HOW STANDARDS 'TRAVEL AND CHANGE BETWEEN CONTEXTS: NATIONAL STANDARDS FOR TVET TEACHER EDUCATION IN THE UK.

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Abstract

This paper focuses on the development and growth of standard-led reform and regulation of TVET teachers and trainers in the UK by developing a theoretical discussion and critique of standards that has a wider relevance to that in other countries. It shows how standards-led regulation in the UK has moved from a permissive to a more rigid approach where new standards have been defined. The study also illustrates how standards are mediated and interpreted differently within the diverse contexts and communities of practice by developing a critique of the standards-led model, an attempt to codify both situated and non-situated knowledge. Here, standards are treated as decontextualised, vertical knowledge simply applicable across diverse contexts, subjects/vocational practices, learning in the workplace and training TVET teachers. Within the diverse practices of TVET teachers and teacher educators, different types of understandings exist and different types of knowledge and pedagogy are learnt, used and transformed. Not only do attempts to deal with the complex zone of professional practice by standards fail to address the inherent ambiguity of standards, but also lead to a bureaucratic, competency-based framework which marginalizes professional knowledge and understanding.

Keywords: TVET teachers and trainers, standard-led reform and regulation, professional knowledge

Introduction

This paper focuses on the development and growth of standard-led reform and regulation of TVET teachers and trainers the UK. It will develop a theoretical discussion and critique of standards that has a wider relevance to standards-led reform in other national and international contexts particularly towards the notion of trans-national standards for TVET teachers. The paper will start by showing how standards-led regulation in the UK has moved from a relatively permissive, to a more rigid regulatory approach where new standards have been defined alongside further specifications, learning outcomes, units of assessment, teaching role specifications and a 'standards based qualifications framework'.

Based upon a theoretical framework developed in earlier research and a critique of the standards-led model of initial teacher education, I will illustrate how standards are mediated and interpreted differently within the diverse contexts and communities of practice that make up the UK further, adult and TVET system. The paper will also develop a critique of the standards-led model that is described as an attempt to codify both situated and non-situated knowledge. In this way standards are treated as though they are decontextualised, vertical knowledge that can then be simply applied across diverse contexts, subjects/vocational practices, learning in the workplace and training TVET teachers.

The paper will argue that within the diverse practices of TVET teachers and teacher educators different types of understandings exist and where different types of knowledge and pedagogy are learnt, used and transformed. It will show that attempts to deal with the complex zone of professional practice by standards and ever more detailed specification not only fails to address the inherent ambiguity of standards, but leads to a bureaucratic, competency-based framework which marginalises professional knowledge and understanding.

Understanding Standards as a Mediating Tool-the Production and Consumption of Standards

Our theoretical discussion and critique of standards and other related specifications has a wider application to standards led reform. However, we use as a case study attempts by policy makers in the UK to regulate the complex professional practice of teachers in further education with national standards1. In this section we conceptualise standards as mediating tools that move from the context

of policymakers to practitioners and in so doing are interpreted differently as they travel. The model we use to conceptualise and understand standards led us to pose three main questions that we have related to our study of how standards have evolved for FE teachers in England.

1. Where do they come from (their origins and nature)?
2. Where do they go (how do standards function in the pedagogical domain of FE Colleges)?
3. What happens to them on route (how are they transformed through processes of mediation and re-contextualization)?

The diagram below incorporates these main questions. It applies Wertsch's concepts of the production and consumption of cultural tools to the transfer of standards between the policy and pedagogical contexts (Wertsch, 1998).
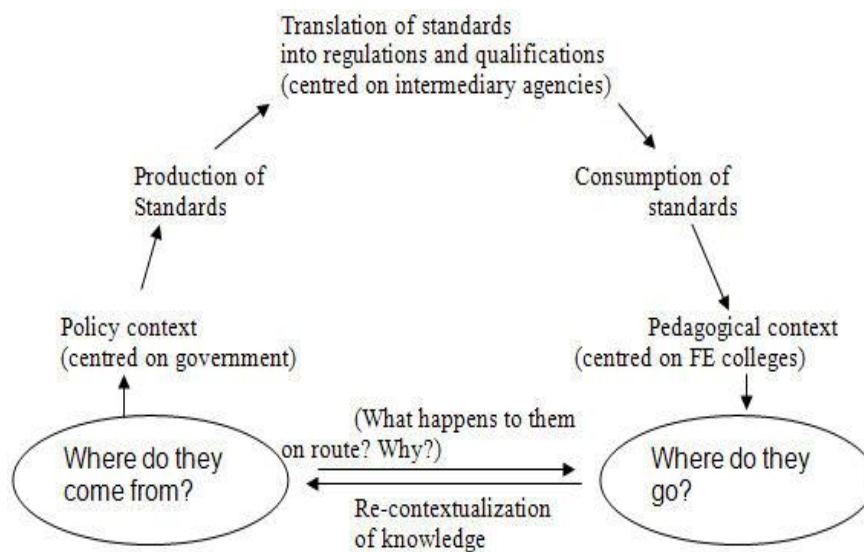

Figure 1: The mediation of national standards between the policy
and pedagogical contexts (Nasta 2007).

Where do Standards come from (their origins and nature)?

This question involves an analysis of when and why national standards were produced, for whom, what they contained and how those who designed them envisaged that they would lead to change. It reflects a Vygotskian focus upon identifying the historical and cultural genesis of a particular cultural tool. Standards like other cultural artefacts have a recent and an older history. The recent history refers to the 1997-2007 reforms that produced the FENTO and LLUK standards[2]. The older history reflects the rationale for introducing them and the form that they took was related to much older debates about the separation between the vocational and the academic and between occupational and professional models of practice. The question also involves analysing how the evolution of standards reflects the exercise of power in policy making at a national level. The roles played by different national players in the complex superstructure of governmental and quasi-governmental organisations, and representatives of employers, trade unions, universities and national awarding bodies. In unravelling the origins of a cultural tool aspects of its fundamental nature are revealed or as Wertsch states, *the forces that go into the production of a cultural tool play a major role in determining how it will be used (Wertsch, 1998, p.142).*

Where do standards go (how do standards function in the pedagogical domain of the FE college)?

In the diagram we use the word consumption, this means how standards are used in the workplace. A very active meaning of the term consumption is implied in Wertsch's writing.

> *Cultural tools are not always facilitators of mediated action, and agents do not invariably accept them and use them; rather an agent's stance toward a mediational means is characterised by resistance or even outright rejection (Wertsch, 1998, p144).*

As the quote above makes explicit, there is a political dimension in the consumption of cultural tools; standards are not neutral, they embody assumptions about the nature of professionalism and teacher qualifications. The interpretation of standards and regulations within FE colleges reflects relationships of power and authority – for example the pervasive influence of managerialism on teaching and learning. Above all else an analysis of the consumption of standards is about unravelling how standards function within the specific domain of the FE workplace. Focussing on mediation in this context raises issues about how standards are interpreted and used by the subjects for whom they were ostensibly designed – college managers, teacher-educators and trainees. The focus is upon how the context in which teacher trainees work and learn has affected the ways in which they perceive and use standards.

In dealing with these critical empirical questions, we draw upon wider concepts from the post-Vygotskian literature. One is Engestrom's development of Star and Griesmer's (1989) concept of cultural tools as boundary-crossing artefact that cross different activity systems (Engeström, 1995). The other is Fuller and Unwin's (2004) concept of the individual's learning territory as part of their model of expansive and restrictive learning environments.

What happens to standards on route (How are they transformed through processes of mediation and re-contextualization)?

The voyage of standards between the worlds of policy makers and those of practitioners is complex and political. Standards are interpreted and re-interpreted by groups with different vested interests on their journey through the tangled labyrinth of governmental and quasi-governmental agencies, national awarding bodies and HE and FE providers. Each transition entails processes of mediation, where agents, for example regulators, qualification designers and teacher educators use standards as a cultural tool to work upon a particular problem. For example, recent research (Nasta 2007) showed that while teacher educators recognised how open to interpretation and ambiguous standards where when applied to initial teacher education, trainees adopted a very instrumental approach and saw standards as assessment criteria to be covered.

These transitions can also be seen as re-contextualization of knowledge. A fundamental issue is whether the LLUK standards lend themselves to re-contextualization. If there are intrinsic problems to do with the nature of the codified knowledge that they represent, the whole basis of standards-led reform of ITT could be seen as fundamentally ill-conceived. In general Vygotskian perspectives seem better suited to showing how cultural tools are transformed through processes of mediation than dealing with issues that are intrinsic to the tool itself or the structure of the knowledge it represents (Young, 2004). Below we will draw upon Bernstein's critical distinction between horizontal and vertical discourses to highlight the importance of knowledge and supplement Vygotsky's concept of tool-mediated action when we evaluate the elements of knowledge included in the curricula and ITT.

Understanding Standards through Vygotsky's Concept of Tool-Mediated Action
Our interest is about how standards mediate learning within the pedagogical context of FE in the UK. Using Vygotsky's concept of tool-mediated action offers a creative and different way of conceptualising standards. Drawing upon Vygotsky we treat the FENTO and LLUK standards as cultural tools, mediating artefacts with their own origins and trajectories which are shaped and re-shaped by subjects working in different policy and pedagogical contexts.

Vygotsky was researching in the 1920s and 1930s in post-revolutionary Russia. He was attempting to develop a Marxist theory of Psychology that gave primacy to the influence of social and cultural factors in learning and human development. His focus was on how cultural tools, as carriers of the collective intelligence and expertise of previous generations mediate our actions. Edwards describes this succinctly when she writes (Edwards, 2005), *a psychology which explained how the collective was incorporated into the individual through processes of mediation and which could be used to transform ways of thinking and acting to the benefit of the greater good (p.52).* Vygotsky created a dynamic unit of analysis represented as a triadic relationship between the subject, the object of learning and the cultural tool or mediating artefact.
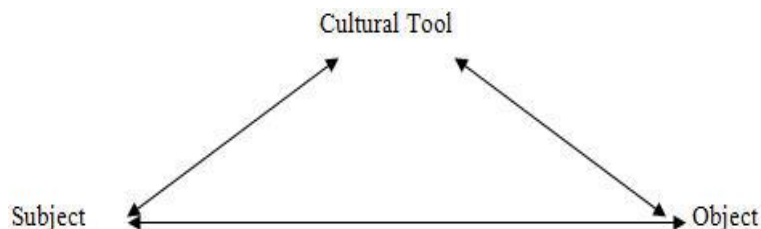

Figure: Vygotsky's model of tool-mediated action

Figure 2: Vygotsky's model of tool-mediated action

In this model, the subject can be seen as an individual or group. The object is what is being worked on or shaped through the use of the cultural tool, rather than the goal or objective. These three elements are seen as irreducible (Cole, 1996, Wertsch, 1985, Wertsch, 1998).

> *The incorporation of tools into the activity creates a new structural relationship in which the cultural (mediated) and natural (unmediated) routes operate synergistically (Cole, 1996, p.119)*

Wersch uses the image of pole vaulting (Wertsch, 1998, p.27) to illustrate the fusion between, the subject, the pole vaulter, the mediating artefact, the pole that embodies the invention and technical innovations of those who developed it (i.e. the cultural legacy) and the object - getting over the pole successfully, winning the competition or whatever is defined as the legitimate object of pole vaulting. Wertsch refers to this integration between subject, object and mediational means as the 'irreducible tension between agent (the subject) and mediational means (Wertsch, 1998, p.141)'.

Mediating tools can take many forms. They can be semiotic, signs and symbols. They can be physical artefacts such as the pole in the example above and they can involve other individuals or groups. Much of Vygotsky's writing was on the subject of semiotic mediation – the role of language and other signs, for example artefacts from the arts, in mediating thought and learning(Vygotsky, 1971, Vygotsky, 1996, Vygotsky & Luria, 1994). He was particularly interested in how the child made use of language as a cultural tool in developing conceptual thought – less situated ways of interpreting the world. Understanding the historical – the socio-genesis of cultural tools was a critical element. He advocated the genetic method - tracing the origins of a cultural tool in order to unravel its nature. This is perhaps unsurprising, given that Vygotsky was writing in a Marxist context, where history was often seen as a series of stages leading to a predetermined end. He was determined to demonstrate the importance of history and culture as opposed to biology in shaping human thinking and development. The historical timescales that he identified were long periods – the phylogenetic or species history and the cultural-historical or changes across decades and centuries. Unravelling the historical dimension of cultural tools remains an important aspect of Vygotsky's legacy. Rogoff illustrates the historicity represented in cultural tools when she states (Rogoff, 2003):

> *artefacts such as books, orthographies, computer languages and hammers are essentially social, historical objects, transforming with the ideas of both their designers and their later users. They form and are formed by the practices of their use and by related practices, in historical and anticipated communities (p.276).*

The social element – the anchoring of learning in social activities - was also an important dimension and is reflected in current theories of situated learning. This too may have reflected the fundamental premise in Marxism that men play a crucial role in changing the social conditions of their existence as they develop collective consciousness and take collective action.

In Vygotsky's theory cognitive development consists of individuals changing their ways of understanding, perceiving, noticing, thinking, remembering, classifying, reflecting, problem setting and solving, planning and so on – in shared endeavours with other people building on the cultural practices and traditions of communities (Rogoff, 2003, p.237).

Perhaps, Vygotsky's best known concept, the Zone of Proximal Development (ZPD), arises directly from the fundamental idea of tool mediated action. ZPD refers to the distance between understanding and knowledge gained from mediated as opposed to unmediated action. Lave and Wenger indicate its different meanings (Lave & Wenger, 1991). ZPD can refer to the extra learning and capability exhibited by a learner when assisted by or collaborating with more experienced people, for example a teacher or mentor. The idea of the teacher initially 'scaffolding' a complex task before the learner tackles it arises from this meaning of ZPD (Daniels, 2001). In a wider sense, ZPD explores the transformation that occurs when learning is mediated through the use of cultural tools. For example, the word-processing programme, dramatically expands the capacity for writing, storing, retrieving and re-working materials. Although it is a physical tool, it allows one to completely re-conceptualize the way to produce a chapter. Cultural tools carry within them knowledge that allow individuals to move beyond the confines of everyday experience or as (Cole & Wertsch, 2003) state.

Artefacts so not serve simply to facilitate mental processes that would otherwise exist. Instead they fundamentally shape and transform them (p.2).

Conceiving standards as artifacts is to recognize that like all cultural tools they are transformed by the contexts that they enter and that they in turn transform the activities of the agents (Universities, awarding bodies, teacher-educators etc.) who make use of them. This is a very different perspective from those of policy makers from the Government and regulatory bodies, who often view standards as fixed occupational outcomes, externally supplied curricula commodities that can be translated into FE teacher education. Examining how standards are mediated as they move between the worlds of policy and pedagogy is to recognize that like all cultural tools, they are transformed through mediation. They are not simply transferred from the policy to the pedagogical context.

Case study. The Application of Standards to the Policy Context in the UK
In contrast to the past the further education sector has been seen by policy makers as of central importance as a means of social inclusion, as an engine for raising participation in education and training and of central importance to the economy (Lucas 2004). As the further and adult education and training sector has moved up the political agenda it has moved from a neglected sector to one of ever-greater regulation. We focus upon effort to raise the standards of teaching by the introduction of national standards regulated by an employer lead body known as the Further Education National Training Organisation (FENTO) accompanying the introduction of compulsory teacher education in 2001 and the employer led Lifelong Learning UK (LLUK) standards which replaced them in 2007.

The introduction of the first national occupational standards in 1999 were initially welcomed by many because of the unacceptable variation in the structure and quality of Initial Teacher Education (ITE) and professional development arrangements. However, as Lucas (2004a) shows, the national standards were arrived at through functional mapping, initially designed to be the basis of an National Vocational Qualification[3] (NVQ). Although after consultation the NVQ model was abandoned, FENTO was left with occupational standards designed for a different purpose. While few disagreed with standards as such, they remained occupational standards for an NVQ and were of very little

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[3] The NVQ is competency based vocational qualification.

actual use in improving the quality of ITE programmes and remained a 'hybrid' that falls between providing a 'professional' or 'industrial' framework for FE teachers (Lucas 2004). As a result awarding bodies, colleges and many universities mechanically 'mapped' the standards against their existing diverse ITE provision focusing on 'covering' the standards however superficially, particularly because the standards could be interpreted at many levels. Such an approach did not take into account the very diverse contexts in which FE teachers practice.

In 2003 the first Ofsted[4] national survey report was published (Ofsted 2003). The report pointed out many weaknesses in the current system arises from defects in teacher education. For the purposes of this paper we wish to mention just two. The first focused on the lack of subject-specific knowledge and pedagogy given to trainees and the second reported that the FENTO standards did not clearly define the standards required of new teachers. As a consequence, the report said that the FENTO standards were of limited value in securing common understanding of the pass/fail borderline on courses of initial training or judging the attainment of newly qualified teachers. Furthermore, the survey found that most trainees said the language of the standards was remote and seldom used the standards to increase their knowledge and skill because there were far to many standards and subheadings.

The Ofsted report was followed by a UK government paper called 'Equipping out teachers for the future' (DfES 2004). This proposed a new set of standards to be introduced in 2007 and many changes to the ITE qualifications, emphasising the importance of helping trainees with teaching their subject. Given the diversity of subjects in FE[5] it is widely accepted that in the main subject support can only be met by having subject mentors in the workplace/colleges which in turn could be guided by the same set of national standards which ITE courses were also endorsed against. The new standards were to be developed by Lifelong Learning UK (LLUK) which replaced FENTO as a new employer led body in 2002 reflecting the UK Government wider policy of replacing National Training Organisations with larger Sector Skills Councils. The ever growing emphasis on employer led standards, further specifications and subject specific mentoring in the workplace means that teacher education is becoming a more work-based, standards-led model (Lucas 2007).

The new standards (LLUK 2007) are divided into 6 domains;
1. Professional Values and Practice
2. Learning and teaching
3. Specialist Learning and Teaching
4. Planning for Learning
5. Assessment for Learning
6. Access and progression

Each domain is broken down to three categories, scope (s) knowledge (k) and practice (P).
For the purposes of this paper we wish to examine just two examples from the 192 statements
1. AS1 Teachers in the lifelong learning sector value all learners, their progress and development, their learning goals and aspirations and the experience they bring to their learning
2. A K 1.1 Teachers in the LLL sector know and understand what motivates learners to learn and the importance of learners' experience and aspirations
3. AP1.1 Teachers in the lifelong learning sector encourage the development and progression of all learners through recognising, valuing and responding to individual motivation and aspirations.
4. DS1 Teachers in the lifelong learning sector are committed to planning to promote equality, support diversity and meet the aims and needs of learners
5. DK 1.1 Teachers in the lifelong learning know and understand how to plan appropriate, effective coherent and inclusive learning programs and promote equality and engage with diversity

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[4] OFSTED is an inspection body that is funded by and reports to the UK government.
[5] In a review of a single FE college Crawley (2005) suggests that one can identify up to 200 specialisms.

6. DP 1.1 Teachers in the lifelong learning sector plan coherent and inclusive learning programs that meet learners needs and curricula requirements, promote equality and engage with diversity effectively.

As can be seen from these examples there is a somewhat cyclical relationship between the categories scope, understanding and practice. For example the terms, 'planning to promote equality' or 'engage with diversity effectively' or 'plan to meet learner's needs or value all learners' are hard to disagree with yet finding a common approach across the diverse teaching and learning contexts of the lifelong learning sector is another question. Furthermore, standards such as, 'teachers should understand principles, frameworks and theories which underpin good practice in learning and teaching' (AK 4.1) are quite meaningless because good practice is a contested concept across subjects and contexts. Recent research also found ITE courses using different theories (which are often contested), and struggling with standards to define how much underpinning knowledge, and what breath and depth was required to cover the standards (Lucas et al 2004, 2007).

But the new LLUK 192 standards are not left at the level of statements. They are then broken down into performance criteria (outcomes) - very much like National Vocational Qualification (NVQs) which can then be used to assess trainees. As we will show, the problem with this sort of approach is that when national standards (or any other prescriptive code) leaves government and national agencies, they are interpreted in many different ways, not always leading to a commonality of practice and often having quite unintended consequences (Nasta 2007). There simply are no standards for measuring standards. In order to escape this complexity, regulatory bodies revert to the deceptive relative certainty of technicist models, to the comfort zone of further detailed statement specifications and competency statements. As discussed above, regulatory bodies fail to see standards as artefacts that necessarily change as they move from one context to another. In order to prevent this change more specifications are added which in turn become new travelling artifacts. While it may not be the explicit intention of policy makers, we fear that as initial teacher education (ITE) becomes subject/practice focused through greater specification of standards and more work-based, the taught or knowledge part of the course, become marginalised and ITE takes on the form of an NVQ with the national standards becoming the basis of outcomes and competence based criteria.

The new LLUK standards clearly differ from the FENTO ones in two major respects. Firstly the old FENTO standards were for the further education sector, the new ones apply to the Learning and Skills Sector and the Lifelong Learning Sector (LLL) which is a far more diverse sector then FE including teachers, tutors and trainers in many varied contexts with an emphasis on competence in teaching a particular area of vocational or academic specialism. Secondly, as mentioned above, the FENTO standards were mapped to existing provision allowing for a wide interpretation of their meaning, their depth and breath according to the learning and teaching context. The new LLUK standards (LLUK 2007) could in theory be used the same way but they are accompanied by a qualifications framework that translates the LLUK standards into units of assessment, learning outcomes, role specifications, detailed subject specifications of a minimum core, credit framework and assessment criteria. In other words, the new LLUK standards and the accompanying qualifications framework and guidance are far more prescriptive in an attempt by the regulatory body to ensure a commonality of approach and understanding across a very varied teaching and learning context. Such an approach as described above assumes that standards or other prescriptive statements move unproblematically between policy and pedagogy and are not seen as mediating artefacts that we describe above. This standards-led approach to raise the quality of teacher education shows no understanding of how inevitably national standards are mediated, transformed and retranslated as the move between very different and changing pedagogical contexts that we describe below.

The Pedagogical Context in UK Further Education Colleges.
Another problem with the emerging standards-led model of teacher education is that it fails to recognise or capture the diverse and changing nature of teaching in FE college-particularly among full-time staff. An example of this is the promotion of the acquisition of skills and knowledge by students, trainees and employees with a very wide diversity of learning needs and attitudes (Huddleston and Unwin, 2002). This requires FE teachers to broaden their forms of expertise to include resource-based learning, flexible modular curriculum design, offering advice and guidance to

individual students, and to maximise the potential of Information and learning technology as a resource for learning. In addition, teachers need to keep up to date in their own academic/vocational specialisms as well as understanding how their specialism relates to the curriculum as a whole, because there is a growing overlap between teaching and learning that cuts across subject boundaries as many so called 'subject specialists' in FE colleges now teach on more than one type of programme (Simmons 1999). Fisher and Webb (2006) problematise the notion of 'subject knowledge' showing how a typical (vocational) business studies diploma incorporates many aspects (or versions of) of academic disciplines such as English, Maths, Economics and other 'bundles of knowledge'. This is particularly true in the case of general vocational programmes, or the many initiatives that reflect government inclusion policies that are sometimes seen as a shift from 'teaching to welfare' (Gleeson et al 2005). This 'new FE' emphasises learning to work in multi-specialist teams requiring collaborative skills and a sufficient knowledge of the college as an organisation to enable them to link their work with other local providers such schools and training partners. Furthermore, it has been suggested that many FE teachers do not conceive of themselves as subject specialists (Fisher and Webb 2006) and for those that do the curriculum requires them to work in ways that are contrary to the concept of a narrow subject specialist.

Our argument is that FE teachers, particularly full time teachers, have increasingly been required to have more then simply a narrow knowledge about delivering a specialism in a classroom. This is not to suggest that knowledge of the subject matter being taught is not important. There is clearly a relationship between how something is taught and the knowledge the person teaching it possesses (Watkins and Mortimer 1999). We are suggesting moving beyond models of teaching predominately associated with school-teachers on the one hand and the training traditions on the other.

Such an extended notion of practice means trainees would not just be obliged to learn the practices of their subject, but would also look beyond the boundaries of their subject to be able to change and question practices and apply new ideas concerning teaching and learning to different contexts. Such an approach questions individualistic theories of learning which are embodied in national standards, promoting the idea of different types of pedagogy with learning understood as a social process that takes place as trainees 'immerse' themselves with different groups of practitioners and different learning contexts in the workplace. This requires moving beyond the present rather narrow, workplace based, subject-focused and standards-led model of ITE.

The Limitations of Standards as a Guide to Teachers Learning in the Workplace.
As described above, the emerging model of teacher education in FE colleges in the UK is one where standards are applied in the workplace across diverse teaching and learning subjects and contexts. Workplace learning is a highly complex process because it cannot be separated from the situation in which it takes place. Much that is learnt is unpredictable and is inseparable from individual agency and interpretation. We will draw upon some of the major tenants of the work-based learning literature and focus upon the importance of seeing the learning of further and adult education teachers in the workplace as a complex relationship with many 'experts' in multiple learning contexts. In the discussion we wish to challenge the assumption behind the LLUK standards that there exists a single, uncontested or harmonious community of professional practice in FE from which trainees can learn (Gleeson et al 2005) and in which a common understanding of the standards will emerge. Often departments represent different subjects and vocational specialisation with very uneven practice and quality of provision. We will also focus upon the importance of seeing work-based learning as more than a serendipitous process of 'learning by doing', or immersing individual teachers in practice, but rather as an intentional structuring of participatory activity which can be seen as a 'pedagogy of the workplace'(Billet 2002). Such intentional structuring would require teaching institutions and universities to focus upon and plan the learning opportunities in the workplace as well as prepare trainees to understand how to relate formal and informal learning (Guile and Griffiths 2001). Our approach to workplace learning is underpinned by three theoretical and conceptual understandings.

1.   Learning is 'situated process' that is mediated, among other things, by the individual
The starting point of our approach to trainee teacher's learning in the workplace is the assumption that learning to teach is a 'situated process' that takes place in and between contexts. In taking this approach we highlight the importance of seeing learning as a social process and that the basis for

analysing learning should be the 'community of practice' (Lave and Wenger 1991). This provides a means of understanding learning as 'participation' not to the 'individualised', 'learning as acquisition' (Sfard 1988) that underlines the standards led model described above. We also draw upon Activity Theory, with its origins in Vygotsky's (1978) psychology, to provide a way of broadening the notion of context by suggesting that contexts can themselves be seen 'in context'. While much of the work-based learning literature emphasises the social participatory aspects of learning in 'communities of practice', such participatory aspects of learning need to be balanced by reiterating the importance of the disposition or perceptions of individual learners in the process (Hodkinson and Hodkinson 2004). What is learnt from the same or similar experience may be different depending upon the receptiveness or confidence of the individual who is learning (Eraut 2004). The meaning and significance of the experience depends not only on the experience itself but also on how and by whom it is interpreted (Brah and Hoy 1989, Griffiths and Guile 1999).

Such a relationship between individual and situated learning reflects recent research that found that trainee teachers of adults had a very wide variety of prior work, teaching experience, and qualifications. They wanted quite different things from their initial teacher education programmes and had a variety of learning needs and dispositions that they took with them into their ITE courses and workplace (Lucas et al 2004, 2007). This in turn meant that individual trainees required different participatory experiences, types and amounts of feedback and support during their time in the workplace. While the trainee's learning could not be separated from the 'communities of practice' in their colleges, a trainee's learning in a particular college context could be seen as both separate and connected to learning within and between different contexts. We wish to argue that mapping learning against a set of national standards cannot begin to cater for the varied and multiple learning needs of trainee teachers and providing a subject mentor within a college department represents just the 'tip of the iceberg'. The emphasis should be to give multiple opportunities for participation and learning with many mentors or 'experts' that can build upon subject specific acts of teaching. Rather then seeing learning as a subject mentor ensuring trainees meet a set of standards we would rather characterise the learning of trainee teachers in the workplace as a complex relationship with many people, many mentor and many (often conflicting) communities, which differs according to the individual needs of trainees.

2. The Importance of Understanding Colleges as 'Activity Systems': Expansive and Restrictive Learning for Trainees

Alongside individual agency discussed above, another important factor to consider is the different departments in colleges that provide different opportunities depending upon their subject culture and way of working. Engestrom (2000) uses Activity Theory to conceptualise the relationship between learning within and between contexts by conceptualising workplaces as made up of a series of interconnected and conflicting 'activity systems'. We wish to suggest that in any FE college, groups that make up departments are best understood as conflicting and interconnected communities. This is what Billet (2004) calls 'workplace cliques' where some workers are restricted to what others are engaged in and where individuals have particular ways of working. In other words, colleges have a whole number of activity systems often based upon subject cultures (Becher 1989) that reflect distinct ideas about how 'their' subject is best taught and what should or should not be in the curriculum. This is illustrated in one study of teachers that found quite different collaborative and non-collaborative cultures in different subject departments (Hodkinson and Hodkinson 2004). In another study of adult basic skills teachers, researchers found different attitudes towards whole class teaching and group work depending upon subject area (Lucas et al 2006). In further education colleges, what constitutes 'best practice' in teaching and learning is contested and often differs between departments and subject, and vocational cultures.

Seeing colleges as a series of competing and conflicting activity systems has important implications for a trainee teacher learning in the workplace. Fuller and Unwin (2004) using Engestrom's notion of restrictive and expansive learning, distinguish between 'expansive' and 'restrictive' learning environments. Some of the dimensions contained in an expansive learning environment are, opportunities to engage in multiple communities of practice at and beyond the workplace, access to a multidimensional approach to the acquisition of expertise and the opportunity to pursue knowledge based courses and qualifications.

While learning environments do not simply fall into expansive and restrictive, as there are graduations between and conflicts within single environments, it is worthwhile using Fuller and Unwin's distinctions. Using the distinction expansive and restrictive learning environment is helpful in identifying factors in a college learning environment that could be considered expansive or restrictive for trainee teachers. For example, it could be argued that a learning environment that offers trainees diverse forms of participation provides expansive learning. Or a restrictive one in which trainees participate within a narrow subject-focused range. A learning environment that encourages team-work and collaboration compared to one where teachers are isolated in classrooms or where innovation is discouraged or encouraged and so on. Using these distinctions does connect with concerns raised by a recent study of adult basic skills trainee teachers where many trainees' practical teaching experience was restricted to within one level and one context of teaching (Lucas 2007a). This would be hard to describe as an expansive learning environment.

3. The Importance of Intentionality: Towards a 'Pedagogy for the Workplace' for Trainee Teachers

According to Billet (2002), what is now needed is a 'pedagogy for the workplace' to help understand and assist workplace learning. In our terms this requires an understanding of how trainee FE teachers can best learn through experience. In the present UK standards-driven context this has been addressed rather simply and can be characterised as; the novice teacher has a subject mentor, the mentor gives some tips and the novice is 'left to get on with it' and this is assessed by outcomes. Rather we would like to see the relationship between mentors and trainee teachers seen in similar way to Davydov (1995), when he sees the child and teacher and social surroundings dynamically linked together. This means seeing the mentor as teacher and trainee as child (Nasta 2007). The teacher/mentor extends the trainee/child's 'zone of proximal development' (Vygotsky 1978), meaning the extra learning brought about by the intervention of a more experienced teacher. This could take the form of a mentor introducing theories and research or facilitating other related or wider experience to help the trainees to extend their understanding beyond the boundaries of individual reflection. Thus mentor support and practical experience is intentional and can be seen as a pedagogy for the workplace.

The key elements in the 'pedagogy for the workplace' comprise of intentional structuring of participative activities, the realisation that there are different kinds of workplace participation, and contexts and individuals will need varying levels of support (Billet 2002). Such structuring could take the form of immersing trainees in different learning contexts and different levels or looking at practice outside of their particular subject specialism. This is not to say that teachers will not learn other unplanned things but that the pedagogy in the workplace will be made explicit and consciously planned according to the individual learning needs of the trainees. Achieving such a thing in any workplace is not only difficult but requires intentionality on the part of the university, teaching institution and individual trainee. For trainee teachers in FE such a development would require colleges seeing themselves as learning environments not just to their traditional learners but to teachers as well. In turn it would also require ITE courses to help trainee teachers to learn how to negotiate their learning during work experience and be supported in relating formal and informal learning (Guile and Griffiths 2001). Success depends upon the planned supported opportunities provided to trainees to participate or what Lave and Wenger (1991) calls a 'learning curriculum', where activities are sequenced from low to higher levels of criticality. Given the diverse experience, backgrounds and qualifications of FE teachers (Lucas et al 2004, 2007) individuals will engage differently with what is offered, and it thus follows that a teacher undergoing 'initial training', particularly given that most trainees are undergoing in-service ITE programmes, can be seen as a beginner, competent or expert depending upon the situation and the task (Fuller and Unwin 2002). Such complexity is not encompassed by standards.

4. Standards and workplace learning: Issues of Knowledge and Pedagogy

Standards that attempt to describe the occupational skills and knowledge required in the discharge of complex professional role often take the form of complex and elaborate specifications. The 1999 FENTO standards and the 2006 LLUK standards that replace them are no exceptions.

Both sets of standards make an implicit assumption that it is possible to capture in written statements – codified knowledge - the richness and complexities involved in the process of teaching.

Whilst codification may have some significant advantages in making knowledge transparent and accessible, there is far from common agreement about whether it is possible to capture in this form, the fundamental knowledge and practices of professionals operating in complex teaching and learning environments. As (Stevenson, 2001) comments:

> *The unpacking of workplace activity into statements of assessable behaviour, knowledge and/or attitudes is usually quite difficult. Even when participants have managed to express their views and needs, and have made attempts to convert these into the style required for standards, syllabuses and qualification statements, one is left with questions of whether the statements 'add up' to the desired abilities to undertake the roles that are involved (Stephenson, 2001, p649).*

Some authorities have argued that many aspects of a teacher's practice are based upon tacit rather than explicit knowledge (Eraut, 1994, Polanyi, 1983), and that it is only in the application of knowledge in action that teachers and other professionals shape their craft. In other words teachers 'know' and 'do' much more than they can say or can be written in sets of written standards. Their knowledge and performance is in many respects unique and dependant upon the contexts in which they work. Evans (Evans, 2002) draws a distinction between situated and non-situated knowledge and locates the former in an inner social framework based upon the particular community of practitioners and an outer social framework represented in legislation, government policies and so on. Within the outer social framework, it is usual for knowledge to be codified in publicly-accessible forms. Within the inner social framework, knowledge is shared by the participants in more tacit forms. One of the advantages of situated learning approaches is that it is possible to study how knowledge from the outer social framework is used by agents located in the inner social context. Standards could be seen as part of this outer framework, designed as a bridge between the outer and inner frameworks. The key question therefore is how far meaning travels across the bridge that standards are meant to provide. In other words to evaluate the effects that the explicit codified knowledge, represented by standards have had and are having as they are translated into the contexts in which FE teachers work and are trained?

In his reflections on the relationships between words as tools for mediating meaning, Vygotsky observed that 'a simplified syntax, condensation and a greatly reduced number of words characterize the tendency to predication that appear in external speech when the partners know what is going on. He goes on to observe that 'dialogue always presuppose in the partners sufficient knowledge to permit abbreviated speech (Vygotsky, 1996, p.238)' and 'a word acquires its sense from the context in which it appears: in different contexts it changes its sense .... the dictionary definition of a word is no more than a stone in the edifice of sense, no more than a potentiality that finds diversified realization in speech' (Vygotsky, 1996, p.245). If the above is accurate then another of Vygotsky's observations might better apply to national standards. 'In written speech, lacking situational and expressive supports, communication must be achieved only through words and their combinations: this requires the speech activity to take complicated forms' (Vygotsky, 1996, p.242). Such words and phrases described in the standards above such as 'engage with diversity effectivley', or 'theories that underpin good practice in learning and teaching' are good examples of words that assume a common understanding but lack situational meaning.

We wish to suggest that understand learning is a complex process of participation and interaction in communities of practice that are not captured in the LLUK standards. Importantly it is also the case that learning in the workplace for teachers in particular, raises issues of knowledge and pedagogy, which may involve the acquisition of, or transformation of knowledge, which is not addressed if learning in the workplace is seen simply as a process of participation (Young 2000) which is assessed against national standards.

The initial teacher education of teachers is a complex combination of knowledge. It requires specialist knowledge but at the same time much depends on experience and learning on the job. There is no doubt that through participation in the workplace, trainees will learn. What trainees learn is another question, much is unpredictable; it could be bad practice, or it may reinforce some tacit personal knowledge that remains unchallenged. On the other hand, the learning may not be 'new' in the sense that it can reinforce or refine existing knowledge, or transform one type of knowledge to another. Teaching practice in the workplace is a crucial learning zone for trainee teachers, where not

only should new learning take place but also where knowledge is changed and where trainees can begin to 'make sense' of knowledge. Clearly the relationship between different types of knowledge is far more complex then expressed in the LLUK standards above.

One example of this was discussed in a research project which evaluated ITE courses for adult basic skills teachers which in the UK context included subject specifications and generic national standards (Lucas et al 2004). The focus was upon the introduction of subject knowledge and pedagogical to trainee teachers who brought with them a variety of prior experiential knowledge, subject qualifications and practical teaching experience. As a starting point, the researchers suggested that the key issue is how different types of knowledge are, what Bernstein (2000) calls 're-contextualised'. Bernstein's work was not specifically focused upon teacher education, but rather focused upon the distinction between academic or theoretical knowledge and knowledge acquired from experience. The wide diversity of trainees' past teaching and life experience found in ITE courses (Lucas et al 2004, 2006), serves as an example of the wide and varied experiential knowledge that trainees bring with them. Bernstein refers to this as 'horizontal knowledge'. In contrast, subject knowledge is on the whole, specialist disciplinary knowledge, which, unlike horizontal knowledge, is not based on experience. It is de-contextualised 'academic' knowledge. Bernstein refers to this as 'vertical knowledge'.

The problem, according to Bernstein, is how to bring the two types of knowledge together - this is referred to as the problem of 're-contextualisation'. Re-contextualisation for the planners of ITE programmes means relating subject knowledge (vertical) and knowledge associated with practical pedagogy in the workplace (horizontal) together in ways that enhance practice. It could be argued that this is a fundamental pedagogic problem that all teacher educators face.

Bernstein's distinction between vertical and horizontal knowledge becomes more problematic when applied to vocational knowledge because as Barnett (2006) suggests, vocational education is job related but also related to knowledge structures (much like vocational pedagogy). Here the boundaries between vertical and horizontal discourses become blurred because situated knowledge impinges on vertical knowledge in a unique way. In creating vocational knowledge a process of 'dual recontextualisation' takes place where disciplinary knowledge is reorganised for vocational purposes moving from a context-free situation to context-specific work-related situation (Barnett 2006).

Another way of looking at re-contextualisation is to examine Shulman's (1997) idea of 'transformation'. Shulman produced seven categories when analysing the knowledge base of schoolteachers. These categories are described and expanded upon elsewhere (Lucas 2007) for the purposes of this paper we wish to focus upon two. Firstly, content knowledge which is the same as subject knowledge or the subject matter to be taught. It includes theories, principles and concepts and the validity of the subject. According to Shulman, content knowledge is the starting point where novice teachers begin, but this (vertical/formal learning) needs to be 'transformed' into a form that learners can understand. This is the second category which he calls pedagogical content knowledge. This is 'expert' knowledge and is an amalgam of the other categories of knowledge and experience. It is a complex construction of reality that fits the experience of context, knowledge of learners, knowledge of pedagogy and of subject, content and curriculum knowledge. It is knowledge that is 'fit for purpose'.

It could be argued that the movement from 'novice' to 'expert' teacher can be seen as the result of the 'transformation' of different categories of knowledge. Sometimes this is described as 'intuitive knowledge' (Polyani 1967) or the 'artistry of teaching' (Schon 1978). Like Bernstein's 're-contextualisation', the key lies in the 'transformation' from content knowledge into a pedagogy that is adaptive and meets the learners needs. This is the essential nature of pedagogical content knowledge that is a mixture of formal and informal, vertical and horizontal.

These categories illuminate the complexity of what constitutes teacher knowledge. It is the complex nature of 'transforming' or 're-contextualising' different types of interacting knowledge that remains at the hub of improving the practice of FE teachers. Our argument is that when discussing the 'transformation' of different categories of knowledge, it is the 'community of practice' in which the trainee teacher works that represents a crucial zone for this type of learning. For many trainee teachers, particularly those with little teaching experience, it is the workplace that influences the extent to which pedagogical content knowledge is developed, or for that matter hindered. Indeed, in

more recent work, Shulman stresses the importance of developing a more comprehensive conception of teacher learning and development within communities and contexts (Shulman and Shulman 2004).

The implication of this for the trainee teacher is that the 'transformation' or 'recontextualisation' of knowledge is no longer seen as an isolated individual mental process expressed in outcomes and standards. It takes place through trainees interacting with the world of ideas, participating with other subject teachers and moving beyond specific workplace bound contexts to be influenced or 'mediated' by other and wider contexts (Young and Lucas 1999). In other words, giving support to trainee teachers, particularly subject support in an institution, is an important starting point for trainees. However, there should also be opportunities for the trainee to step back from reflecting on their own experience in order to access other learning and teaching contexts and to connect to wider considerations often expressed in ideas and theory. Such concerns are not new and are common to trainee teachers across different sectors. However, discussing the transformation of different types of knowledge through intentional workplace experience does help to conceptualise the problem of relating formal and informal learning through practice and experience, which has always been a challenge for initial teacher education. As discussed above, within the impoverished professional culture in further and adult education in the UK (Lucas 2004) this challenge is particularly difficult because the standards-led model of ITE emphasises competence with little if any consideration given to professional knowledge.

Conclusion

This paper has illustrated how national standards are mediated and interpreted differently within the diverse contexts and communities of practice that make up the UK further and adult education and training system.

We have argued that professional practice is a zone where different types of understandings exist and where different types of knowledge and pedagogy are learnt, used and transformed. We have shown that attempts to deal with the complex zone of professional practice by ever more detailed specification fails to address the inherent ambiguity of national standards and the complex nature of applying codified knowledge to pedagogy. Rather such an approach leads to a bureaucratic, competency-based framework which marginalises professional knowledge and understanding.

Finally we suggest that while national standards may have uses as a general guide and a means of national accountability they need to be understood as artefacts that necessarily change and are transformed as they move between one context to another. Without such an understanding they have no meaning to practitioners and merely divert energy away from the stated aims of the national standards to raise the quality of teaching and training in the UK.

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