component was unclear in the case of two frameworks).

Table 1: Duration and knowledge content of higher apprenticeship frameworks (January 2013)

	Short minimum duration (12 months or less)	Medium minimum duration (12-24 months)	Long minimum duration (over two years minimum)
Minimal knowledge content (less than 25 credits)	-Social Care(management) -Employment related services	-Creative industries	
Some knowledge content (between 25 and 50 credits)	-Human resource management -Hospitality management	-Public relations -Professional Services	-Project Management -Innovation and Growth -Insurance and banking
Substantive knowledge content (more than 120 credits)			-Advanced Manufacturing -Sustainable Built Environment -Express logistics -Construction operations management -Research and Development
Knowledge content unclear from framework documentation		-Chemical Science/Life Science -Information Technology	

It is worth also noting here that many of the longer apprenticeships that contain significant amounts of credit (from 120 to 360 credits in some cases) are actually structured around Foundation Degrees and have significant involvement of higher education institutions and/or further education colleges. In addition, there is often substantial involvement from professional associations and large employers in these apprenticeships, supporting the recognition and credibility of the apprenticeship in the labour market. This appears to be particularly true of those in the engineering and construction sectors , where networks and relations between employers, educational institutions and sectoral and professional representative bodies have often persisted and adapted throughout the various periods of government reform to apprenticeships. For example Construction Skills, the

sector skills council involved in the higher apprenticeships in Sustainable Built Environment and Construction Operations Management, is comprised partly of the Construction Industry Training Board (CITB), one of the original industrial training boards founded in 1964 which also continues to levy construction employers for sector-wide training activity (CITB 2014). The engineering and manufacturing sectors also demonstrate some similar characteristics (Twigg 2012).

Structures of vocational knowledge and curriculum decisions

Barnett (2006) identifies the importance of both a disciplinary knowledge base and the mechanisms for establishing practice requirements for the constitution of vocational knowledge and pedagogy. Using a Bernsteinian framework, Barnett outlines processes of 'reclassificatory recontextualisation' and 'pedagogic recontextualisation' (2006, 146-8) as knowledge is taken from disciplinary sources to, firstly, be transformed to meet the requirements of the vocational knowledge base as informed by practice requirements, and secondly, transformed to meet the requirements of vocational pedagogy. Of course, different 'agents with recontextualising functions' (Bernstein 2000, 33) may be active in these processes, and with variable levels of influence across the elements of 'appropriation' and 'transformation' that make up a recontextualisation process (Barnett 2006). Understanding the character of these processes of recontextualisation is inextricable from our understanding of the social and epistemic character of the 'region' of professional or vocational knowledge (Bernstein 2000), which is constituted through the recontextualisation of disciplinary singulars and driven by a 'supervening purpose', often 'to support a domain of professional practice' (Muller 2009, 213). As part of a professional or vocational 'region' a variety of individuals, organisations and authorities may have influence over the constitution of professional knowledge and structures of professional formation, and this may include professional associations, higher education institutions, employing organisations and governments. This 'region' may therefore look very different in different national contexts and at different times. Fundamentally important, at least from the perspective on the 'region' outlined by Muller (2009) and Beck and Young (2005), and in keeping with Bernstein's framework, is the notion of the region as a 'socio-epistemic' entity. This stems in part from an insistence on the inviolable structure of disciplinary knowledge and the necessity of knowledge differentiation (Bernstein 1999; Muller 2009; Young 2006). In other words, it is essential to be clear about the character of knowledge, and in which structure, discipline or 'discourse' it may have originated. Bernstein's (1999) delineation between vertical discourse with hierarchical knowledge structures (roughly the physical sciences), vertical discourse with horizontal knowledge structures (roughly although not exclusively the social sciences) and horizontal discourse (local contextual 'everyday' knowledge) provides a framework for distinguishing between knowledge type, but also

raises substantive questions for professional and vocational knowledge and curriculum (Young 2006), and for how these forms of knowledge constitute specialised vocational and professional practices.

Understanding the character of knowledge is an important guide to how it can be organised within curriculum and pedagogised in educational settings (Barnett 2006; Muller 2009). It may be possible to combine elements of different 'knowledges' with different origins, but if vertical discourse provides the 'rules for making explicit the grounds for an explanation' and thus the 'principles of recontextualisation' (Young 2006, 118) then those seeking to identify a vocational knowledge base need to ensure that the structure of underlying disciplinary knowledge (whether that be maths and science for forms of technical occupations or social sciences for the welfare professions) has bearing on the recontextualisation of forms of knowledge into the vocational curricula. From a different angle, Whitty et al.'s (1994) analysis of the use of cross-curricular themes in the national curriculum demonstrated the difficulties of inserting horizontal discourse connected with 'everyday' experience into the established disciplinary discourses of the physical or social sciences. Nevertheless, aspects of horizontal discourse could have a role in professional and vocational curricula and pedagogy (Breier 2004), on how the 'reclassificatory' processes of recontextualisation are enacted by helping to define the problems of practice (Hordern 2014b), and perhaps in contributing to awareness of the 'situated' complexity in which vocational practice takes place (Winch 2010), in contexts that are not always clearly separated from the 'everyday'.

The notion that knowledge structure provides a shape to the curriculum may not be controversial in every context, but it certainly challenges much of the prevailing thinking in vocational education and training in the anglosphere (Wheelahan 2007, 2010; Young 2006), where narrow conceptions of competence-based approaches maintain a dominant role. In further education in England elements of vertical discourse (i.e. disciplinary structure) have been supplanted increasingly by a focus on generic skills and competences (Thompson 2009), leaving learners only superficially prepared for employment. A recent review of vocational education in the England demonstrated the lack of coherence or structure in many of the existing qualifications offered (Wolf 2011), leaving learners with forms of weak contextual knowledge that has limited conceptual purchase. Apprenticeships have been subject to pressures to minimise or remove disciplinary knowledge from curriculum, as part of the competency paradigm that enveloped vocational education in the U.K. and elsewhere from the 1970s onwards. The focus on competency demonstrable and verifiable in the workplace aimed to expose the perceived irrelevancies of acquiring 'outdated' theoretical knowledge in college on day-release courses that had characterised post war industrial training (Boreham 2002; Young

2006). Influenced by forms of analysis that aimed to break down aspects of working practice into discrete parts that could then provide a framework for evaluating performance (Young 2006, 109), the approach contrasts with the increasing recognition in some other European countries that it is forms of 'work process knowledge' which offer learners greater insight into how work activities are interconnected and organised (Boreham 2002) and thus support the development of greater worker capability. When apprenticeships re-emerged in the mid -1990s they originally only needed to contain competence qualifications and a key skills certificate before a technical certificate was included in 2001 (although made optional again in 2006) as part of a clumsy recognition that apprentices were ill-prepared to perform any task without some conception of the work they were supposed to be involved in (Brockmann et al. 2010). Following the 2009 Apprenticeships, Skills, Children and Learning Act the requirements for 'off the job training' and minimum knowledge content was reasserted. However, even when 'knowledge' or 'technical' elements increasingly began to be included in apprenticeship frameworks the size and substance of these elements was often kept to a minimum (Fuller and Unwin 2012), and the extent to which they effectively made links with a disciplinary base is open to question.

Increasing knowledge content and making greater connection with disciplines and subjects in apprenticeship curricula has proved problematic in England, and it can be argued that this is primarily due to the reluctance of the most powerful stakeholders, large employers and government, to invest further in provision and to introduce more extensive and substantive modes of vocational formation (Boreham 2002; Brockmann et al. 2010). Much of UK industry still seeks to compete on cost rather than quality with minimal capacity for productivity improvements (Keep et al. 2006), and thus investment in knowledge or skills (acknowledging the ambiguity of the term – Payne 2000), can be perceived as unnecessary, not to mention the perception that workforce development activities can cause disruption to work processes. However, there are also minimal pressures to increase knowledge content because the institutionalisation of vocational formation appears to have little appeal in England at least, in the sense that there appears to be little appetite amongst policy makers to develop an established vocationally orientated pathway underpinned by social partnership along the lines that exist in Germany and in various other European countries (Brockmann et al. 2010).

For a body of knowledge to have value for vocational formation over the longer term it must surely have sufficient 'conceptuality' to make sense of the 'contextuality' of vocational or professional practice (Muller 2009). Professional and vocational practice demands that elements of the

knowledge base are conceived as a 'collective asset' that is 'articulable' (Clark and Winch 2004, 513), enabling communication and co-ordination on interrelated tasks, and achieving these demands requires socio-epistemic processes appropriate to the vocation or profession. Abstract concepts, originating in the disciplines, need to be recontextualised so that they can be 'put to work' in the context of the problematics of practice, however defined. The accurate definition of the requirements of practice, with a view to the future as much as to current conditions, is surely crucial for establishing a suitable body of knowledge, and retaining purchase on the range of contexts to which concepts must relate. Here the circumstances of the particular sector or industry have considerable influence. How fragmented is the sector in terms of the strategies and operations of the employers concerned? Is the knowledge required by one employer significantly different than another, or are identical roles clearly present across the sector? There may be pressures from some employers for the foregrounding of types of organisational knowledge that relate specifically to the processes and technologies in place at this current time in their organisation, and if so, such employers may prefer qualifications weighted towards competence elements so that their apprentices or employees are not covering content which might be perceived as irrelevant to the organisation. In other sectors, there may be a consensus amongst employers as to the requirements of practice across the sector, and this may result in qualifications covering occupational knowledge that has relevance in a wide range of organisations and contexts and acquires a greater degree of collective ownership. Contrastingly, employers may have different views as to the significance of conceptual knowledge, some perceiving it as overly academic and irrelevant, echoing the criticisms of 'inert' knowledge that resulted in the move towards competency-based qualifications (Boreham 2002). Furthermore, inadequate recontextualisation processes may leave vocational or professional knowledge using disciplinary concepts that are outdated or questionable.

Using Bernstein's (1999) notion of the social sciences comprising a set of 'languages', often developed by dominant thinkers or schools, that offer different ways of interpreting the world, it is quite easy to see how certain theoretical approaches may be recontextualised into professional formation (for example in the welfare professions of social work and teaching) without the opportunity to introduce alternatives that may demonstrate the shortcomings of those approaches and offer different insights. Equally, technical occupations may be at risk of using outdated techniques if these are not revised in accordance with developments in technology or scientific knowledge that occur outside of the purview of the occupation.Thus the process of 'reclassificatory recontextualisation' that Barnett (2006) describes needs to be underpinned by an adequate capacity within the 'region' to define the requirements of practice and ensure that knowledge is 'selected',

'appropriated' and 'transformed' (Bernstein 2000; Barnett 2006; Hordern 2014b) in ways that support the development of knowledgeable practitioners with the conceptual resources to operate within the various contexts of their practice. Arguably, these processes can be well supported both by strong representative professional associations with the capacity to co-ordinate recontextualisation but also by healthy relations between higher education institutions (and other research bodies), professional associations and employers (Hordern 2014c). The capacity to review and iterate the existing knowledge base through research and enquiry is significant for all professions and vocations, particularly where there may be ongoing developments in the disciplinary knowledge base and technological change affecting the work context and requiring new forms of knowledge.

It is also important to acknowledge the influence of the workplace itself on access to forms of knowledge for apprentices. Studies of workplace learning have emphasised the manner in which work is organised as expanding or restricting opportunities to learn and to acquire new knowledge (Billet 2002; Fuller and Unwin 2003b). Workplaces are, of course, situated within a complex topography of contexts, with workplace practice shaped by a myriad of supra-national, national, sector-specific, organisation-specific and local factors (Felstead et al. 2009; Unwin et al. 2007). Access to expertise within workplaces may be vital for successful professional and vocational formation, but it is also important to consider those factors that enable apprentices or others 'in formation' to benefit from whatever opportunities are available. Vocational formation in the workplace is likely to be somewhat fragmented without a framework built on foundations provided by an occupational community that can consolidate learning and enable a greater capacity to contribute at work. Bearing in mind the instability of much employment it is also surely vitally important for apprentices to recognise the time-limited nature of certain types of expertise that may be tied to particular technologies or processes that may become redundant over time, suggesting again the importance of a sound foundation in the knowledge that supports the vocational field. In Winch's (2010) terms, 'vertical' elements of expertise may be more durable than 'horizontal', given the inevitably of industrial and work process change in most occupations. Workplaces can be rich in recontextualised knowledge, which may be combined and interrelated with knowledge that is specific to work processes or sectoral or organisational specifics. Gaining access to this workplace knowledge may be very important for the vocational formation of apprentices, and certain organisations or sectors may be particularly effective or ineffective in generating the 'affordances' (Billett 2001; 2002) necessary so that apprentices gain access to knowledge that will be valuable to them over the longer term.

Regions, recontextualisation and knowledge in Higher apprenticeships – two brief examples

Access to a disciplinary knowledge base through vocational formation can be seen as providing an important foundation for future professional development. Equally, access to conceptual disciplinary knowledge promotes the 'epistemic access' that enables participation in 'society's conversation' (as discussed by Wheelahan 2007, 2009). Here again we see the distinction between (for example) the English and Australian contexts and that of some continental European countries, where apprenticeships also often incorporate elements of general education to ensure apprentices are able to participate as fully as citizens as those who take a more academic route (Brockmann et al. 2008, 2010). It may be true that while conceptions of requisite knowledge and competence often differ across nations (Brockmann et al. 2008), there may also be differences within sectors and depending on the particular institutional configurations and dynamics encapsulated within specific regions and their recontextualisation processes.

To illustrate some of the tensions outlined above we will now look briefly at two higher apprenticeship frameworks and their associated qualifications to examine the patterns of recontextualisation that occur in their 'regions' and to identify how vocational knowledge is being shaped into particular units and combinations within qualifications. This section also draws on interviews carried out with representatives of two professional bodies involved in the development of two of the higher apprenticeship frameworks mentioned above. 'Vocational' and 'professional' notions are used large interchangeably here, as there is a particular focus on occupations seeking to grow their 'technical' workforce through higher apprenticeships using forms of professionalization.

Human resource management higher apprenticeship

Human resource management continues to struggle to establish itself as a profession (Gilmore and Williams 2007; Bailey 2011), at least in the U.K.. This is perhaps particularly because HR staff work within organisations where more dominant professions and roles are present, and are compelled to justify the value of their knowledge and skills to those organisations and other professionals (Francis and Keegan 2006). Because HR staff are spread widely across all sectors and a wide variety of organisational contexts it can be difficult to coherently identify the requirements of practitioners. HR staff in small or medium size organisations are often working alone or in very small teams which may restrict the development of their professionality by minimising their exposure to more experienced staff with similar knowledge and skill. Additionally, even in large organisations, they may struggle to influence the affordances (Billett 2002) that a workplace offers for professional development, despite having the field of 'learning and development' within their competence. The CIPD is the

dominant HR professional organisation in the UK and has control of the majority of professional qualifications, while also recognising some academic qualifications as providing routes to levels of professional membership. The CIPD also produces a number of textbooks that are intended to represent the current state of knowledge about human resources, and to support students enrolled on their qualifications. The 'knowledge' that is represented in CIPD qualifications has been criticised for not sufficiently critiquing various aspects of HRM work (Gilmore and Williams 2007), but nevertheless it is clear that various academics and researchers are involved in selecting and appropriating bodies of knowledge for the qualifications that CIPD offers (i.e. lead authors of core CIPD textbooks are frequently academics). However, CIPD's approach to qualifications can be seen as inextricable from their approach to membership; as a professional association without control over a licence to practice they continually need to ensure they are offering sufficient value to their members (Hordern 2014c).

The higher apprenticeship in human resource management (in its 2012-2014 iteration) comprises a minimum of 74 credits, including 5 core units (28 credits of which 14 relate to knowledge units), and then 14 optional units (7 competence (8 credit units) and 7 knowledge (4 credit units)). The optional knowledge and competence units form pairs that relate to particular themes or areas of practice, so that apprentices are encouraged to study both the knowledge and competence units for 'employee engagement' or 'reward management', according to their particular responsibilities in the workplace. From 2014 onwards, according to the revised framework, the apprenticeship will involve the achievement of a qualification comprising 90 credits, with additional knowledge and competence options relating to 'managing change' now included in the framework (Skills CFA 2014). The qualification, the Level 5 Diploma in Applied Human Resources (QCF) has been promoted as having equivalence to higher education qualifications (i.e CIPD 2012a). However, it is clear that the involvement of higher education institutions was not a priority for CIPD in developing the higher apprenticeship (Interview 1), perhaps because CIPD might question whether they are 'set up to do the competency-based elements' of the qualification (Interview 1), but also resulting from a concern that the qualification content is 'made as real' (Interview 1) as possible through validation by employers rather than higher education staff. The process of developing the apprenticeship was led by CIPD, and involved engaging employers to achieve credibility for the apprenticeship and agreement on the nature of the qualification to be used, although it was 'difficult to get them to engage with the detail' (Interview 1). It is notable, of course, that major employers of HR staff are not primarily concerned with HR, a significant difference from how work is organised in many professional/vocational occupations. In professions such as accountancy or Law, Chartered Surveying, engineering, or sectors such as construction, hospitality and social care, it is easier to

identify those employers who should be consulted. It is notable too that progression from the qualification appears to be envisaged as involving the CIPD professional categories of membership and enrolling on further CIPD qualifications (SkillsCFA 2012), which may help to advance the CIPD professional 'project' (Gilmore and Williams 2007).

In these circumstances, the 'region' of human resource management appears to be dominated by the CIPD, who are uniquely positioned in having an overview of HR practice and influence over what is considered valid HR knowledge (Hordern 2014c). The minimal involvement of higher education institutions here (Interview 1) leaves the CIPD as the chief 'arbiter' of knowledge value. Hamilton (2012) has identified the HR region as having significant weaknesses in its distance from sources of conceptual disciplinary knowledge, which may leave it prone to the use of forms of potentially outdated 'inert' knowledge, in addition to fads and popular techniques that are not subjected to the ongoing review and iteration that is customary for disciplinary knowledge (Muller 2009). This has some parallels with the experiences of the field of management studies, where there are criticisms of the persistence of 'static' forms of knowledge that are being 'appropriated' from disciplines without attention to the context of that discipline or the necessary transformation to meet the requirements of the region and therefore management practice (Oswick et al. 2011; Hordern 2014d).

The contexts in which the 'HR function' operates within organisations could result in pressure to focus on forms of knowledge that will promote technical competence and uncritical performance. HR departments are charged with some of the most sensitive and emotive areas of organisational work, and are often asked to implement strategies that may be highly controversial. The 2012 Level 5 Diploma, as outlined above, has minimum knowledge content of 30 credits (with approximately 150 guided learning hours and 150 for self-directed study). There are three mandatory knowledge units (Understanding the Business Context of Human Resources (4 credits), Understanding the Contemporary Human Resource Function (4 credits), and Understanding Employment Law (6 credits)) (Skills CFA 2012). Interestingly, one of the two other mandatory units, Using a Research Approach in Human Resources (4 credits – 20 guided learning hours and 20 self-directed study) is a competence unit (Skills CFA 2012), but includes indicative content such as 'Different paradigms in research, for example positivism; anti positivism/naturalism; critical theory' and 'The nature and purpose of independent enquiry' , although this content is clearly 'neither prescriptive nor exhaustive but should enable achievement of the learning outcomes' (CIPD 2012b, 2) . The two four credit knowledge units discussed above foreground the centrality of the HR function as the object of study, with learning outcomes focusing on understanding factors which 'impact on the HR function' (two of the three learning outcomes in CIPD 2012c), 'the purposes and key objectives of the HR

function' , 'different models of delivery of HR Services', and how 'HR's contribution to the organisation can be evaluated' (three of the four learning outcomes in CIPD 2012d). While there is no doubt that there are opportunities within the structures of these units for able educators to use elements of knowledge developed in the field of management and organisational studies that may introduce a range of alternative perspectives on the role of HR and the nature of organisations, the limited duration of the units and the focus on 'flexibility' (Interview 1), and 'neither prescriptive nor exhaustive' approaches to content (CIPD 2012c, 2; CIPD 2012d,2), may lead to a restricted engagement with content both on the part of the educator and the learner. Nonetheless, there are pledges within one unit that content will include the 'reviews of published research'; unfortunately, a closer look reveals that this focuses on demonstrating how research findings are 'linking HR activity with *positive* (emphasis mine) organisational outcomes' (CIPD 2012d, 1), whatever they may be. While it may be inappropriate to expect HR qualifications that explicitly prepare staff for higher level support roles in practice to contain elements of the vertical discourse of a disciplinary-based social science or (disciplinary-orientated) management studies degree, the flexibility offered in terms of unit content and distance from sources of knowledge production and validation (with the exception of the CIPD), leaves potential for considerable variability in the way in which knowledge is recontextualised in pedagogy and by learners themselves enrolled on the qualification (Evans et al. 2010; Hordern 2014b). This is, of course, compounded by the variability in workplace contexts that learners experience as part of their apprenticeship, which may be 'expansive' or 'restrictive' (Fuller and Unwin 2003b) and subject to various organisational or sectoral conditions (Felstead et al. 2009). Relatedly, learners may or may not be supported to take advantages of whatever opportunities their workplace affords, and CIPD has no means of monitoring this (Interview 1). The distance that learners have from sources of disciplinary knowledge, mediated as their learning experience is by their employment context and by the knowledge preferences of CIPD, could make 'epistemic access' through their vocational formation highly problematic. Arguably, a case could be made for a progression from this 'higher-level' vocational formation as a higher apprenticeship to a 'professional' grade that might involve a higher education qualification or a postgraduate qualification, but the limited and uncertain knowledge base provided by the Level 5 Diploma may provide only a partial preparation for such progression.

Project Management higher apprenticeship

Project Management, with some similarity to the context of HR discussed above, is an occupation in pursuit of professionalization (Muzio et al. 2011). Again, with some similarity to HR, it is 'pan-sectoral', although it has particular prominence in industrial sectors which lend themselves to

'project' forms of organisation, for example construction, engineering , Information Technology and manufacturing (Winter et al. 2006). There are two professional bodies with a significant membership base in the U.K., the US based Project Management Institute (PMI) and the UK based Association of Project Management (APM). Data collected on the project management profession suggest that a high number of those defining themselves as project managers have entered the role via another profession or higher technical occupation, with few 'career' project managers who have entered the role without a background specific to a particular sector (Interview 2). The APM sees itself as having a particular role in 'growing professionalism' and in developing a profile of project management as 'increasingly a career of first choice' (Interview 2). It is these objectives which form part of the basis of the higher apprenticeship in project management, which aims to 'open up entrance routes into the profession' (Interview 2) and develop 'greater competence earlier in people's careers' (Skills CFA 2013, 7). The higher apprenticeship contains one integrated qualification of 120 credits, with a minimum of 30 credits of knowledge (comprised of one mandatory knowledge unit entitled 'Principles of project management'), and 90 credits of competence taken from mandatory and optional units (Skills CFA 2013, 14).

Project management 'knowledge', as outlined in qualifications devised by and for the APM in the UK, is informed by the APM 'body of knowledge'. The process whereby this body of knowledge is developed, agreed and iterated can be criticised on the grounds that certain forms of knowledge, and ways of representing that knowledge, are particularly attractive to powerful interests within the project management community (Morris et al. 2006), thus influencing the inclusion, rejection and re-prioritisation of forms of knowledge within the curriculum of project management qualifications. Morris et al. (2006, 463) argue that in the case of the 'situated' knowledge of 'practice-based areas' like project management knowledge 'legitimacy is derived through group endorsement'. Thus, the review of the 'body of knowledge' relies on extensive surveying of employers across key sectors to assess the perceived 'relevance' of topics, and is influenced by pressures to comply with existing certification programmes into which the professional body and others have invested time and resources (Morris et al. 2006). Indeed, the development of the higher apprenticeship is said to be 'very much employer led…involving 80 organisations in focus groups' (Interview 2), and also to provide a route towards 'registered project professional' (Interview 2). The results of such constraints may limit the extent to which alternative perspectives can be incorporated within the knowledge base and result in granular, reductive and somewhat decontextualized forms of knowledge that can be perceived as notionally relevant across a very wide range of contexts. Project management knowledge is heavily influenced by dominant methodologies (Winter et al. 2006), such as Prince 2, which may limit the development of broader perspectives on project management and

militate against more reflective and critical forms of professionalism. Although there is no doubt that APM seeks to incorporate research into project management, and the involvement of higher education institutions, into the validation and iteration of the knowledge base (Morris et al. 2006), the project management 'region' is challenged in its development by the range of sectors and employers who need to be involved, the imperatives of the project management professional 'project' (Larson 1977; Hodgson 2002) and the 'emerging' and 'organisational' forms of professionalism that accompany this (Muzio et al. 2011; Muzio and Kirkpatrick 2011).

The sole 'knowledge unit' in the project management higher apprenticeship, the Principles of Project Management (POPM), focuses on the principles that are 'common to projects regardless of whether projects are undertaken in different sectors or whether they differ in scale and/or scope' (EAL/APM 2012, 3). Interestingly, the unit is assessed by two three hour examinations, entitled 'Understanding Project Management Principles' (UPMP) and 'Applying Project Management Principles' (APMP) (page 5). Whereas UPMP seems to primarily require the regurgitation of descriptions of core project management terminology and concepts through question types such as 'explain' and 'list and describe' that necessitate short answers (EAL/APM 2012, P.6) , APMP develops a more analytical approach requiring that the candidate 'evaluate', 'discuss' and 'compare and contrast' (pp. 6-7). Although the unit title suggests an orientation towards the conceptual, with students inducted into the abstract 'principles' that will guide them in any sector or with any project, much of the knowledge content reveals itself as more aligned with the acquisition of methods or techniques that relate to particular elements of project management practice. There are twelve sections of content that relate to twelve learning outcomes for the unit. Although the first two outcomes promise some abstract conceptualisation, with a focus on 'the conceptual basis of project management' and 'project context and governance structures', which could theoretically draw on research into project organisation and industrial change, eight of the remaining outcomes focus on how to accomplish, or perform, various activities. Whereas the initial two elements open up some potential for the work process knowledge that Boreham (2002) describes, and even to engage with elements of horizontally structured vertical discourse, or at least the recontextualisation of such elements, others can more easily collapse into the uncritical presentation of existing techniques or approaches without providing the types of knowledge that might enable better preparation for understanding the work process in greater depth, and indeed the 'epistemic access' which Wheelahan (2009) outlines.

While it is possible that the knowledge unit may be seeking to develop learners' 'transversal abilities' (Winch 2013), the 'polymorphous' (289) and context-specific nature of such abilities suggests that

they cannot be developed in a granular or decontextualized fashion . Thus, attempting to locate these abilities within a knowledge unit might indicate either that the nature of these abilities is being misinterpreted, or that knowledge is being weakly represented as technique, or potentially both. Content focused on 'how to communicate within projects', 'how to establish processes within projects' , 'how to define and manage project scope' and 'how to develop and maintain project schedules' (EAL/APM 2012, 3) may be immediately relevant and useful for employers and apprentices if framed through techniques (such as how to define intended project outputs with product breakdown structures or use critical path analysis), but does not provide a conceptual base for starting to think about the 'softer' or more 'contextual' reasons for project success or failure, one of the key areas of development in project management research (Winter et al. 2006), or, most probably, a framework for best developing transversal abilities. Certainly, whatever the 'technical' advantages of the higher apprenticeship in project management for employers and employees, claims of equivalence with the first year of a degree course (Interview 2; APM 2012) need careful scrutiny.

Concluding remarks

The examples taken from the HRM and project management higher apprenticeships demonstrate the pressures on knowledge to demonstrate its utility in workplace practice, and the challenges of constructing qualifications that meet with approval across very diverse groups of employers, many of whom may have little in common. There is a risk that knowledge becomes granulated and decontextualized, reflecting a weak conceptuality which also engenders a weakened capacity to handle contextuality (Muller 2009), with apprentices left without the conceptual tools to adequately recognise and adapt to changing contexts, or the 'know-how' that provides the basis for working with professional knowledge (Winch 2010). Arguably, the delineation between 'knowledge' and 'competence', borne of requirements to ensure both are adequately included (DBIS 2011), actually exacerbates reductive approaches to both of these notions.

Although there is no doubt that it is perfectly possible for a higher apprentice enrolled on the HRM or project management programme to complete further qualifications that may provide greater 'epistemic access' it seems that the current qualifications provide only a partial platform for such progression. Equally, claims of equivalence with the first or second years of higher education qualifications may be misleading if there is insufficient induction into a specialised body of professional/vocational knowledge, although it should be pointed out here that there is no guarantee that any given higher education qualification is in fact achieving anything similar.

Returning to those apprenticeships with higher knowledge content, often incorporating Foundation Degrees (i.e. Construction Operations Management or Sustainable Built Environment), it could be concluded that there is considerably more potential here for adequate preparation for working life through greater engagement with disciplinary content. While this may be true, it is nevertheless important to draw attention again to the significance of the 'region' and the social relations existing between professional associations, employers and sector skills councils in the shaping of the higher apprenticeships concerned, in addition to the specifics of workplace context, and the realities of industrial and labour market change. Whatever the benefits of access to more substantive knowledge based qualifications, apprentices themselves nevertheless may have limited influence over their circumstances of formation, and the curriculum and pedagogy they experience in the English VET context is constrained in its potential for enabling 'access to powerful and transformative knowledges' (Avis 2014, 51). Indeed, it could be argued that those apprenticeships of longest duration and involving greatest qualification size are driven primarily by perceptions of skills shortages (i.e. higher apprenticeship in Advanced Manufacturing – SEMTA 2013) and increasingly specialised technical role profiles. Specialisation, while potentially offering routes to higher levels of occupational capability is also related to demands for technological work process innovation, cost management, and new forms of Taylorism in the organisation of work (Brown and Lauder 2006). This, rather than a concern to support greater engagement in 'society's conversation', or indeed to build stronger modes of vocational formation , is driving much of the development of higher apprenticeships.

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