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## **Changing power relations in work based learning: collaborative and contested relations between tutors, learners and employers**

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### **Introduction**

This chapter discusses some of the implications for the role of university tutors and the centrality of educational objectives in circumstances where there is a 'cultural shift' towards meeting the needs of learners and employers. The Work Based and Integrative Studies (WBIS) programme at the University of Chester is used as a case study to examine the changing power relations between university tutors, learners, employers and the University, compared with relations on traditional programmes. WBIS is an example of a flexible of work based learning programme using e-learning methods, of which there are increasing numbers globally (Murdoch 2004). Although programmes like WBIS are unfamiliar to most academic practitioners there are good reasons to suppose we will see many more like it in the near future (CIHE 2006; SQW and Taylor Nelson Sofres 2006).

Much of the literature in relation to innovative learning is focussed on pedagogical issues. By contrast the central theme explored here is the organisational context in

which such programmes operate. The chapter draws heavily upon organisational literature and is poststructuralist in the sense that organisational rationality is not assumed and the analytical framework developed is explicitly from the perspective of tutors, who in this context are seen having no interest other than promoting learning (Jackson and Carter 2007). It is also consistent with an approach to learning embedded in WBIS which is derived from an academic discourse which deconstructs epistemology to assert there is no end to the interpretation of experience (Costley 2000).

The contents are organised as follows. The WBIS framework and its application in work based, e-learning is described. The main body of the chapter is concerned with analysing where effective work based learning is likely to occur, based upon an analytic model of power relations between tutors and other stakeholders. It is assumed that learning is maximised wherever tutor influence is strong.

The main conclusions are that the balance of power between participants in the process is more complex, variable and explicitly contested than in traditional programmes. Newer forms of higher education such as WBIS require a negotiation of relationships between tutors and new stakeholders and re-negotiation with existing ones, such as learners. In some circumstances this can lead to a positive exchange of power, in the sense that both parties are empowered but can also lead to conflict. As a result, learning may be compromised in ways not encountered on traditional programmes.

### **The WBIS framework**

Chester is one of a number of UK universities delivering negotiable programmes of work based learning. Other notable examples are at the Universities of Middlesex,

Derby and Portsmouth (Nixon et al 2006). The Work Based and Integrative Studies (WBIS) framework at the University of Chester accords with the main features of 'innovative' programmes developed by UK universities in recent years (Slowey 2000). At time of writing there is no research on the varieties of work based learning frameworks either in the UK or globally but indications from colleagues nationally and internationally are that WBIS is distinctive by virtue of the degree of flexibility it allows learners to define their own learning, means of learning and progression.

WBIS was developed by a team of tutors in the mid to late 1990s and has enrolled learners since 1998. It is informed by a variety of theoretical and political developments in the field of learning from the 1980s and 1990s. It is therefore the conscious product of a group of academic practitioners with a strong interest in learning and commitment to a set of social values rather than the traditional subject focus of many academics. Unlike many other work based learning frameworks, WBIS has always been trans- disciplinary and incorporates a number of learning constructs. These include the theory of *Andragogy* (Knowles et al 1998) which holds that adult learning preferences are significantly different from children and young people. Other important constructs include *Situated learning theory*, where knowledge for most learners is context bound (Lave and Wenger 1991; Wenger 1998) and *action learning* which holds that learning stems from doing and experiencing that which happens around us (Weinstein 1995). Other important elements include the various models of *reflection* and reflective practice, usefully summarised by Moon (2000) and a commitment to *lifelong learning* (Field 2006). The emphasis on the application of *learning in the workplace* reflects the preoccupations of government and some educationalists from the late 1980s onwards (Billet 2001; Department for Education and Employment 1998; Eraut et al 1998; Sutherland 1998).

By its very nature WBIS represents a critique of traditional university programmes based upon a standard pedagogic approach for full time, neophyte undergraduates. Although almost all the original tutor team have moved on, the model developed nearly a decade ago has remained and the number of learners and pathways within WBIS multiplied. Within Fuller and Unwin's (2002) five models of work based learning, it can perform in a variety of roles but is principally designed to bring formal instruction to social learning in the work place as the basis for reflective practice. Individual pathways of learning are constructed for all levels of learning in the context of higher education. In relation to other work based learning frameworks it bears the closest resemblance to, *Learning Through Work*, developed at the University of Derby (Minton 2007)

There are currently about 1000 learners on WBIS, all of whom are employed adults. Most of these are on individually determined pathways, funded by employers whilst others are on pathways where there is considerable employer input into pathway design. Examples of the latter include a Foundation Degree developed for the Civil Service and a Certificate for Decision Makers in the Department for Work and Pensions. WBIS is also used to deliver learning for defined occupational groups such as regeneration and housing professionals. It is also used to accredit employer delivered learning. All recent pathways developed using the WBIS framework use e-learning methods to facilitate workplace delivery.

Within the broad WBIS framework, individual and group pathways are created, tailored to the needs of either individual learners or those of an employing organisation. Learners, provided they meet standard academic entry criteria, determine not only the content of their programme but also the title of the award they obtain. They can opt for a Higher Education Certificate, Professional Certificate, Foundation Degree/Diploma, Degree, Postgraduate Certificate, Diploma or Masters.

The title of their award, whatever the level of achievement, is always Award Title, Name of Pathway (Work Based and Integrative Studies). Examples include BSc Clinical Governance (WBIS), MA Regeneration Practice (WBIS) and so on. All award titles must relate to professional practice.

Learners on the programme can study modules which have been developed specifically for WBIS or any other module in the University, provided it is relevant and at the appropriate level. Individual learning needs can be catered for through the use of project modules or, if there is sufficient demand, new modules are developed on request. There is a rolling programme of module accreditation to accommodate changing requirements. It is therefore possible to constantly adapt to the changing needs of learners without the requirement for time consuming validations. Learners enrol when they want and study at their own pace, within prescribed limits. A fundamental aspect of the programme is therefore that it is demand led. Tutors do not determine the content of the learning programme: the learner and/or employer are given responsibility for defining their own learning. The role of tutors is to facilitate and assist the learning process and translate it into formal academic credit bearing qualifications.

Another distinctive feature of the WBIS approach is the intimate connection with workplace practice. In a typical taught WBIS module, the learner is introduced to a body of theory and wider literature and then asked to interrogate their practice, in a way consistent with Gibbs (1998) cycle of reflective practice. From the learners' perspective, the relationship with theory becomes much more immediate than is the case on conventional programmes. They select those theories/models which are relevant to their needs and use this as the basis for an internal dialogue, based upon their own practice and that of colleagues. This requires a degree of sensitisation to formal, reflective practice which is usually embedded at the start of most WBIS

pathways, through a module entitled *Self Review and Negotiation of Learning*. In this way learners are encouraged to reflect upon their current practice as a means of improving performance. Learners are encouraged not simply to demonstrate knowledge but application to future actions.

The central contention of this chapter is that in the new and emerging forms of higher education, the traditional authority of tutors can no longer be assumed. Innovations in programme design and means of delivery requires a corresponding re-examination of the role of tutors. Only by understanding the changed world in which tutors work can we begin to comprehend the scope for promoting good educational practice and recognise when and where effective learning is likely to occur. The starting point for this analysis is the recognition of the legitimate (and possibly competing) interests of other stakeholders in the learning process. Some may find this kind of discussion distasteful because it involves acknowledging the changing politics of learning and as Trow (2005) notes, politics of any description (or at least, their public expression) is almost a taboo among UK academics. The view of this author is that tutors engaged on innovative programmes are forced to confront the same sort of issues as WBIS tutors and as more universities adopt such models, more will do so in future. In short, politics is inevitable.

### **The contested power domains of university tutors**

It is widely acknowledged that contemporary university tutors, along with other professional groups, do not enjoy the same degree of respect, authority and autonomy as previous generations (O'Neil 2002). Harris (2005) for example, describes how the internationalisation and creation of mass higher education has transformed it from being essentially welfarist and paternalist to something more market oriented and consumerist. This has various consequences for the way in

which tutors perform their role. There are concerns that economies of scale and massification have led to tutor de-skilling and hence disempowerment (Campion and Renner 1992). At the same time, changed learner attitudes have resulted in a more instrumental approach and willingness to complain (Jones 2006).

Unwin (2007) describes a growing culture of mistrust and suspicion of university tutors, manifest in the 'plethora of rules, targets, audits, accountability requirements, performance management and quality assurance requirements' (p297). Others, such as Avis et al (1996) and Gleeson and Keep (2004), decry the increasing influence of employers on higher education and the 'asymmetric' power relationship between the two, as part of a broader social, economic and political shift towards markets and neo-liberalism. Within the context of work based learning Onyx (2001, p 138) has described how the role it imposes on tutors generates resistance: 'Their new roles are ...unclear. The loss of traditional academic authority may be seen as a threat to professional standards. The discourse of the market place may be offensive to the academic values of autonomy and collegiate decision making'.

It is not the purpose of this chapter to explore further these ideas. For present purposes they are accepted as axiomatic; they are simply the world we live in. Instead the purpose is to focus much more on how relationships in higher education landscape which we will increasingly inhabit are played out in practice and how tutors can and do adapt, drawing upon the experience of the WBIS tutor team.

### **Some basic concepts: power, authority, influence**

One of the noticeable features of discussion in the literature about the power of academic tutors is the informal way in which the idea of power is referred to. The concept of 'power' is one of the most contested in social sciences. The contested



definitions reflect its centrality in all social relationships. One of the simplest definitions is Bertrand Russell's : "Power may be defined as the production of intended effects" (Russell 1938, quoted in Lukes (1986), p 19). Two other oft quoted definitions are provided by Weber (1947, p152) and Dahl (1957, p202) respectively:

'Power is the probability that one actor in a social relationship will be in a position to carry out his own will despite resistance regardless of the basis on which this possibility rests'

and

'A has power over B to the extent that he can get B to do something that B would not otherwise do'

At its most simple, it is the ability to be able to effect a desired change. But power exists in many dimensions and many contexts (Wrong 1979, Barnes 1988, Lukes 1993). There is no single, widely agreed definition since the view we have of it ultimately depends upon our own ideological view (Rush 1992).

Power relationships exist in a number of dimensions. *Domination* is the ability to exert complete control, that is compel another or if physical force is used, *coercion*. Another form of power and that which is most useful in the present context is that of *authority*. Unlike coercion, authority implies the ability to influence or command others without recourse to coercion. Authority is the legitimate exercise of power and implies an acceptance or recognition of the power of others and is at root, consensual. (Parsons 1967). That is, the power that others exert over us is exercised because we allow it. In practice, coercion and authority often go hand in hand, since with coercive power comes a degree of authority. But authority can exist without

formal power structures, in the sense that people can attain moral authority, subject authority or competence authority for example. That is, their authority is derived solely from personal actions, knowledge of a subject or the ability to take effective action. For tutors authority is essential to their role in facilitating learning. A closely related concept is that of *influence* which describes the process of change in others as the result of the exercise of authority. The ability of tutors to influence learners is the often unacknowledged mechanism which facilitates learning in students. Any reduction in tutor authority is likely to reduce tutor influence over learners and hence, learning.

### **A framework for the politics of learning**

So far we have considered power in the abstract, defining some key terms. What we have to do now is consider how power is exercised between players, both in a contested sense and, as we shall see, cooperatively. Understanding how education works in practice involves not only an understanding of the formal rules and culture but also its politics. Politics in this sense is simply 'power in action' (Robbins 1996, p477). Politics, like culture, occurs wherever there are groups of people because there are different sources of power, often with competing interests, values and aspirations. The identified actors in the present analysis are learners, the university, employers and tutors.

Most writers on organisational power agree that it is access to and control of resources which is the principal source of power in organisations. Handy (1993, pp 126-141) for example, lists physical power, resource power, position power, expert power as sources of authority. Similarly, Morgan (1989) lists formal authority and the control of scarce resources as being the most important sources of power in organisations. The starting point for many analyses of organisational power is the

general theory of social power developed by French and Raven (ibid, 1960). They characterise the exercise of power as the ability to change the beliefs, attitudes or behaviours of a *target*. For French and Raven, power is conventionally exercised non-coercively: in practical terms the power of individuals and groups in organisational settings is measured in terms of the ability to influence others. The ability to influence is strongly related to access to resources which are described as having five origins. These are:

- *Coercive power*- the ability to compel by dint of being able to inflict punishment for non compliance
- *Reward power*- the ability to be able to give people what they want, whether it is money, status, position or other resources
- *Legitimate power*- legitimacy is derived from the position a person occupies rather than their personal qualities. A superior commands a subordinate not because they are more charismatic or more insightful but because they occupy a senior position and the target accepts the exercise of power because it is believed to be rightfully exercised.
- *Referent power*- is derived from a person being liked, because people wish to emulate that person or because it is considered desirable to maintain a relationship with that person
- *Expert power*- is conferred upon a person who has expertise or knowledge in a specified domain.

The sources of power described in the model have different origins, different ranges of applicability and different levels of effectiveness. The first three sources (Coercive, Reward and Legitimate) are derived from the position an individual or group holds in an organisation, whereas expert and referent power are based upon more personal

characteristics. As a result, they are also likely to have the greatest range and be applicable in many more situations since they are less contextually dependent. Legitimate and Expert power is thought to be especially effective because they are usually congruent with the internalised values of targets. Thus a tutor 'commands' a learner because s/he is ceded authority to teach in a subject of which s/he has specialised knowledge. Conversely, Reward and Coercive power are likely to be the least effective because they depend upon a willingness to exercise power irrespective of the values of targets and as a result, may lead to a loss of authority (Backman et al 1968; Shetty1978)

French and Raven's framework has been validated in many empirical studies, in many contexts. Thirty years after their original work appeared, Raven (1992) listed some of its applications- parents influencing children; husbands and wives influencing one another; children influencing each other; doctors influencing patients; salesmen influencing customers; supervisors influencing subordinates; political figures influencing one another and so on. There have also been a number of studies of the ways in tutors influence learners (Jamieson and Thomas 1974; Tauber and Knouse 1983; Tauber 1985; Tauber 1992; Nesler et al 1993). Most of these studies have reported how influence has been exercised in a positive manner to secure beneficial learning outcomes but in one study of a child care programme, Zeece (1996) identified abuses of power by principals and instructors. Beyond the tutor-learner relationships there have been few applications of the French and Raven model in educational settings, with the exception of Raven and Erchul's (1997) study of the way in which US High Schools consulted with parents and others.

The emphasis of researchers on the tutor-learner relationship is understandable for a number of reasons. First, it is simply easier to describe relationships between two sets of actors than multiple relationships between actors. It is also, from the tutor's

perspective, the centrally defining relationship in terms of 'what we do and what we are here for'. For the majority of tutors most of the time, core business is about facilitating learning. Finally, it is the view here that until recently tutors existed in a world of relatively settled relationships where power relationships were known, accepted by all sides and therefore existed in a way taken for granted. It is the contention here that these relationships in emerging, innovative forms of education are more complex; existing stakeholder relationships, such as with the learner, have to be re-negotiated and relationships with new stakeholders may be contested. The previously settled role of the tutor requires adaptation in a number of ways.

While French and Raven's model provides important clues as to how power relationships are defined in the context of higher education, it is not in itself a model of the way in which power is exercised. Up until now we have implicitly assumed that power is always contested and is only obtained by one group at the expense of another loss of authority. This view of the exercise of power, as a kind of zero-sum game where power is conceived of as a pie to be divided up, we will call the *contested view* and is strongly associated with the work of Machiavelli (1513).

An alternative view of the way in which power is exercised, arguably based on a more common and positive experience is contained in the writings of Mary Parker Follett (1924) and represents a *collaborative* view of the exercise of power. For Follett, power is not a finite resource to be divided up among competing interests, groups and individuals. Nor is power solely defined in terms of one person or group exercising power over another. According to her, there is a sense in which a power holder can enable a subordinate greater power so that the sum total of power is increased. As an example, an organisation which enables subordinates to freely contribute to discussions about how to improve any aspect of the organisation increases the sum power of the organisation itself. Similarly an authoritative tutor

able to influence a learner is likely to increase the learner's own power. Follett believed that power could not be 'given' to the powerless but conditions could be created to enable subordinates to develop their own power. Power, according to Follett, is most of the time, self generating. For Follett, the point is not to exercise power over others but to enable others to acquire power. These two views of power relations, contested and collaborative are evident in all social relations including those between tutors and other stakeholders with access to organisational power. The type of relationship which exists in practice is likely to be determined by the interests and motivations of the stakeholders. In the real world the nature of power relations are continually re-negotiated. Even in contested relationships there will be elements of collaboration and vice versa. The model described below simplifies this but enables a clearer understanding of how relationships can be conceptualised.

### **Conceptualising power relations between WBIS tutors and other stakeholders**

At the heart of WBIS is a collaborative view of power which aims to empower learners in the workplace by identifying and meeting their learning needs in ways which are meaningful to them and relevant to the needs of employing organisations. This was the intention of the tutors who originally devised WBIS and remains the driving preoccupation for the current tutor team. What was planned as an increase in collaborative power between tutors and learners has also led to an altering of the traditional power balance with other stakeholders with who tutors have varying degrees of influence. The variety of power relationship is situation dependent. For example, with some employers tutors enjoy a high degree of influence but this is not the case with all of them. For the most part, tutors exert strong influence over learners but again, there are exceptions.

The following sections explore these relationships in more detail by identifying situations where tutors enjoy a high degree of influence and those where it is less so, using a combination of French and Raven's model, evidence from the literature and our own experience. In each circumstance, influence is defined as being High, Low or Variable. In circumstances where tutors have strong influence, power is exercised collaboratively- that is there are gains to both sides, since the object is to maximise learning. This can and does happen in relations with learners. By contrast, where power is contested, there may be winners and losers.

### **Tutor- Learner power relations**

In most situations with tutors and learners, it is the tutor who is dominant. The tutor has access to strong Coercive power, Reward power, Legitimate power and Expert power. These sources of power can be further enhanced by Referent power- an especially charismatic and well liked tutor is likely to even further enhance their ability to influence a learner. This imbalance in power is not necessarily detrimental to the learner: learning is a mutual exercise and greatly facilitated by collaborative power relations.

To some extent tutors' authority has diminished in recent years in respect of their students. The general erosion in trust in professionals referred to earlier has eaten away at Expert power; Legitimate power has been undermined by the development of more consumerist attitudes among students and the greater willingness of students to withhold assent to authority whilst coercive and reward power have to some extent been undermined by the introduction of complaints procedures, appeal mechanisms and independent quality assurance procedures such as anonymous learner evaluations of the learning experience. These changes may help explain why

tutors may feel obliged to be better liked by their students, as Referent power, unaffected by these changes, assumes greater importance.

All learners on WBIS are adults and while the andragogical model of learning developed by Knowles and his colleagues has been challenged there is little dispute that adults have a more developed sense of their learning needs than younger people (Davenport 1993). WBIS and work based frameworks like it enables learners to design their own learning pathway, reflect on personal experiences and select information which is relevant to them. However, learners are dependent on tutors in new ways because it is tutors who facilitate the process of learning in a far more active and involved way than on traditional programmes. In place of 'learning taken for granted' tutors sensitise learners to the process of learning itself and there is a lot to explain. Boud (1990) has written of the way in which work based learning necessarily involves deeper learning and for many this is a considerable step which requires a great deal of tutor assistance.

Student dependency is also more pronounced in an institutional sense. Formal representation is difficult when learners are distant from the campus and do not know their peers. As a result learners rely on tutors to represent their interests, with employers and the University for example, to a far greater extent than learners on a traditional programme. This is especially the case when the rest of the University assumes its business is to be looking after full time undergraduates.

The extent of tutor power over learners is also modified by other factors, such as the willingness to engage in learning. For the most part WBIS learners are highly motivated but to some extent, self selected. As with all distance programmes progression is more problematic than on traditional programmes. Research indicates



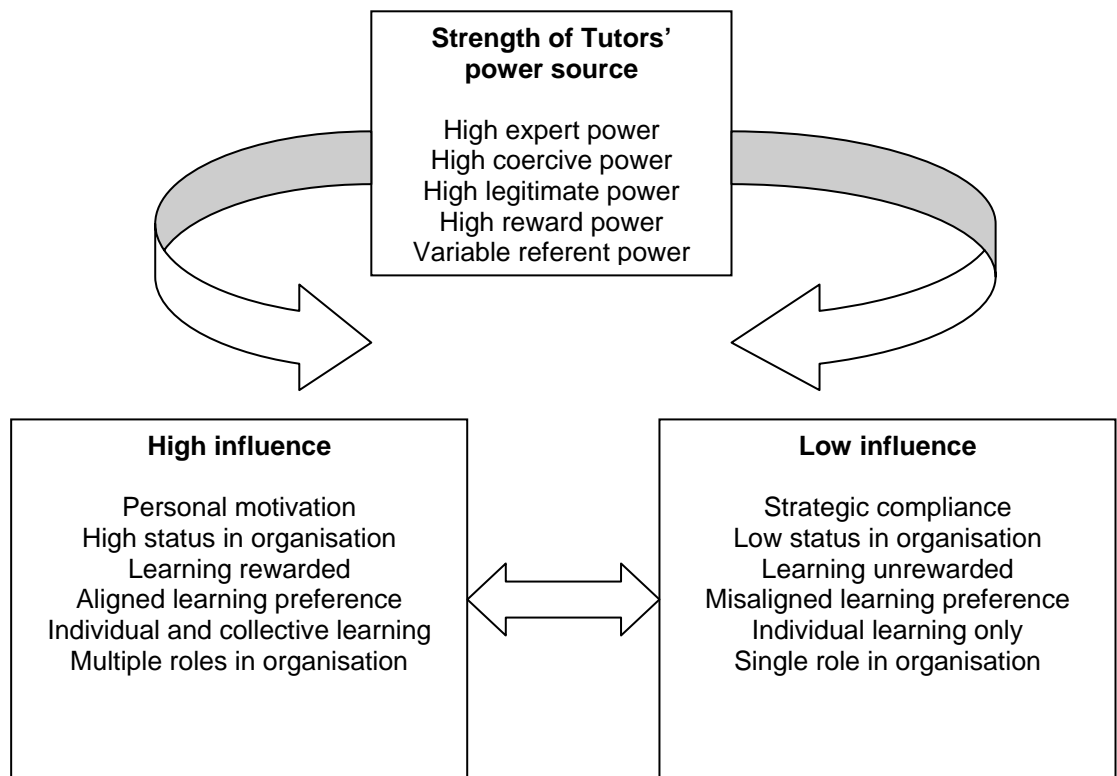
that progression is a function of both individual motivation and the degree to which the work environment is supportive of learning (Fuller and Unwin 2004) and that personal motivation is mediated by family and social relations (Smith and Spurling 2003). WBIS tutors also know from experience that changes at home such as changing address, the birth of children, separation and bereavement have a major impact on progress. Other factors, such as gender or preferred learning style do not appear to affect motivation and this is born out by research elsewhere (Walsh et al 2003).

Research elsewhere underlines tutor experience in other ways. Allen and Lewis (2006) for example, highlight the importance of the support of line managers in facilitating learning. Bryson et al (2006) have demonstrated that access to learning time is mediated by status in the organisation. Higher status individuals have a tendency to enjoy the paid study time which facilitates learning. In the experience of the WBIS tutor team, the level of workplace support for learners is hugely variable, even within an organisation. A change of line manager can result in the end of study leave and learners leaving a programme. A cohort of learners on a Foundation Degree, occupying fairly low level roles in an organisation, are at the mercy of those above them.

From these observations we can construct the following model of power relations between tutors and learners on distance learning WBIS programmes (Figure 1). Tutors have access to a number of sources of organisational derived power and therefore have considerable influence over learners. Influence and hence effective learning is mediated by a number of factors. Where learners are personally interested in learning, are developed autonomous learners, where they have relatively high status in the organisation and where the organisation both values learning and provides opportunities for its application in a wide variety of contexts

tutor influence will exert a powerful effect. Conversely, influence is low in situations where the learner feels compelled to study (perhaps out of fear of redundancy), occupies a lowly role in the organisation, feels uncomfortable with autonomous learning and where the organisation itself places little value on it. In these situations tutors have limited capacity to facilitate effective learning.

**Figure 1: Tutor-learner influence on WBIS**



**Tutor- Employers power relations**

On WBIS there are two sets of relationships with employers. In most circumstances tutors deliver to learners who are employees and the employer pays. In other circumstances, the WBIS framework is used to accredit delivery of learning by an

employing organisation- either to its own employees or to paying learners. In the latter situation, there are formal partnership agreements to ensure appropriate levelness and quality assurance. No discussion in this paper is included of power relations in these situations since the focus of is on the changed power relations of university tutors.

In the experience of WBIS tutors, tutor-employer relations are highly variable. Most of these relationships are harmonious and in such circumstances tutors feel there is sufficient influence to facilitate effective workplace learning. Nonetheless it is striking how dependent this is on employers' voluntarily ceding influence. Employers have much greater power than learners and should they care to exercise it, greater power than tutors. In this respect, tutors have low Coercive power, low Reward power and even variable Expert power. In UK Foundation degrees for example, there is a requirement for employers to determine curriculum, something unheard of on traditional programmes.

To understand some of the tensions which can arise it is important to appreciate the different motivations of tutors, learners and employers. For tutors the pursuit of learning is an unmitigated good; for employers that learning must be beneficial to the organisation while for the learner motivation may be more complex and in some circumstances, unrelated to organisational goals. There is not the space here to explore learner-employer power relations but these issues are discussed by Costley (2001). Suffice it to say that employers may not view educational programmes, however tailored to their needs, in the same rosy light as tutors.

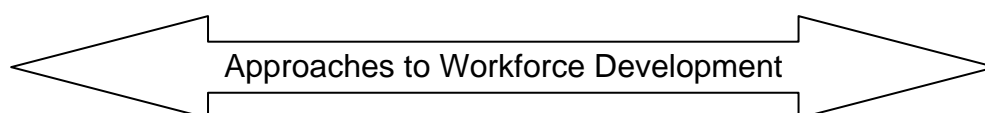
This is manifest in a number of ways. For example, tutors know that an over-reliance on e-learning methods is likely to affect the quality of the educational experience, progression and completion compared with a 'blended' approach involving more face

to face delivery (Elliot 2002; Garrison and Cleveland Innes 2003; Garrison and Kanuaka 2004; Singh 2003; Hughes 2007; Wheeler 2007). Yet employers in some circumstances, for entirely understandable operational reasons, may insist on e-delivery only. Similarly, tutors advocate support for learning in the workplace because research and experience has demonstrated that paid study leave is essential in effective learning (Billet 2004). Yet some employers may resist this. While it is easy to say from a tutor perspective that this should not be the case, it might be that the alternative is no educational programme at all.

Employers are also powerful in the sense they can take learning from a wide variety of providers. Tutors are aware that if an employer is unhappy they can go elsewhere. Employees and employers have many more means of meeting their learning needs than undergraduates. In some ways, tutors behave as supplicants with employers. They have to be courted and their needs addressed. While tutors are persuaded of the benefits of university education, employers may not be; at best Legitimacy power is variable.

The most important development in understanding the influence of employers on the learning experience is contained in the work of Evans (2006) and her colleagues. They hypothesise a continuum of Expansive-Restrictive approaches to workforce development among employers. There are many dimensions to the continuum and there is not space here to include all of them but Figure 2 below summarises some of the main parameters:

**Figure 2: Approaches to Workforce Development- The Expansive-Restrictive Continuum**



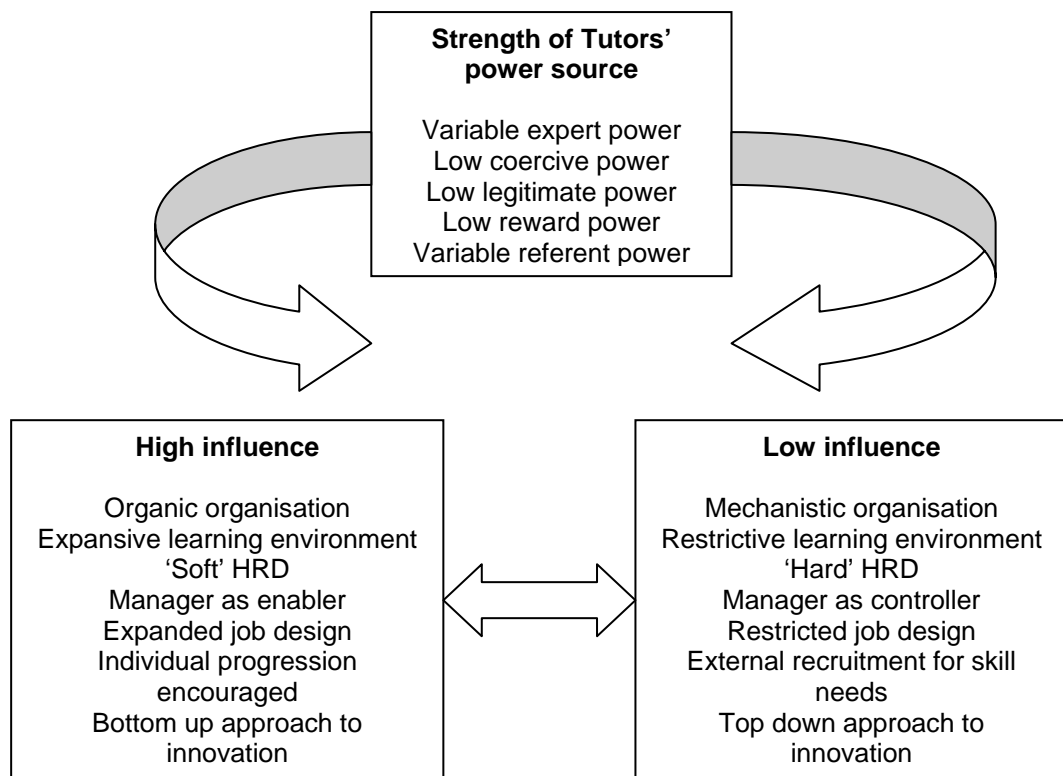
<b>Expansive</b>	<b>Restrictive</b>
Organisational recognition of and support for employees as learners	Lack of organisational recognition of and support for employees as learners
Workforce development is used to develop individual and organisational need	Workforce development used to tailor individual capability to organisational need
Managers act as facilitators of workforce and individual development	Managers as controllers of workforce and individual development
Innovation important	Innovation unimportant
Team work values	Rigid specialist roles
Cross boundary communication encouraged	Bounded communication
Knowledge and skills of whole workforce developed and valued	Knowledge and skills of key workers/groups developed and valued
Multi-dimensional view of expertise	Uni-dimensional top-down view of expertise
Planned time off the job: including for knowledge based courses and reflection	Virtually all on the job: limited opportunities for reflection

Based on Evans et al (2006), pp40-1

There are a couple of features worth commenting on the continuum. Not only does it help contextualise and explain a number of other empirical studies on workplace learning, it also has striking parallels with established organisational models, such as Burns and Stalker's (1961) mechanistic-organic continuum. Organisations near the head of the mechanistic scale tend to operate in relatively stable environments. They tend to be larger, more top down and bureaucratised with individuals performing prescribed roles. By contrast, organic organisations are less process driven. They tend to operate in more uncertain environments, are flatter, innovative and far more flexible. Since their survival depends upon constant adaptation, it is not surprising that they place greater value on the skills and capacities of all their members and so place greater value on learning.

These observations accord with the experience of WBIS tutors. Organisations where greater value is placed on learning give greater support not just in terms of access to programmes but also time allocated for learning. By contrast, some of the largest organisations using WBIS are also those where tutor influence to maximise the educational experience of learners is the weakest. From these observations we can characterise a model of tutor-employer influence, as set out in Figure 3. Tutor influence and hence effective learning is likely to be strongest where the employer organisation is more organic with an expansive learning environment and support for learning embedded throughout the structure and culture of that organisation. Such organisations are likely to value staff more highly and seek to profit from their enhanced capacity. The relationship between tutor and employer in these kinds of circumstances are more likely to be based on trust.

**Figure 3: Tutor-employer influence on WBIS**



### Tutor- University power relations

The WBIS tutor team is not especially powerful in the institution in which it sits. They are powerful as Experts and the claim to expertise rests not just on subject knowledge but also pedagogical matters and e learning. But they have low Coercive power in the sense that they are in a weak position to influence either the rest of the academic community or administration. They also have low Reward power, like all Faculties, because resources are allocated centrally. Finally, they have low Legitimate power; legitimacy is derived from the University, not the Faculty.

None of this is especially surprising about any University Faculty. In the case of the WBIS tutor team the sense of powerlessness is exacerbated by cultural differences

with the rest of the University. From the perspective of the WBIS tutor team, the rest of the University is an organisation principally designed to meet the needs of a traditional pedagogy and modus operandi. This does not appear to be something confined to Chester. In a national survey of the experiences of adult learners Callender (1997) found that universities are still largely catering for the needs of their traditional school leaver intake. More recently, Garnett (2007) has re-affirmed the 'lack of fit' between traditional university structures and distance, work based learning. The majority of academic staff is still wedded to a traditional view of pedagogy where new technologies are seen as an adjunct to lectures, research and indeed the function of a university. The hostility of some University staff to innovative learning is rarely openly expressed (Smith and Webster 1997) but WBIS tutors are certainly aware of it.

At a fundamental level, WBIS is a different kind of academic enterprise to that traditionally undertaken in higher education. Caley (2001, p118), in the context of discussing work based learning programmes at Cambridge, identifies it as a different academic paradigm. In place of the 'scholarship of discovery' is an interest in application of knowledge. Whereas traditional 'academic experience is founded on a recognised canon, work-based learning is founded on experience, problem solving and action based approaches'. Even where academics are sympathetic to the aims of lifelong learning, flexibility and putting the needs of learners first but in practice this can be seen as diluting academic standards and undermining the reputation of the institution.

One of the consequences of having a minority academic enterprise, in what can be termed a 'dual mode' institution is that it is likely to be regarded as having lower status than the dominant mode (Perry and Rumble 1987). Past experience of innovative educational models has demonstrated the difficulty of integrating them



within existing institutions. It is precisely because of institutional resistance to developing distance adult education that national, separate Open Universities have been established by central governments, first in the UK and then globally (Perry 1976; Leibbrandt 1997). At present there is no public debate on whether work based learning requires new institutions although it is clear from experience other than Chester's that the lack of status afforded distance learning appears to be replicated in the case of work based learning (Singh 1979). If dual mode universities are to work effectively, Boud and Solomon (2001) observe that structures which embed innovative work based practice in all academic departments and not in one, as at Chester and the majority of other institutions, may be important and suggests the need for research on organisational models which facilitate the wider diffusion of practice.

The differences in academic practice and culture of WBIS are one aspect of the differences with the rest of the university but there are also significant administrative and managerial cultural variances. In recent years, all UK universities have been the subject to the same 'audit explosion' as has occurred in other public bodies (Power 2007). This development, reflecting broader processes of centralising power, is not simply about tighter control of monies, in the traditional sense in which the term audit is used. It is also manifest in developments in quality assurance. Its effects have been documented in many sectors, including UK universities (Charlton and Andras 2002). Conventional academics often find negotiating internal quality systems difficult and time consuming. These difficulties are compounded with something as non-standard as WBIS. WBIS tutors often find themselves having to explain WBIS and its attendant pedagogies to colleagues who do not really understand its purpose and objectives. This experience is replicated in other institutions with work based learning frameworks where one colleague recently found herself shouting "I am not a deviant!" in response to a particularly tricky line of questioning.

In other areas, such as regulations, admissions, marketing, enrolment, finance and library services, the presence of a non standard operating model also results in challenges. The tradition of academic autonomy creates practice and cultural diversity in any university (Sporn 1996). From an institutional perspective, WBIS and its tutors represent one of a number of different cultural centres, whose needs have to somehow be accommodated within existing frameworks, rather than designing frameworks which suit WBIS and everyone else. The result is that WBIS administrators and tutors sometimes feel as if they are engaged in a battle with the rest of the university administration. One response has been the creation of a separate team of Faculty based specialist administrators, alongside the central administration systems. WBIS tutors have reported feeling like a 'University within a University'.

The difference in academic practice and administration create a sense of difference and separation. If culture is 'what we do around here' (Drennan 1992), the culture for those working with WBIS is radically different from the 'what we do around here' elsewhere in the organisation. This raises the issue as to whether the overall culture of any university, including Chester, is especially conducive or antithetical to innovative learning programmes like WBIS. The literature on university cultures is surprisingly sparse and marked by a lack of empirical research. One useful approach to characterising the culture of universities is that developed by Conole (2004) who highlights the differences between institutions arising from mission. She makes a fundamental distinction between more traditional research-driven institutions with those whose mission is widening participation. The latter, more focussed on learning and learning, are she implies, more likely to adopt innovative learning practices. Another approach is that of McNay (1995; 1999), echoing the work of Handy (1993). He identifies four archetypal university cultures- 'Collegiate', 'Bureaucratic',

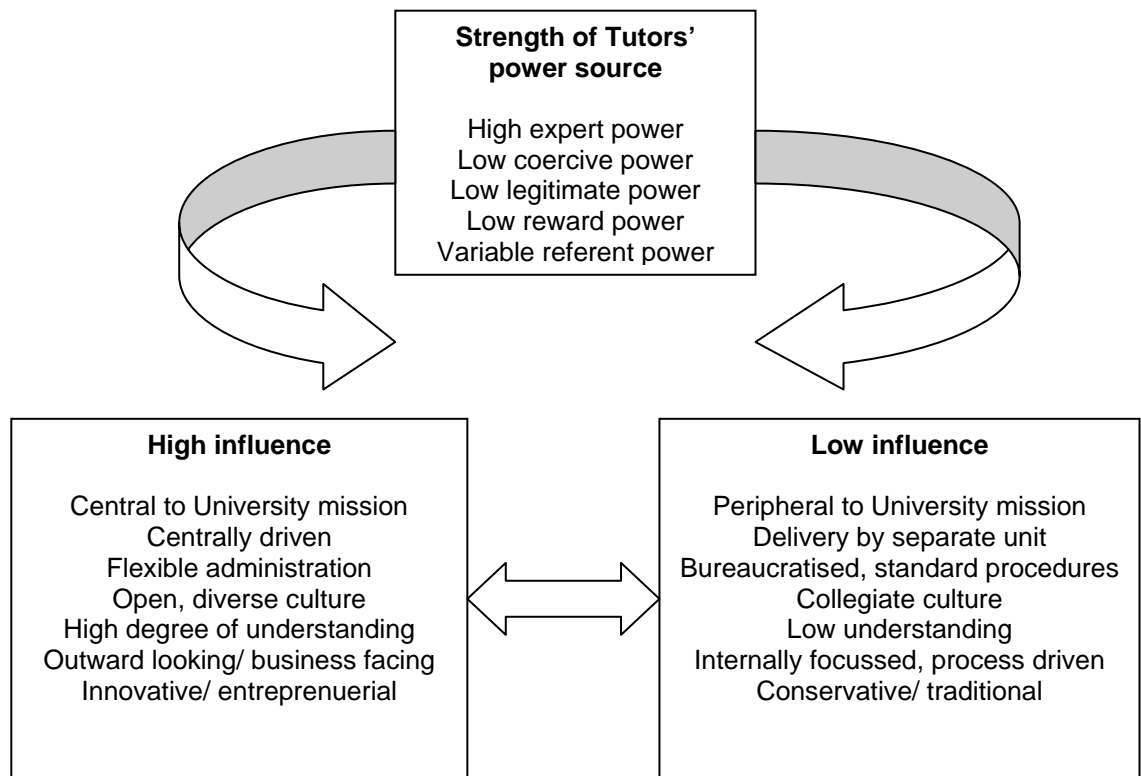
'Innovative' and 'Enterprise'. Collegiate culture is found in older universities with a research focus; Bureaucratic culture is common in technical colleges and new universities; Innovative cultures exist in some new institutions and sub sets of older universities while Enterprise culture is found mostly in American institutions. While these typologies are useful, in the experience of this writer, all four cultures can exist within a single institution. This is also the experience of Sharpe (2005, p 38) reflecting on experience of trying to deliver a multi-institution, innovative programme 'One of the key aspects I think is that there are sub cultures within institutions and people have their own views within their own part of the organisation as to how things work'.

Lack of cultural fit and low levels of authority within the university are not just issues in their own right. What is less well understood is the way in which they can undermine learning. At one level this is a quantitative outcome. Like most universities, marketing is centralised and much of their effort goes into producing a Prospectus, which is almost completely irrelevant for adults in work. The marketing and promotion of WBIS heavily relies upon tutor time and energy, with few resources. Fighting internal battles with systems designed for other purposes is not only time consuming, it is also exhausting and detracts from time spent facilitating learning.

From these observations we can begin to hypothesise situations where tutor influence with the university is likely to be strong and where it is likely to be weak (Figure 4). Influence for WBIS type programmes is likely to be stronger where the university mission is understood to be centrally concerned with increased participation and vocational education. That influence will be stronger still when it is delivered from the centre but formally integrated with the faculties. Influence is enhanced further by the presence of an open and flexible system of administration rather than one heavily bureaucratized, which assumes all students are full time

undergraduates. An open and diverse culture and a high degree of understanding is also likely to be associated with strong influence, as is a sense of the university being innovative and business facing.

**Figure 4: Tutor-University influence on WBIS**



### Concluding comments

Although this chapter has focussed on experience with one programme in one university, others have also begun to observe that with emerging forms of higher education, there is a change to the traditionally central role of tutors and their ability to effect the learning imperative can be compromised (Harvey 2007b) . Others, such as Sharpe (2205) have noted the institutional conservatism of universities when

confronted with innovative learning models. Others, such as Conole et al (2006), describing the failure of the UK E-University, have noted the power employers can wield to determine educational imperatives previously thought the preserve of academics. What this illustrates is that in the emerging landscape of higher education, control of the learning process will not automatically be ceded to tutors as has been the case in the past but that it is likely that it is tutors who will defend and promote it.

Despite the difficulties, WBIS tutors have also been able to influence at least some parts of the university, employers (who have benefited from the learning of their staff) and there has been useful collaboration between WBIS tutors and some parts of the university, such as learning technologists. As WBIS becomes ever more embedded and popular with learners, many of the difficulties and tensions should be overcome.

In all circumstances power relations will continue to affect learning outcomes. If employers are to be an increasing part of the higher education landscape there will be tension with some and the learner's ability to engage will be mediated by their employing organisation and their role within it. What this chapter has attempted to do is set out a theoretical model of situations where tutors can expect to have influence and others where their influence is likely to be weaker and suggest a direction for research into the institutional implications for new modes of delivery.

## References

Allen, B. and Lewis, D. (2006), "Virtual learning communities as a vehicle for workplace development: a case study", *Journal of Workplace Learning*, Volume 18:6 2006, pp 367-83

Avis, J., Bloomer, M., Esland, G., Gleeson, D. and Hodkinson, P. (1996), *Knowledge and nationhood*, London: Cassell.

Backman, J., Bowers, D. & Marcus, P. (1968), "Bases of supervisory power: a comparative study in five organizational settings", in S. Tannenbaum (ed.) *Control in organizations*, New York: McGraw Hill, pp 229-239.

Barnes, B. (1988), *The nature of power*, Urbana and Chicago: University of Illinois Press.

Billet, S. (2001), "Knowing in practice: reconceptualising vocational education", *Learning and Instruction*, Volume 11:1 2001, pp 431-457

Billett, S. (2004), "Learning through work: workplace participatory practices", in Rainbird, H., Fuller, A., Munro, A. (eds.), *Workplace Learning in Context*, London: Routledge, pp.109-25.

Boud, D. (1990), "Assessment and the promotion of academic values", *Studies in Higher Education*, Volume 15:1 1990, pp 101-111

Boud, D. and Solomon, N. (2001), "Future directions for work based learning: reconfiguring higher education", in Boud, D. & Solomon, N. (eds.) *Work based learning: a new Higher Education?*, Buckingham: Open University Press pp 215-226

Burns, T. and Stalker, G. (1961), *The management of innovation*. London: Tavistock.

Caley, L. (2001), "The possibilities in a traditional university", in Boud, D. & Solomon, S., *Work based learning: a new Higher Education?*. Buckingham: Open University Press. Pp 113-125

Callender, C. (1997), "Full and part time students in higher education: their expressions and expectations", *National Committee of Inquiry into Higher Education, Report 2*. London: HMSO

Campion, M. and Renner, W. (1992), "The supposed demise of Fordism: implications for distance education and higher education", *Distance Education*, Volume 13:1 1992, pp 7-28

Charlton, B. and Andras, P. (2002), "Auditing as a tool of public policy; the misuse of Quality assurance techniques in the UK University expansion", *European Political Science*, Volume 2:1 2002, pp 24-35

CIHE (2006), *The market for work Based Learning: an input to the Review by Professor Marilyn Wedgwood*. London: The Council for Industry and Higher Education

Conole, G. (2004), *The Empire Strikes Back- organisational culture as a facilitator/inhibitor*, York: JISC Infonet conference, When worlds collide: changing cultures in twenty first century education.

Conole, G., Carusi, A., de Laat, M., Wilcox, P. and Darby, J. (2006), "Managing differences in stakeholder relationships and organisational cultures in e-learning development: lessons from the UK eUniversity experience", *Studies in Continuing Education*, Volume 28:2 2006, pp 135-50

Costley, C. (2001), "Organisational and employee interests in programmes of work based learning", *The Learning Organisation*, Volume 8:2 2001, pp 58-63

Costley, C. (2000), "The boundaries and frontiers of work based knowledge", in Portwood, D. & Costley, C. *Work based learning and the University: new perspectives and practices*. Birmingham: SEDA (SEDA Paper 109)

Dahl, R. (1957), 'On the concept of power', *Behavioural Science* Volume 2 1957, pp202-203

Davenport, J. (1993), "Is there any way out of the andragogy mess?", in Thorpe, M., Edwards, R. and Hanson, A. (eds.) *Culture and processes of adult learning*. London: Routledge, pp 109-117

Department for Education and Employment (DfEE) (1998), *The learning age: a new renaissance for a new Britain*, Norwich: HMSO

Drennan, D. (1992), *Transforming company culture.*, London: McGraw Hill.

Elliot, M. (2002), "Blended learning; the magic is in the mix", in Rossett, A. (ed.) *The AJTD e learning handbook*. New York: McGraw Hill, pp 58-63.

Eraut, M., Alderton, J., Cole, G., and Senker, P. (1998), *Development of Knowledge and Skills in Employment*, London: Final Report of a Research Project funded by "The Learning Society" Programme of the Economic and Social Research Council: University of Sussex Institute of Education

Evans, K, Hodkinson, P, Rainbird, H and Unwin, L (2006) *Improving workplace learning*, London: Routledge

Field, J. (2006, *Lifelong learning and the new educational order*. (2<sup>nd</sup> Ed.) Stoke on Trent: Trentham Books.

Follet, M., P. (1924), *Creative experience*. New York: Longman Green and Co.

- French, J. and Raven, B. (1960), 'The bases of social power', in Cartwright, D. and Zander, A. (eds), *Group dynamics*, New York: Harper and Row, pp 607-623.
- Fuller, A. and Unwin, L. (2002), "Developing pedagogies for the contemporary workplace", in Evans, K., Hodkinson, P. and Unwin, L. (eds.) *Working to learn*, London: Kogan Page, pp 95-111.
- Fuller, A. and Unwin, L. (2004), "Expansive learning environments: integrating organizational and personal development", in Rainbird, H., Fuller, A., Munro, A. (eds.), *Workplace Learning in Context*, London: Routledge, pp.126-44.
- Garnett, J. (2007), *Challenging the structure capital of the university to support work based learning*, Buxton - Work based learning futures conference. Bolton: UVAC
- Garrison, D. and Cleveland Innes, M. (2003), *E-learning in the twenty first century*. London: Routledge
- Garrison, D. and Kanuaka, H. (2004), "Blended learning: uncovering its transformative potential in higher education", *The Internet and Higher Education*, Volume 7:2 2004, pp 95-105.
- Gibbs, G. (1998), *Learning by doing: a guide to teaching and learning methods*. Oxford: Oxford Further Education Unit.
- Gleeson, D. and Keep, E. (2004) "Voice without accountability: the changing relationship between employers, the State and education in England", *Oxford Review of Education*, Volume 30:1 2004, pp 37-63
- Handy, C. (1993), *Understanding organisations*. Harmondsworth: Penguin.
- Harris, S. (2005), "Rethinking academic identities in neo-liberal times", *Teaching in higher education*, Volume 10:4 2005, pp 412-433
- Harvey, M. (2007a), *Enhancing work-based learning: how effective is e-technology?*, Hendon, University of Middlesex: Work Based Learning Network Annual conference
- Harvey, M. (2007b), *The changing power balance between learners, universities and work contexts*, Buxton: Work based learning futures (UVAC conference)
- Hughes, G. (2007), "Using blended learning to increase learner support and improve retention", *Teaching in Higher Education*, Volume 12:3 2007, pp 349-363
- Jackson, N. and Carter, P. (2007), *Rethinking organisational behaviour: a poststructuralist framework*. (2<sup>nd</sup>. Ed.) Harlow: Prentice Hall.
- Jamieson, D. and Thomas, K. (1974), "Power and conflict in the student-teacher relationship", *Journal of Applied Behavioral Science*, Volume10:3 1974, pp 321-336
- Johnson, H. and Dixon, R. (2006), *Using blended teaching approaches to upgrade qualifications: the experience of in-service industrial technology/ TVET teachers in Jamaica*, Vancouver: commonwealth of Learning, Fourth Pan Commonwealth Forum on Open Learning.
- Jones, G. (2006), "'I wish to register a complaint': the growing complaints culture in



higher education”, *Perspectives*, Volume10:3 2006, pp 69-73.

Knowles, M., Holton, E. and Swanson, R. (1998), *The adult learner* (5<sup>th</sup> Ed.) Woburn, MA: Heinemann-Butterworth

Lave, J. and Wenger, E. (1991), *Situated learning: legitimate peripheral participation*. Cambridge: Cambridge University Press.

Liebbrandt, G. (1997), “The Open Universiteit in the Netherlands”, in Muggeridge, I. and Reddy G. (eds.) *Founding the Open Universities: essays in memory of G. Ram Reddy*. New Delhi: Sterling Publishers pp 101-121

Lukes, S. (1993), “Three distinctive views of power compared” in Hill, M. (ed.) *The policy process: a reader*. Hemel Hempstead: Harvester Wheatsheaf, pp 51-58

Lynch, R., Leo, S. and Downing, K. (2006), “Context dependent learning: its value and impact for workplace education”, *Education and Training*, Volume 48:1 2006, pp 15-24.

Machiavelli, N. (1513), *The prince*. Translated by Bondanella, P. and Musa, M. (1995), London: Oxford Paperbacks.

McNay, I. (1995), “From the collegial academy to corporate enterprise: the changing cultures of universities”, in T. Schuller (ed.) *The changing university?*, Buckingham: Open University/ SRHE. Pp 105-115

McNay, I. (1999), “Changing cultures in UK Higher Education: the state as corporate market bureaucracy and the emergent academic enterprise”, in Braun D. and Merrien F-X. (eds.) *Towards a new model of governance for universities: a comparative view*, London: Jessica Kingsley, pp 34-58

Minton, A. (2007), *Negotiation of Learning Contracts and assessment in work based learning*. Hendon: Work Based Learning Network Annual conference, University of Middlesex

Moon, J. (2000), *Reflection in learning and professional development*, London: Kogan Page

Morgan, G. (1989), *Creative organisation theory: a resource book*. London: Sage.

Murdoch, J. (2004), “Developments in the evaluation of work based learning: a UK perspective”, *Industry and Higher Education*, Volume 18:2 2004, pp 121-4

Nesler, M., Aguinias, H., Quigley, B. and Tedeschi, J. (1993), *Credibility and perceived power ratings*, Arlington VA: Eastern Psychological Association

Nixon, I., Smith, K, Stafford, R and Camm, S. (2006), *Work based learning: illuminating the Higher Education landscape*. York: Higher Education Academy.

O’Neill, O. (2002), *Called to account*. London: BBC. (Reith Lecture 1<sup>st</sup> December 2002) Available at:

<http://www.bbc.co.uk/radio4/reith2002/>

- Onyx, J. (2001), "Implementing work based learning for the first time", in Boud, D. & Solomon, N. *Work based learning: a new higher education?*. Buckingham: Open University Press, pp 126-140
- Parsons, T. (1967), *Sociological theory and modern society*. New York: Free Press.
- Perry, W. (1976), *Open University: a personal account by the first Vice Chancellor*. Milton Keynes: Open University Press
- Perry, W. & Rumble, G. (1987), *A short guide to distance education*. Cambridge: International Extension College
- Power, M. (2007), "The theory of audit explosion", in Ferlie, E., Lynn, L. and Pollitt, C., *The Oxford handbook of public management*. Oxford: Oxford University Press, pp 326-346.
- Raven, B. (1992), *The bases of power: origins and recent developments*. Washington DC: American Psychological Association.
- Raven, B. and Erchul, W. (1997), "Social power in school consultation: a contemporary view of French and Raven's bases of power model", *Journal of Social Psychology*, Volume 35:2 1997, pp 131-71
- Robbins, S. (1996), *Organisational behaviour, concepts, controversies, applications*. (7<sup>th</sup> ed.) Englewood Cliffs NJ: Prentice Hall.
- Rush, M. (1992), *Politics and society: an introduction to political sociology*. London: Prentice Hall.
- Russell, B. (1938), "The forms of power", in Lukes, S. (1986) *Power*, New York: New York University Press, pp 19-27.
- Sharpe, B. (2005), "Overcoming the cultural challenges", *The Think Tank; making lifelong learning a reality*. London: JISC Infonet.
- Shetty, Y. (1978), "Managerial power and organisational effectiveness: a contingency analysis" *Journal of Management Studies*, Volume 15:2 1978, pp 176-86.
- Singh, B. (1979), "Distance education in developing countries- with special reference to India", in Hakemulder, J. (ed.) *Distance education for development*. Bonn: German Foundation for International Development, pp 234-241.
- Singh, H. (2003), "Building effective blended learning programs", *Educational Technology*, Volume 43:6 2003, pp 51-54
- Slowey, M. (2000), "The United Kingdom: redefining the non-traditional student: equity and lifelong learning in British higher education 1985-2000", in Scheutze, H. and Slowey, M. (eds.) *Higher education and lifelong learners: international perspectives on change*. London: Routledge, pp 101-124.
- Smith, A. & Webster, F. (2002) "Changing ideas of a university", in Smith, A. & Webster, F. (eds.) *The post modern university? Contested visions of higher education in society*, Buckingham: Open University Press/ Society for Research into Higher Education, pp 1-14

- Smith, J. & Spurling, A. (2003), *Understanding motivation for lifelong learning*. London: Campaign for Learning/ NIACE.
- Sporn, B (1996), "Managing university culture; an analysis of the relationship between institutional culture and management approaches", *Higher Education*, Volume 32:1 1996, pp 41-61
- SQW and Taylor Nelson Sofres (2006), *Demand for flexible and innovative types of higher education; report to HEFCE*. Histon: SQW Ltd.
- Sutherland, J. (1998), *Workplace learning for the twenty first century: report of the Workplace Learning Task Group*. London: Unison.
- Tauber, R. and Knouse, S. (1983), *The perceived effectiveness of French and Raven's five power bases for vocational High School teachers and students*, Lancaster PA: Pennsylvania Vocational Education Conference
- Tauber, R. (1985), "Power bases: their application to classroom and school management", *Journal of Education for Teaching*, Volume 11:2 1985, pp 133-44
- Tauber, R. (1992), "Those who can't teach: dispelling the myth", Reston VA: *NASSP Bulletin*, 76 (no. 541), pp 97-102.
- Trow, M. (2005), "The decline of diversity, autonomy and trust in post war British Higher education; an American perspective", *Perspectives*, Volume 9:1 2005, pp 7-11
- Unwin, A. (2007), "The professionalism of the higher education teacher: what's ICT got to do with it?", *Teaching in higher education*, Volume 12 :3 2007, pp 295-308
- Walsh, E., Wanberg, C., Brown, K. and Simmering, M. (2003), "E-learning: emerging uses, empirical results and future directions", *International Journal of Training and Development*, Volume 7:4,2003, pp 245-58.
- Weber, M. (1947), *The theory of social and economic organisation*. Chicago: Free Press.
- Weinstein, K. (1995), *Action learning* (2<sup>nd</sup> Ed.) Aldershot: Gower
- Wenger, E. (1998), *Communities of practice: learning, meaning and identity*. Cambridge: Cambridge University Press
- Wheeler, S. (2007), 'The influence of communication technologies and approaches to study on transactional distance in blended learning', *Alt-J, Research in Learning Technology*, Volume 15:2 2007, pp 103-117
- Wrong, D. (1979), *Power: its forms, bases and uses*. Oxford: Basil Blackwell.
- Zeece, P. (1996), "Power lines: the use and abuse of power in child care programmes", *Child Care Information Exchange*, No. 112, pp 23-28

