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Workforce development, higher education and productive systems.

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Abstract

Workforce development partnerships between higher education institutions and employers involve distinctive social and technical dynamics that differ from dominant higher education practices in the United Kingdom. The New Labour government encouraged such partnerships in England, including through the use of funding that aimed to stimulate reform to institutional processes and build capacity. In the broader policy context, greater workforce development activity had the objective of supporting national skills policy targets and increasing industrial productivity. In this article the notion of the productive system is used to identify factors influencing the outcomes of this policy, using three models of the production of higher education provision. Attention is paid both to the structure in which these productive processes are situated, and the stages that result in new higher education programmes. To evaluate the sustainability of the productive systems, the development of mutual interests between participants is examined, in addition to the norms that structure culture and relationships and the distribution of power and influence. The role of the institution in respect of the employer and the student is also addressed, with reference to uncertainty regarding the value of workforce development provision in economic and political contexts of perpetual change.

Keywords

workforce development, productive systems, higher education, skills.

Introduction

Developing higher education provision for employees through partnerships with employers remains a peripheral activity in most higher education systems (De Weert 2011). However, the greater integration of higher education within the ‘knowledge economy’ and national industrial strategies, and projections of an increased diversity of student types and study modes (OECD 2008, Altbach et al. 2009), could lead to changes. In Europe, concerns about whether the stock of ‘human capital’ is sufficient to drive desired improvements in economic productivity may encourage governments to introduce policies that stimulate growth in new forms of higher education, particularly for those working in sectors deemed of importance to the economy (CEDEFOP 2011). In nations as diverse as China, the Netherlands and Singapore mismatches between higher level skills supply and the perceived demands of the economy have been identified, leading to suggestions that higher education improve its labour market relevance and increase employer involvement (De Weert 2011, Wang and Liu 2011, MoE 2012). In England in 2008 the New Labour government introduced a programme of capacity building funding that offered higher education institutions in England the opportunity to ‘*test and invest in new approaches*’ (DIUS 2008: 31) to providing higher education to meet the perceived needs of the workforce, including new ways of engaging employers in the design and delivery of higher education with the aim of developing the ‘*higher level skills that a particular business needs in a particular place*’ (DIUS 2008: 7). This programme built on the consultation document *Higher Education at Work: High Skills, High Value* (DIUS 2008) and on the broader recommendations of the Leitch Review of Skills (Leitch 2006). Following the conclusion of this programme, some of the higher education institutions who received funding have continued to offer workforce development provision despite the ending of the subsidies by the new U.K. coalition government, which is using different strategies to increase higher level skills (Kewin et al. 2011, DBIS 2010).

The relationships inherent in workforce development provision are inevitably more complex than those that involve only the university and the student, leading to new questions in relation to roles and responsibilities in educational processes that additionally involve employers (Reeve and Gallacher 2005, Lester and Costley 2010). Workforce development does not necessarily involve learning solely in the workplace, as potentially employees can attend a course on an institutional campus, but almost invariably does use workplace experience as a substantial part of the educational process (Brennan and Little 2006), with

employee-students studying via work-based learning in their organisations. The processes and relationships developed are usually different from 'standard' academic practices (Lester and Costley 2010) and challenge dominant academic cultures (Foster and Stephenson 1998) and therefore require strategic commitment on the part of the institution if workforce development is to become more than just a peripheral element of institutional activity (Garnett et al. 2008).

Policy which attempts to stimulate greater engagement from higher education institutions in workforce development is subject to criticism from those who question the quality of work based qualifications in comparison with 'traditional' higher education, and see employers' interests in the education of their staff to be primarily instrumental rather than developmental (Lester and Costley 2010, Usher and Solomon 1999). The potential for the work that students produce while learning to be exploited by their employer has also been identified (Gibbs 2004), with the suggestion that higher education institutions have a specific 'duty of care' to those studying in this way. The promotion of employer engagement can also be presented as an example of governments aiding the re-orientation of higher education to serve commercial interests (Giroux 2003), to the wider detriment of staff, students and communities. Higher education institutions and commercial organisations may also collude in the interests of a mutual generation of enhanced reputation and prestige (Gustavs and Clegg 2005), which may be at the expense of the interests and opportunities of employee-students. At the very least the development of work based learning as a paradigm challenges the position of the higher education institution as the prime arbiter of valuable knowledge (Foster and Stephenson 1998, Garnett 2001, Gibbs and Garnett 2007), with institutions increasingly exposed to the varied character of mode 2 knowledge created in the workplace (Gibbons et al. 1994).

More broadly, the notion of a skills policy that prioritises reform of education and training systems to deliver improvements in economic productivity and national competitiveness has continually been questioned (Keep et al. 2006, Brown and Lauder 2006), with research also demonstrating the limited extent to which encouraging investment in educational qualifications will meet societal expectations, not least for graduates and the middle classes (Brown 2003, Brown et al. 2008, Keep 2008). Recent workforce development policy in England is one aspect of this wider picture of change in the relationship between education and work, suggesting new relationship dynamics between higher education institutions, employers and employee-students that challenge all parties to think and act differently in a

context of ongoing reflection and debate regarding the value of higher education qualifications and the knowledge and learning they represent (Young 2008).

In this article the notion of the productive system (Wilkinson 1983, 2002, Felstead et al. 2009) is used to articulate some of the factors that influence the initiation, design and delivery of higher education workforce development programmes. In addition to the uncertainties, risks and ‘hidden costs’ that developing this form of higher education provision entails, the level of influence that higher education institutions, employers and other bodies can bring to bear over the character of the provision, and what it ‘produces’, will change according to the context in which it is developed. Finding effective ways of identifying and characterising this context, which may vary according to the sector, institution, or the involvement of employers, and registering how levels of influence from differing parties may alter within the process of developing new provision, are essential for the analysis of potential outcomes of workforce development activity.

The article draws on data collected through research into the HEFCE-funded Transforming Workforce Development Programme, which included 37 capacity building and employer engagement projects at English higher education institutions between 2008 and 2010. Research activity included analysis of policy and institutional strategy documents and publically-available data about the funded projects. This process aimed to scope the variety of workforce development approaches in use, and provided the basis for the development of the productive system models outlined below. Case studies were then undertaken at four higher education institutions involved in different aspects of workforce development. This included in-depth interviews with project managers and strategic managers at these institutions and detailed analysis of the planned provision, links with wider institutional strategy and relationships with other institutions, providers and agencies. The institutions had different histories and profiles; two were pre-1992 and two post-1992 universities.

Workforce development design and delivery processes

Research and evaluation has indicated the difficulties with bringing together employers and higher education institutions in partnership arrangements to develop the workforce, emphasising differences in culture and conceptions of ‘knowledge’ and ‘learning’ (Reeve and Gallacher 2005), the importance of adapting institutional processes and structural capital

(Garnett et al. 2008), and the challenges of engaging academic staff in activities often seen as peripheral to the core responsibilities of teaching full time students and conducting research (Eyres et al. 2008, Kewin et al. 2011, Timilin et al. 2010). It is suggested that the roles of the institution and partnering employer need to be agreed yet remain distinct (Slotte and Tynjala 2003), although the difficulties of meeting the expectations of all stakeholders may serve to pull partnerships apart (Gustavs and Clegg 2005). The mechanics and processes of designing workforce development are likely to involve much more of a negotiation of outcomes than in the case of ‘traditional’ full time higher education provision (Lester and Costley 2010), although the processes may provide greater potential to explore new approaches to programme content and the student learning experience.

As acknowledged by Universities UK in a submission to the Innovation Universities Science and Skills Select Committee inquiry into the implementation of the Leitch review, developing new forms of HE workforce development provision requires employers ‘*to share the costs and risk involved in developing provision where student demand is untested*’ (UUK 2008: 256) due to the inherent uncertainties of these activities. Similarly, Million+, the think tank representing one group of higher education institutions, in a submission to the same inquiry, emphasised that the ‘*variety of work-based provision and the cost to institutions...are often underestimated*’ due to ‘*hidden institutional costs*’ (Million+ 2008: 190). The adaptability and flexibility required of higher education institutions, while perhaps attractive to some employers and prospective students, may militate against the sustainability of workforce development models. Where employer contributions are required to make provision sustainable, institutions face multiple challenges. Difficulties with ensuring the long term financial commitment of an employer partner increases levels of risk to institutions (Hordern 2012), and employers will be reluctant to commit if they cannot foresee tangible benefits to developing their workforce through higher education programmes as opposed to other routes (Nixon et al. 2006). Perhaps most significantly, most institutions lack the financial reserves to engage in experimental pilot provision in previously untested markets (Million+ 2008, UUK 2008).

In certain contexts, factors external to institutions may be particularly influential in determining the content or structure of a programme. For example, in the case of programmes that aim to provide initial professional formation or continuous professional development institutions may need to ensure that programmes conform with standards set by professional

bodies. When programmes incorporate elements of workplace learning, as in the case of much workforce development provision, then the dynamics of how and what people learn at work is of particular interest. In the case of a workforce development partnership with a sector skills council or an individual employer there are likely to be additional influences on the character and structure of provision that emerge from the sectoral context or the organisational context of the employer concerned. The integration of Wilkinson's (1983, 2002) productive systems approach with the typology of the expansive and restrictive learning environment (Fuller and Unwin 2004) as set out by Felstead et al. (2009) in the Working as Learning Framework provides an analytical structure within which the outcomes of the workforce development policy can be studied, and to distinguish between the different sectoral contexts in which workforce development take place.

Using a productive systems approach to analyse workforce development provision

The concept of the productive system was devised by Wilkinson as a means of forming an institutionalist analysis of 'production' that could provide an alternative to prevailing neo-classical models of economic systems, and presents a compelling counterpoint to dominant assumptions about the operations of organisations and individuals in markets. The structures of production that Wilkinson draws attention to focus analysis on the external context within which the productive activity is located and the locus of power within that context. The 'stages' of production entail the process of producing the output(s) of the activity (Felstead et al. 2009), which could comprise a service or product, or possibly educational provision or research projects in the case of a university. Felstead et al. (2009:21) stress the importance of the articulation between the structure and the stages of production in shaping resultant outputs and the dynamics of power and control within a system, meaning in particular the networks of social relations connecting the vertical (structure) and the horizontal (stages). Wilkinson (2002:5) talks of the social relations of production '*playing a central role in determining the effectiveness of technical co-operation and hence operational and dynamic efficiency*'. In this analysis, systems are unable to be effective without co-operation between different parties, and the circumstances of co-operation are shaped by the specifics of the context, in contrast to the 'invisible hand' which determines relationships in neo-classical economics.

The possibilities for learning and the generation of new valuable knowledge will therefore be significantly affected by the institutional context, which could vary substantially according to the locus of power and influence in the productive system and the norms that structure system activity. These norms may be a reflection of historical activity within the productive system, dominant models or ideologies within the field or the pressures of the policy context. Notions of ‘appropriateness’ of activity within a domain may lead to isomorphic tendencies (DiMaggio and Powell 1983, 1991) that reflect dominance and legitimation within the system. The potential for co-operation and the development of ‘mutual interests’ (Wilkinson 2002) that are important for a sustainable productive system may thus be restricted by policy or management approaches that specify particular models or ways of working. However, these approaches may not achieve dominance if counteracted by cultural norms embedded in ways of working in higher education institutions (Tierney 1988).

Comparing productive systems and the consequences they have for knowledge and learning could lead to suggestions that the framework provides insights with limited general explanatory use, a common criticism of institutionalist approaches (Hill 2005:77). However, a mapping of both structures and stages of production at a sectoral level could help identify the considerable differences in levels of co-operation and commonalities of interest that exist across industrial sectors, which can then inform organisation level analysis of the possibilities for ‘expansive’ and ‘restrictive’ learning environments (Fuller and Unwin 2004). Differing sectors or sub-sectors may not only restrict the opportunities of employees through a lack of qualification equivalence or transparency of achievement, but may also restrict learning in workplaces as a consequence of their productive system. Recognition of the different dynamics of structural influence and institutional norms at different stages of the productive process is essential for an understanding of the ‘flow’ or ‘pattern’ of production within a system. The extent of ‘mutual interests’ and the dimensions of ‘relative power’ (Wilkinson 2002:4) may thus change significantly within a productive process, with different actors having greater or lesser levels of control and discretion depending on the activity at hand. Co-operation may ensue between actors in certain stages, to the exclusion of others, whereas in subsequent stages levels of power and influence may shift as other actors take prominence in the process. If productive systems are constantly interacting with and affected by the ‘*technical, economic, social and political forces to which they are subject*’ (Wilkinson 2002: 6) then acknowledging the interplay between the various levels at which social and technical relations are formed and re-formed is important for identifying risks to the sustainability of

new initiatives and programmes, in addition to identifying the norms and practices that structure activity within a given system.

In terms of policy initiatives, a lack of recognition of the variability of productive system context may lead to a situation in which any perceived ‘failure’ in attempts to encourage a workforce development initiative is misdiagnosed. The extent of mutuality, co-operation and power asymmetry within the various productive systems can contribute to policy outcomes deviating from stated objectives, despite the apparent similarity of the policy and method of implementation. Awareness of the institutional context can alter attitudes towards ‘implementation deficit’ (Pressman and Wildawsky 1973) if policy makers begin to realise the inevitability of the reformation and evolution of policy within the specific contexts of its implementation (Hill and Hupe 2002, Hupe 2011). In the case of the HEFCE-funded Transforming Workforce Development Programme, the pledge to bring together higher education institutions, sectoral and professional representative bodies and employers to deliver workforce skills ‘*that a particular business needs in a particular place*’ (DIUS 2008:7) implies considerable variability in the range of partners and arrangements involved in policy implementation.

Three models of provision and their productive systems

In the next section three models of the ‘production’ of higher education provision are outlined. These models aim to illustrate the different relationships and processes involved that characterise both workforce development and more ‘traditional’ higher education provision. However, it is important to note here that the models presented are only examples of how these relationships and processes can work; they do not claim to be definitive or even necessarily archetypal. The models have been developed through a process of research into the 37 workforce development projects funded by HEFCE and in operation between 2008 and 2010, and draw on the characteristics exhibited by many of these projects. The research thus concentrates on the English higher education context, but the processes and issues arising may have parallels in other education systems.

The structures and stages of production through which educational provision originates and is designed and delivered vary across a spectrum of higher education ranging from ‘traditional’ disciplinary based educational programmes which many higher education institutions may see as their core offer to the undergraduate and postgraduate market to

programmes which originate as a response to sectoral, governmental or professional demands, or as a response to the specific organisational demands of individual employers. The workforce development and higher skills policy of the New Labour government, in attempting to stimulate growth in the latter two models (Models B and C), encouraged higher education institutions to broaden the scope of their structures of production and to engage with sequences of stages of production that vary from what remains the dominant model of higher education provision development (Model A). Models B and C represent workforce development systems, where networks of informed experts, sectoral bodies or employers come together to design, and sometimes co-deliver, higher education programmes. It is important to note that both models assume a degree of initiation from these actors, or from government. Although aspects of negotiating curriculum and programme structure with individual learners, as is common in many forms of work based learning (Lester and Costley 2010) may also arise in Model C, models of work-based learning that could be described as ‘learner-managed’ (Foster and Stephenson 1998), led to a greater extent by individual learning needs, are not represented in the models here.

Model A: ‘Traditional’ disciplinary-based HE programme developed within an institution

Disciplinary based academic processes through which new programmes are developed within institutions typically involve programme or course committees, administrative staff and individual academic staff who provide the disciplinary-based academic content for the programme. The stimulus for a new programme may be related to the institutional strategy as part of an aim to attract more or higher quality students or to respond to perceived changes in student demand which may be related to the changing labour market. We might suggest that the institutional strategy and culture is fundamental here in structuring what the institution thinks it should be providing in terms of education and training and to whom. In general, in the core disciplines of the sciences, social sciences and humanities, institutions are likely to make reference primarily to the development of knowledge through peer-reviewed journals and learned societies as the key indication of what to teach to students, and how to prioritise content, although this may be significantly tempered by student demand for module topics that are considered of particular interest. The fundamentals of degree programmes in the pure sciences, social sciences and humanities may be comparable across institutions of similar types, albeit reflective of different disciplinary knowledge structures (Bernstein 1999) and

schools of thought within and across disciplines. Teaching staff are likely to prefer to teach topics of which they have expert knowledge, leading to some variance across institutions of a similar type, particularly in the latter stages of undergraduate degrees. The activities of institutions considered as peers may also be a factor structuring decision-making when deciding to review a portfolio of programmes. In this model, power lies chiefly within the higher education community and the institution, and this could also depend on the institution's position within the field (Naidoo 2004) and its relative power to strategise independently of 'market' or sectoral forces. The specifics of decisions about programme structure and content will also relate to internal distribution of power and influence within the institution, and this is likely to vary depending on relations between the academic departments and schools and central administration and strategy departments.

Diagram 1: Model A (Structure of Production)

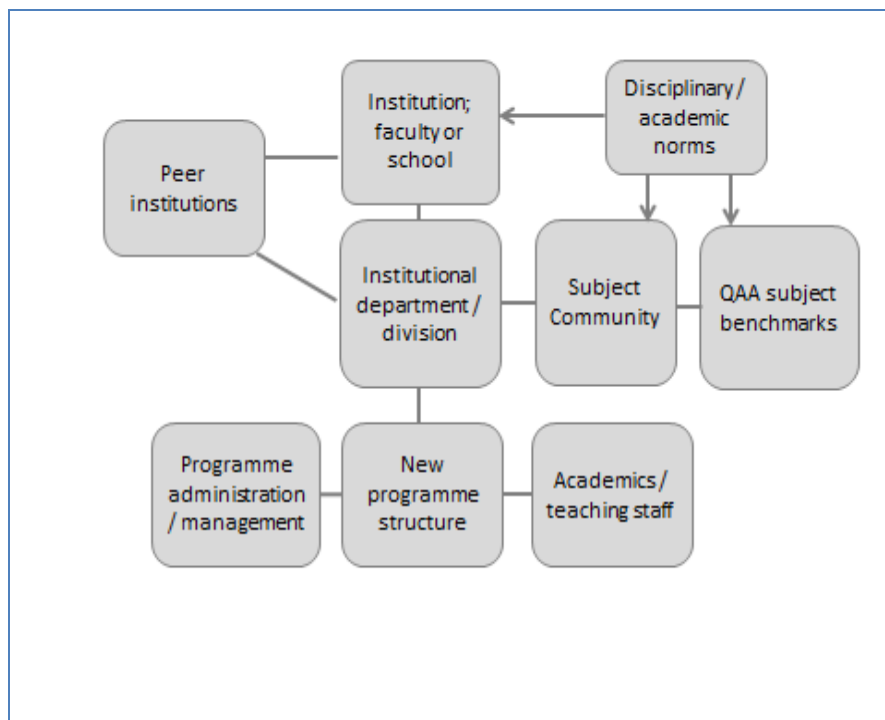
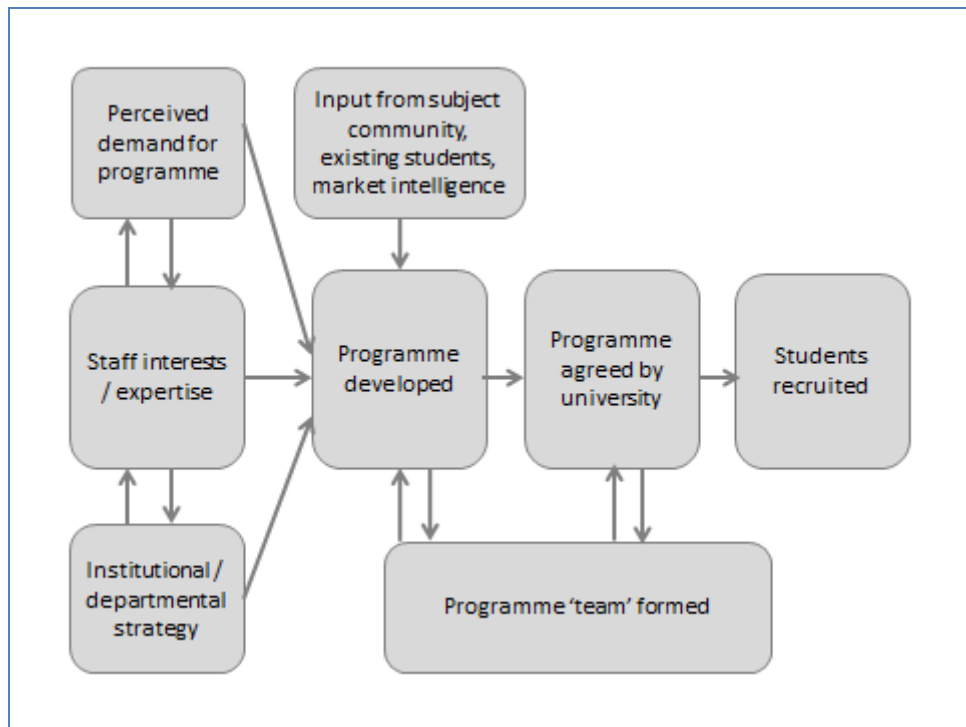


Diagram 2: Model A (Stages of Production)



In model A there is considerable scope for co-operation and the meeting of ‘mutual interests’ as influence within the productive system chiefly lies within academic circles and the higher education environment. The technical and social relations of production are well understood generally within the academic community, although there may well be ongoing debates about the importance of types of content of approaches to teaching and learning. Peer review activities, under the aegis of the QAA, or as part of the external examining system, largely reinforce norms within the system, notwithstanding concerns about intrusiveness and managerialism in quality assurance (Deem et al. 2007; Harvey 1995). Although the origins of a programme and the stages taken towards defining and agreeing its objectives and profile may vary, the institution and its academic staff have limited need to look beyond barometers of student demand, the wider higher education marketplace and quality assurance frameworks to ‘produce’ the programme.

Model B: Higher Education programme developed in response to sectoral, governmental or professional demands

In the second model, institutions develop programmes primarily with regard to the environment external to the institution and the higher education system. In model A

programme developments can be categorised as responses to specific disciplinary developments or staff interests, in addition to changes in student preferences as understood by the institution or the wider higher education community, although these may in some circumstances align. In model B, however, the locus of power in the structure is largely external to the institution and the higher education community, although the institution may participate in networks of sector, employers and professional bodies to negotiate programme structures. Changes in the external environment can be viewed as a demand stimulus, encouraging institutions to develop new supply in response. Investment in new sectors and sectoral agreements are likely to result in new higher education programmes which may emerge through partnerships between institutions and sectoral bodies or through institutional initiative. Government policy developments, for example regarding workforce development for the children and young people's workforce during the New Labour era (Edmond et al. 2007), or changes to professional development for teachers, social workers, the police, often include initiatives that encourage higher education institutions to prepare new programmes that are then validated by a sectoral or government sponsored agency. Finally, professional bodies, for example in accountancy, banking, law, planning, environmental health or any other professional discipline confer accreditation on higher education programmes as initial or continuing professional development for those already in work and therefore institutions are unable to exercise unilateral control of the content or structure of these programmes as they must adhere to the guidelines of the professional body. In all three contexts, whether sectoral, governmental or professional, the primary influence in the structuring of the provision is likely to lie outside the institution, although institutionally-based staff may be integrally involved in sectoral, governmental or professional bodies and exerting influence through these mechanisms. This contrasts with Model A where the institution has considerable control over the shape of programmes.

Diagram 3: Model B (Structure of production)

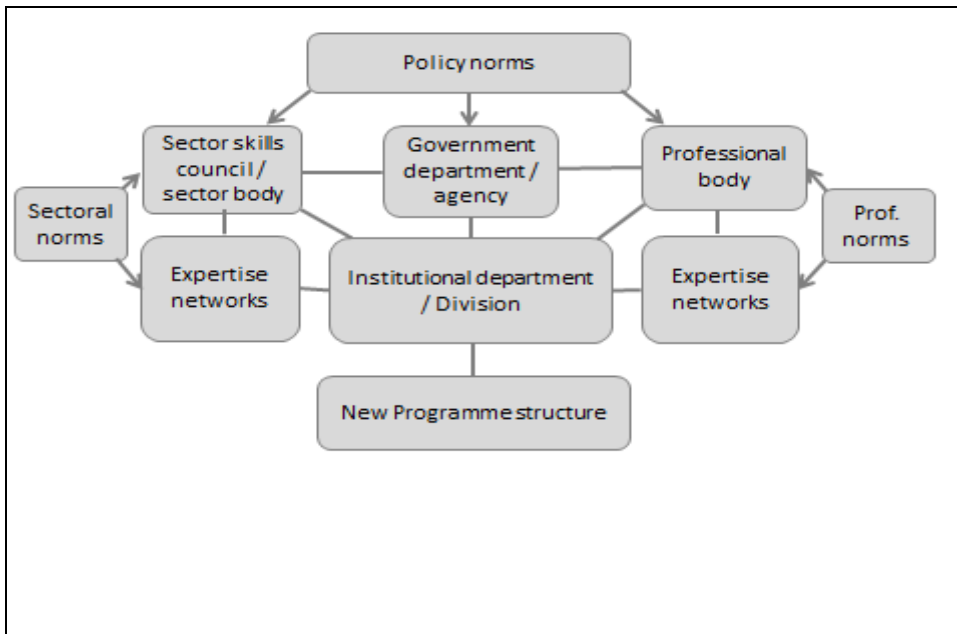
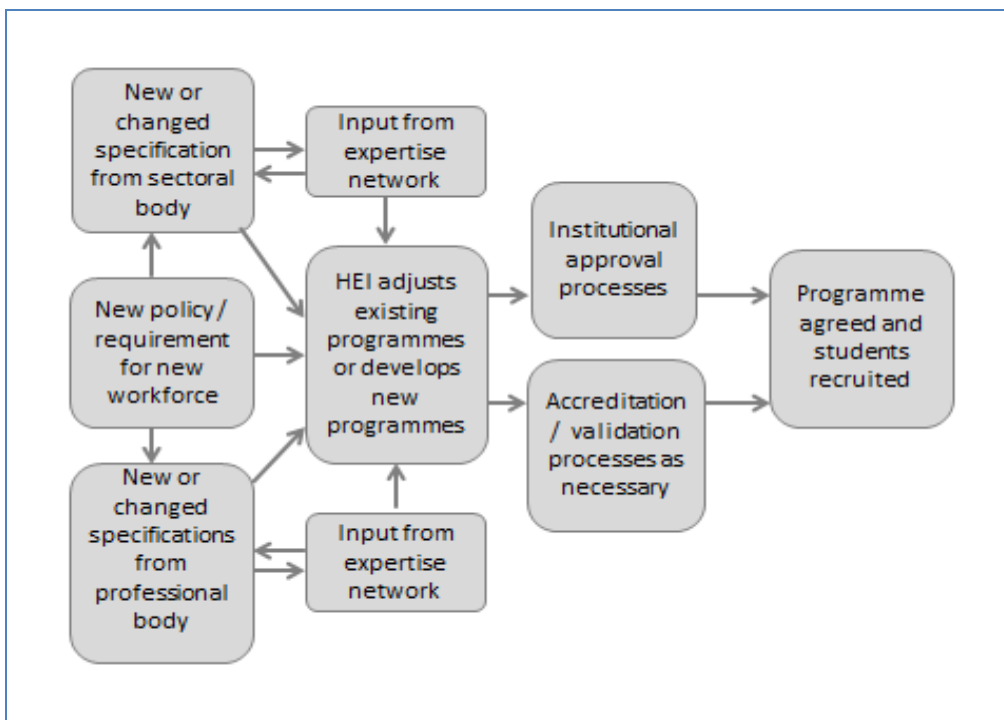


Diagram 4: Model B (Stages of production)



Policy driven workforce reform activities that follow Model B stages of production may have been well placed to play a substantial role in progress towards the Leitch target of 40% of

adults qualified in initial HE by 2020 (DIUS 2008:5), particularly through the children and young people's sector (Edmond and Reeve 2011), and health and social care, where the workforce has until recently had low qualification levels and low levels of training investment. The reforms of the schools and children's workforce have included Model B provision development through HEIs that has opened up a wide range of Foundation and Bachelor's degrees to the future and existing workforce (Edmond et al. 2007). Partnerships with employers to engage the workforce are an important variant of this, although the employers, usually local authorities or NHS organisations, are rarely engaged purely on their own terms as they are constrained in their freedom to respond to policy initiatives (Wilson and Game 2002), and will prioritise organisational performance and compliance (Edmond et al. 2007), resulting in some restrictions on development opportunities for employees. However, the welfarist ethos that exists within many of these organisations and partnering higher education institutions involved in professional formation can support the engagement of employees with limited recent experience of higher education through tools that encourage them to reflect on their own workplace experiences and to identify their existing knowledge and skills. We see elements of this in a description of a workforce development programme for 'associate professionals' provided by an academic involved in managing a HEFCE-funded workforce development project:

'...we helped the students take a bite-sized chunk of a university course.. and some of these people had probably not been in education for many years so it was confidence building... it was like a win-win-win situation and the employers loved it because they could see the students who were on their course getting accredited and moving on to higher education.' (Interview 3 2009)

'Confidence building' and enabling access for those with limited recent educational experience both supports workplace effectiveness and ensures that these staff are less disadvantaged in a labour market where increasing numbers of workers are qualified to degree level with the significant expansion of higher education in the U.K. over the last twenty years (Elias and Purcell 2003, Purcell et al. 2003).

There are also cultural synergies between parts of the HE sector and public sector organisations which reach back to the 'public service' origins of many institutions as technical colleges (Pratt 1997) and the persistence of a sense that institutions have a duty to respond to the '*priority of the day*' (Eastwood 2008) and government policies. This is borne out by the focus of some of the HEFCE funded workforce development projects on

specifically developing model B as a foundation for their workforce activity (Kewin et al. 2011). In the case of one project this was exemplified by the explanation that *'the public sector tends to be slightly easier to work with often because they've got a level of commitment to staff development....they've often got budgets for it ...we understand them and they understand us a bit better than the private sector, so it was seen as a way of getting early successes.'* (Interview 1 2009). Model B can therefore become a strategic priority that can enable the change process and the development of 'structural capital' (Garnett et al. 2008) before embarking on greater engagement with the private sector. A potential difficulty with this strategy is that, if the modus operandi of the public sector is significantly different, then the processes developed can become too attuned to public sector need, making the eventual transition to working more closely with greater numbers of private sector organisations potentially more difficult. In this scenario, the process of adjusting or developing programmes, and the institutional approval processes, can become excessively geared to the specific sectoral or professional inputs in the early stages of the model.

Using a productive systems analysis we again note the potential for considerable 'mutual interests' and co-operative production between higher education institutions, sectoral and professional bodies, and government agencies and departments in the development and delivery of provision. The structure of production in Model B is therefore characterised by consensus and the development of shared norms. Culturally, as discussed above, there may be much common ground between many institutions and certain public sector organisations and professions, and this may also extend to some of those involved in representing industrial sectors, notwithstanding the variability of their capacity and levels of influence (Payne 2008). Strong 'expertise networks' may exist in certain sectors, bringing together professionals, academics, policy makers and brokers to co-operatively form specifications and designs for new or revised programmes, in an atmosphere where the social and technical relations of production are well understood and roles are well-defined by longstanding co-operation. Likewise, although government policy changes will have an impact on the development of provision, particularly where new specifications for professional development, or occasionally new professions, are initiated, these are likely to be influenced by durable sectoral and professional norms and knowledge exchange within the networks (Friedson 2001). This does not negate the potential for radical government policy change to disrupt the network and professional formation within the system. Furthermore, although the systemic conditions for sustainable partnership may exist, there is no guarantee that employers and

higher education institutions will take advantage of them, or that difficulties with the often divergent priorities of stakeholders will be easily resolved (Smith and Betts 2005, Edmond et al. 2007).

Model C: HE programme developed in response to or with individual employers.

In the third model, the institution enters into relationships with individual employers either in partnership or as a service provider responding to the specific workforce needs of the employer. Models A and B operate within frameworks that can be generally seen as relatively stable in that processes and relationships are often durable and within the control of key actors within the system. Model A is situated within the culture of the higher education environment, whereas the structure of Model B is dominated by largely co-operative arrangements between key actors. In Model C, however, the stability of the productive system is at much greater risk, as individual employers have less need for longer term co-operation with a higher education institution. Of course, longer term partnerships may indeed arise, and there is evidence that some employers can see value in this (Lange and Dawson 2010). The approach that employers take to securing the optimum relationship with an institution may result in difficulties with developing co-operative social relations in the system, particularly if the approach taken is 'contractual' in orientation or focused primarily on developing organisational reputation through association with a prestigious institution (Gustavs and Clegg 2005). Variants of model C exist in the provision of bespoke executive MBA Education by business schools, but employer demand for these programmes may not correspond to other forms of higher education for other groups of employees. Aspects of higher education culture remain strongly adverse to commercial approaches (Giroux 2003), and many institutions have recognised this by developing semi-independent employer engagement units that are distinct from, yet engaged with, the remainder of the institution (Kewin et al. 2011). 'Mutual interests' in the productive system may arise in strategic alliances and partnerships between employers and institutions, but the spirit of co-operation and mutuality may not extend to all staff within the institution who will need to be involved in the teaching and tutoring of employee-students. Additional complexities arise if the technical relations, in the shape of the programme design and quality assurance processes that higher education institutions are accustomed to, need to be adapted to accommodate the needs of individual employers. This commitment to developing institutional 'structural capital' (Garnett et al. 2008) requires strategic commitment to ensure that institutions have

the capacity to manage quality systems and the experience of students whose requirements may differ from the majority of the student body.

Diagram 5: Model C (Structure of production)

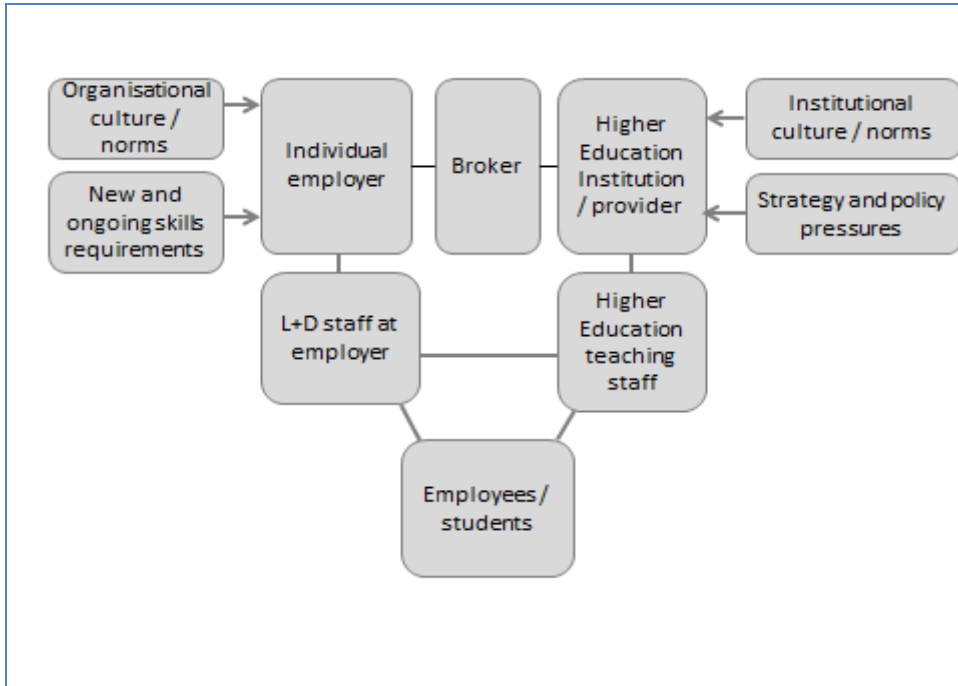
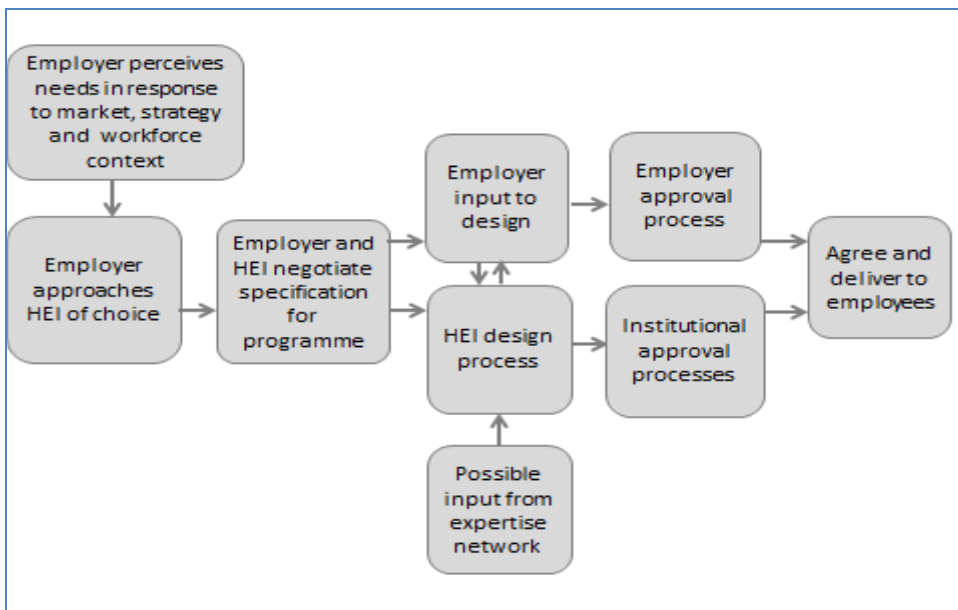


Diagram 6: Model C (Stages of production)



Production in model C is thus complicated significantly at the stages of negotiating a specification, design and approval, as a consequence of the necessity to negotiate roles within

the productive system. The employer, institution and student/employee must come to agreements about where boundaries lie and who has responsibility for which element of the programme. The processes of negotiation in model C are social processes engaged in by actors who bring with them sets of assumptions and objectives that may or may not be compatible with other actors in the process of negotiation. The fluidity and complexity of these processes contrast significantly with Model A, where understandings concerning the appropriacy of content and delivery approach are embedded within the academic context and do not necessarily require a process that makes them explicit. In Model C this may well not be the case, as employers are likely to need reassurance that the provision they are procuring is meeting their organisational needs, leading them to challenge academic culture and require greater precision regarding the value of course content and delivery. This could be regarded, by employers, as 'quality assurance', although again definitions of 'quality' in higher education may be quite different from an employer's understanding of quality, just as understandings of knowledge and learning may diverge (Reeve and Gallacher 2005). It is also possible that employers are reassured by the institution's cultural capital or reputation, both in terms of notions of 'quality' and in terms of the approach of employees towards the provision. The potential complexity of relationships, and the possibility that those relationships can fracture as a result of misunderstandings or disagreements over roles or the quality of provision, may require institutions to invest considerable time and energy in building and maintaining relationships with employers, a responsibility that individual academics may take on, willingly or unwillingly, or may be undertaken by a new 'front desk' or arms-length operation developed within or alongside the institution. Relationships between employers and institutions can also be 'brokered' by a range of third parties as employers seek to approach an institution and negotiate a specification in the early stages of production. These 'brokers' have the role of resolving the tensions in the structure of production that can characterise model C, and could include government agencies, specialist bodies and interest groups or consultants.

In Models A and B the structure and stages of the productive systems examined suggest that the social and technical relations of production are well understood in these models, although the extent of influence and role that the higher education institution has clearly differs from model A to model B. Whereas in model A the HEI enjoys discretion and has no need to invest in co-operation with a sectoral or professional body, in the case of model B these elements become important in order to secure the continued viability and value of the

provision and the qualification offered. In Model C, however, the situation is potentially much more fluid and the role of the higher education institution changes again. The lack of obvious 'expertise networks' in which mutual interests can be explored and refined, means that the higher education institution and employer need to invest in co-operation to ensure that both the social and technical relations of production are defined and agreed co-operatively. The durable co-operation that can be evident in model B is thus replaced with a relationship matrix that is less well understood by both parties, at least initially, leading potentially to misunderstandings about appropriate programme design and delivery. Frustrations with institutional processes exist (CBI 2008:24-25, DIUS 2008:27), meaning that new sets of processes, or technical relations, may need to be constantly developed by institutions to specifically meet employer needs. Alternatively, institutions may see their role as persuading the employer of the value of their approval process, linking this to the value that a qualification from the institution enjoys.

Although co-operation may develop relatively quickly between institution and employer, this may not necessarily extend easily to the employee-student. It can be argued that the role of the employee-student is particularly intertwined with the functioning of a model C productive system, as employees' co-operation and involvement is essential for effective organisational performance. Workforce development provision usually relies extensively on work-based projects (Lester and Costley 2010), often with the aim of adding value to organisational processes in addition to providing the vehicles through which employee-students engage with knowledge and develop new skills. The development of 'mutual interests' in the productive system can therefore be seen as vitally important, for the employee-student and employer, for the functioning of work processes and the attainment of a qualification, and for the institution, so that a sustainable partnership with the employer can develop and initial investment in the relationship can be recouped. Depending on the structure of the provision developed, employees may have limited discretion as to the content they study or the work based projects they engage in, leading to potential difficulties with establishing mutual interests between all parties, unless the employees are primarily approaching the programme strategically with the aim of securing promotion.

The role of the institution in Model C could approximate to that of a private training provider, aiming to sell services to organisations with the aim of enhancing organisational efficiency and effectiveness. However, institutions may also see themselves extending this role into

ensuring that organisations have undertaken a comprehensive analysis of their skills and professional needs, and to understand the range of educational and training services that can be beneficial for their organisation. There is some evidence of this from an interview with a workforce development project manager where the employer-institutional relationship was characterised by an emphasis on *'managing the employer expectations'* and not *'necessarily automatically doing what the employer asks'* leading in some circumstances to a situation where the employer had *'shifted quite significantly from their original ideas'* (Interview 2 2010). Here the institution is in a position to use its structural capital and culture of professionalism to support the organisation to think more broadly about skill needs. The *'unique selling point of HE'* some project managers believe can be conveyed in the process of having the *'confidence to challenge employer expectations and questioning...is it for the longer term?'* (Interview 2 2010). Accordingly it is seen as *'absolutely critical that we can articulate that to the employer because otherwise it would literally be that the employer might go down the training vocational ...private provider route'* (Interview 2 2010). The question therefore might arise as to whether those managing relationships within institutions have the capacity to deliver that role and, perhaps more importantly, whether employers appreciate the value of such an approach, particularly if it might cost more than working with a private provider. There are well-rehearsed arguments setting out why individual employers, and individual employees, seem divorced from the education and skills infrastructure and the assumptions of government (Keep et al. 2006, Keep 2009). If the *'confidence to challenge'* includes an argument that employers should invest more in skills to improve their productivity and performance then institutions will be aiming to succeed where governments have been failing for the last thirty years.

Higher education institutions may also perceive that they have a responsibility to ensure that particular approaches are taken to education and training that prioritise professionalism, criticality and individual development, perceiving their role as educative in a more liberal-humanist sense. Different institutional and organisational cultures can potentially lead to disagreements over the structure and content of HE provision if the institution is comparatively inflexible, aiming to maintain what it perceives as non-negotiable characteristics of higher education. This may lead to a prescriptive approach to mode of delivery, the inclusion of specific disciplinary content or assessment strategy. If an employer, however, has a very specific organisational strategy and perceives that it requires particular skills as part of this, deviation from the strategy in the interests of abstract principles of

‘higher education’ or criticality may be seen negatively, particular if these educative elements appear to add to the programme in terms of time and money. Model C therefore involves institutions in a relationship matrix that shifts the nature of the ‘customer’ away from solely individuals undertaking the programme to also include the organisation commissioning the provision. The ‘*three way learning agreement*’ (Interview 2 2010) or learning contract is an attempt to work through this process to reach an equilibrium between the student/employee, the employer and the university. In putting together agreements and establishing responsibilities a risk may emerge that the agenda or objectives of one or more of the parties is minimised or compromised, for example if the employee interest is not safeguarded in the form of a professional qualification or sector standard that would accrue some clear benefit and qualification value (Gibbs 2004). Learning and development practice, in the context of wider human resource management, tends to emphasise benefits to the organisation as much, if not more than, benefits to individual course participants, and training and development is primarily procured to meet business needs (Harrison 2005). In such situations, the inclination of many in higher education to support the individual needs of students may contrast with employer concern for learning that specifically adds value to organisation processes.

Concluding remarks

If we acknowledge the strength of the arguments of Keep et al. (2006), Lloyd and Payne (2004) and Brown and Lauder (2006) workforce development activity will not be able to fully achieve the outcomes which policies such as *Higher Education at Work* intended without a transformation in the way work is organised and skills used in the workplace. The key reservation regarding the refashioning of education to employer demands that are subject to considerable potential change over short periods of time, due to organisational and market changes, remains powerfully valid. A re-orientation of significant parts of higher education into workforce development activity may leave the consequent provision open to justified arguments that its value is questionable over the longer term. The challenge for those involved in developing new types of provision in concert with employers and government sponsored and influenced bodies is to ensure that the programmes developed are not unduly influenced by ‘nationalisation’ processes (Young 2008:97) that echo the temporary priorities of governments or industries, and retain connectivity with bodies of knowledge that will retain their value to those enrolling on those programmes over the longer term.

An equally difficult challenge may be that posed ‘internally’, by the higher education community, in terms of ongoing scepticism regarding both the practicalities and viability of delivering workforce development higher education at scale, and regarding the quality and validity of the types of knowledge produced in the workplace. Both these aspects may relate primarily to a reluctance to change time-honoured traditions of higher education culture and practice, difficulties with adjusting processes within institutions, or the pressure of other demands on academic and administrative staff. In the U.K. the generally co-operative models A and B, where both the social and technical relations of production are well understood, are themselves having to adapt to changes in higher education policy and funding, meaning that long-held assumptions may be challenged and public service partnerships may need reconfiguration. In this atmosphere, and with the withdrawal of the subsidies and capacity building monies that were offered via the HEFCE to English institutions (Kewin et al. 2011, Tallantyre 2011), the complexity of Model C arrangements can appear daunting, unless longer term relationships can be built with a secure income stream and a culture of co-operation.

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