

# How should universities be responding to the fast-changing professional and vocational worlds?

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## Abstract:

Universities are currently facing an acute crisis of identity. The focus on traditional and academic courses is being redirected to vocational programmes. Universities are turning to industry to sponsor research, and even courses, in a drive towards educational privatisation. Such a dependence could lead to pedagogic compromise. The successful graduate in vocational subjects will be defined by their ability to transfer essential skills to a fluctuating professional arena. It is only by continuous, and a responsive, alliance with the market that we can build course that are relevant to industry but also preserve their pedagogic integrity.

## Main Body of Contribution

On the 18<sup>th</sup> August, 2010, the BBC offered a provocative headline that read, *Durham University students offered Harry Potter course*, raising again debate on the role of the 21<sup>st</sup> century university in a mutable cultural, economic and vocational landscape. This discussion is in line with the investigation of the UK government White Paper of 2003, which stated that higher education needs to enable all suitably qualified individuals to develop their potential both intellectually and personally, and to provide the necessary storehouse of expertise which defines our civilisation and culture (The Future of Higher Education White Paper 2003). The dilemma of universities continues to be the conflict between meeting the needs of the economy, in terms of graduates, research, and technology transfer on one hand, and the preservation of pedagogic integrity on the other. A brief reference to historic origins shows that the rationale for the establishment and survival of universities across the world has been in direct response to the prevailing needs of the societies and cultures in which they operate. The lineage is a well-defined one. For example, the academic community at Al-Azhar, in Cairo, delivered their first lecture in 975 AD in response to the requirements of its Islamic community to provide religious instruction in an ordered and structured framework that also allowed modification by visiting authorities: an intriguingly modern concept (Goddard 2000:99). Such a model remained a standard for the mediaeval European universities and prevailed until the advent of the 19<sup>th</sup> century institution that broadened its discourse into socially-driven issues such as the roles of women, class and intellectual enquiry in secular arenas in the pursuit of providing a liberal education (Soffer 1995). Ringer (1979) identifies the emergence of liberal strands that form part of the structure in present-day higher education: inclusiveness, progressiveness, gender equality, religious tolerance and

segmentation; the latter was a tool to track diversity and development. In this model, we see the role of the university as a well-defined one, a role that was unquestioned: the university was regarded as an institute of authority but one, nonetheless, that considered that part of its academic remit was one of responsibility to its society and able to adapt to meet that role. But what of the role of higher education in the 21<sup>st</sup> century?

In an increasingly market-driven society, universities are facing their most acute crisis of identity for over a century as to what they should provide as centres of learning and teaching, how their relevance is measured alongside their research and how they meet the confusing and mutable needs of cultures, industries and markets that accelerate in their changing demands of graduate attributes. The debate to identify the revised role has progressed for nearly half a century and the granting of the 1992 Royal Charters to the polytechnics to create a new raft of universities marked a significant point in this debate as to the purpose, and direction, of higher education in the UK. Both the Robbins and the Dearing Reports (Robbins 1963; NCIHE 1997) took the view that the purposes and aims of higher education include that of preparation for employment. As Lee Hiu-hong argues (2000), the three ideologies of economic rationalism, academic capitalism and corporate managerialism form the transition from the collegiate model of the late nineteenth century and, together, now should be the structural model for the new university to meet the needs of a technologically developed world. Alongside this view, Shugurensky (1999) identifies the process of the state retreating from role of economic agent and management of the environment in which industry is the generator of corporate wealth. This suggests a relinquishing of public ownership and a reliance on industrial growth as a platform for funding that, in turn, aligns with Hiu-hong's three factors for transition.

Begun by Callaghan in 1976, the initiative for alignment with industrial demand was epitomised by the 1983-87 Thatcher government, and those that followed, for the need for cost effectiveness in all public sector services – including education – and a consequent, and discernible, repayment of investment in these sectors. Gillard (2011) identifies this as the marketization of education. Under this policy, subjects that did not lead to an obvious industrial or vocational niche, such as Pure Mathematics, were required to justify their funding and found themselves in competition with research that might promise immediate returns on investment, such as Applied Technology, representing subject areas that produced a measurable result that could plug directly into the needs of industry. In the twenty years that have followed, there has been a steady decline in the UK and industrially developed countries in the number of courses on offer that have no industrial objective. For example, Classics, the spine of 19<sup>th</sup> century academic study, saw a steady decline in A-level entries as preparation for university application from 9,223 in 1965 to 1,908 in a thirty-year period (Fitzpatrick 2002). These so called traditional and academic courses are replaced by specifically focused and unapologetically vocational programmes such as Golf Management at the University of Birmingham, and Beauty, Spa and Hairdressing at Derby University. This trend is driven by demand from entrants into the university courses, reflected by choice in the feeder programmes: for example, the Joint Council for Qualifications' most recent statistics show that

entries at GCSE in French – seen as one of the ‘hard’ subjects by The National Centre for Languages, UK – has fallen from 345,000 in 2002 to 150,000 in 2011. It is also no longer a compulsory subject in England and Wales. There have also been resulting casualties, with the closure of centres that focused on pure research, such as the Department of Physics at Reading, prompting the Science Director at The Institute of Physics to issue the statement: “University vice-chancellors are operating in an environment that is controlled by the choices of 17-year-old students” (Smith 2006). To justify their funding and teaching effectiveness, universities in the UK are required not only to reveal feedback results from the National Student Survey but also to publish statistics of graduate employability and this is another pressure to evidence results and for non-applied subjects like History to compete with vocational courses and those with direct links to industrial applications. Statistics, of course, need to be regarded with caution, as they do not reveal the level, or type, of employment immediately after graduation (a counter assistant in McDonalds, for example, as opposed to an assistant designer in an agency) and they also cannot plot the stage at which the value of a university education really bears fruit, which, according to research such as that undertaken by Elias and Purcell (2004), is much later in a graduate’s career. Nevertheless, in the competition with corporate investment in research, universities are turning to industry to sponsor research, and even courses, in an increasingly necessary drive towards educational privatisation. Whilst an attractive option, this is a funding route that could lead to pedagogic compromise: Tadmoor (2006) considers that this trend of academic technology transfer and academic entrepreneurship encompasses some of the most difficult ethical and practical pitfalls that universities have ever had to face, and have still to learn to cope with.

In line with this, Jarvis (2002) observes that capitalism has generated new global infrastructures: the control of capital empowered by information technology that has generated changes in knowledge, higher education, research and learning. Such developments in the resulting ownership of knowledge include, as Altbach ((2007) warns, corporate involvement in university research that might determine the direction of research and restrict the dissemination of results. Ownership of databases and scholarly journals by multinational media firms has introduced commercial considerations into knowledge dissemination (ibid 2007). Higher education is consequently forced into defining the problems raised by the need to respond rapidly to the increasing demands of the knowledge-based society of advanced capitalism. The arena, therefore, is no longer parochial, or even national, but now global. Mass communication facilitates the transfer of knowledge, methodologies and paradigms in such a way that the recipients of such information may not discern – or even be concerned about – the geographical, or cultural, location of the source. If it is to participate in the technological and vocational arena, and relinquish its role as a mere provider and guardian of traditional knowledge, the 21<sup>st</sup> century university must provide three tiers of proficiency in its graduates: at the base is ability in knowledge acquisition and research; above this is the sifting, selection and application of this research and, at the apex, is competence in the professional arena. Such provision is achievable if the traditional foundations are built upon but the pitfalls of providing technological knowledge, at the expense of the ability in effecting that knowledge in a creative and innovative way, are ever present.

Ill-informed applicants all too often assume that technical skills – an intimate knowledge of design software, for example – are the key to immediate employment and might be unaware of the need for the more valuable and adaptable transferrable skills of research, critical thinking, cultural awareness, assimilation, planning processing, creating and presentation. In response to this, some tertiary-level courses could be in danger of promoting the acquisition of technical skills over transferrable skills, not only in their marketing but also in curriculum design. By doing so, they are failing their graduates and, in the long term, the actual needs of their societies and industries.

Alongside the debate on how specialist knowledge should be sourced in the vocational courses meeting the demands of the corporate arena itself is the authentication of the role of the professional, or specialist, in the creative media and technological sectors in the dispersal of creative and professional authority. Bijker (1995) refers to the micro politics of power, in which technologies may be used as instruments to build up networks of influence. As desktop technology is now widely available and is becoming increasingly easier to use, diffuse sources of opinion are empowered with the ability to disseminate ideas rapidly and with the superficial guise of authority. With the advent and development of accessible technology is the ability to communicate quickly and efficiently and such accessibility has led to a democratisation of the micro politics of social groups. This has support with liberal politics and authority: Linden (1999) refers to the UN Declaration of Human Rights clause that demands the democratisation of communication in a global market economy. Therefore, the power bestowed by the ability to use obscure technology has been eroded: technical skill and the guardianship of knowledge in the elite crucibles of professional practice and tertiary level institutions has been replaced by the ability of large social groups to engage in communication, articulation and knowledge manipulation, thus presenting a challenge to the authority of both the media professions and the university that provides its graduates.

But how does the university sit in its changing role, in terms of its relationship with this technologically empowered societal community? Bijker argues that, through the acquisition of technological power and knowledge, the pre-existing distinction between experts and laypeople has been eroded, and the boundaries between the two continue to be blurred. First, the constructivist analysis of technology and scientific knowledge shows that an increasing number of social groups are involved in matters of science, communication and technology, and that these groups accordingly have their own particular expertise and their own methodologies of knowledge accumulation and organisation outside both the profession and the university. Secondly, as Barber (1990) notes, the analysis of this democratisation of knowledge ownership and its communication shows that it is possible to translate this observation of technological and scientific development into a political strategy, and it is the ability to manipulate this type of strategy that will empower the graduate in the evolving, post-industrial world (Barber 1990). Established bodies of learning and representation of the professions may view this as anarchic but it is a process that they cannot change. Instead, the manipulation of the fragmentation of knowledge and empowerment should be built into the curriculum, for the radical practitioner may refute the status quo, devise new and more applicable methodologies and thus

acquire greater control of the creative and professional process in increasingly competitive domestic and world markets. In this might reside the new format for the vocational courses. Role models are not hard to find. Innovative and adventurous practitioners, such as James Dyson, in product design, Saul Bass, in motion graphics, and Milton Glaser, in graphic design, are but three examples of practitioners who deviated from accepted norms, relinquished functional fixation and provided fresh visions and solutions. If universities are to adapt to changing needs, the common factors in such innovators are starting points from which to trace a progress in reverse to the initial engagement with the subject in the learning environment. As Krebs (1998) asserts, professional and industrial relevance, effectiveness, success and the effective use of the culmination of the learning process lies not in the sophistication of technology only, nor just in an advanced learning culture, but in the symbiotic combination of both. Operation to the fore in the marketplace, he states, is often found in complex, context-sensitive, knowledge that is difficult – if not often impossible – to codify and store. This core knowledge is found in individuals, relevant communities and, in turn, their connections and it is this vein that higher education institutions might tap into to provide a knowledge source outside the conventional curriculum (Krebs 1998). It is in understanding, facilitating and conveying this symbiosis that universities will prove their relevance and effectiveness in their capacities as learning environments.

In an increasingly mutable environment, Junnarkar and Brown (1997) assess the multi-skilled use of technology first, in terms of mechanisms to facilitate knowledge creation, secondly, the information sources organizational decision-makers use and, thirdly, sense-making activities to support innovation (Junnarkar and Brown 1997). The key words here are knowledge creation, information and innovation. In order to meet the changing demands of industry, these are the areas in which our graduates need to operate and which must be integral with the specialist strands of our courses. As Lowden and Hall (2011) identify, critical literacy and the ability to adjust thinking skills to a malleable market situation are essential transferrable skills that must underpin all of the specialist disciplines in the university. A supposition that flexible thinking is embodied in the curriculum is an easy assumption to overlook in course design and evolution. Vocational subjects, such as design, animation or filmmaking, are particularly vulnerable to a well-used approach to a brief by their students, driven by an increasingly formulaic stream of production by the media industries that, faced with the need for instant returns on sponsors' and clients' investments, resort to safe and tested solutions. This, in turn, exerts pressure on universities, by their applicants, to rise to the expectation of being training courses, in place of learning courses. There is a difference. The first is method driven, based on the acquisition of skills; the second requires the same skills but, as Howard-Jones (2002) argues, develops an understanding of how to use those skills in a creative, self-analytical, generative methodology.

In such a learning environment, knowledge is created by journeys of discovery, based on research; this, in turn, provides a new tier of information and it is from this that the application of creative thinking may provide the route for innovation. Such a developmental process seems self-evident but could be militated against by the modular structure of many tertiary level courses internationally, even though this

model allows, as Leask (1994) argues, for more precise assessment strategies. In the modular structure, the process is broken into segments – module elements might not be contiguous, owing to timetable constraints or careless course design – and the accomplishment of each represents a rapid reward to the grade-chasing learner who might then fail to form connections and links between each learning experience. Those in professional media practice find this a common pattern: each commission, or brief, represents an end in itself, and the elements in concurrent projects might bear little relation to each other. Universities may provide an alternative, a crucible of refuge in which cross-fertilisation occurs, and where the student or researcher has time allocated to explore ideas in depth, in a process that has a conterminous structure, in an environment that is critical only of the concept, not of the budget, and where success is rewarded by the accomplishment of innovation within the discipline, not by commercial dominance. By fostering a culture of innovation – creative practice that feeds into industry and which, at the same time, expands widening awareness within the corporate culture – the university is demonstrating its relevance to its society. In attempting to establish such an environment, it would be tempting to rely on terminology to brand elements in the learning experience, and assume that the label will deliver the solution. One such adjective is the word “creative”. Because innovation is qualitative, not quantifiable, creativity is impossible to teach, other than by introducing methods by which lateral thinking might germinate and flourish. The penalty is the linguistic exhaustion of the term “creative”, such that it is submergent in its context, an adjective that has lost all currency, or that it is commodified and fed formulaically to students as an ingredient of engagement, a process that Sir Ken Robinson warned against in his now widely-known speech at the TED Conference, 1998 (Robinson 2006). He argues that education is increasingly directed to produce workers, rather than innovators. Students with restless minds and bodies — far from being cultivated for their energy and curiosity — are ignored or even stigmatized, with consequences that do not serve their culture or their communities. If universities, in their evolving role, are to remain relevant, they must face the quandary of either relying on the demands of a creative process within the curriculum to develop an embedded experience in innovative thinking – which is difficult to assess, monitor and moderate – or, alternatively, inserting a segregated strand into the programmes that represent the theoretical and contextual element to support the practical activity. By so doing, this essential aspect of the students’ learning experience is included and identifiable but the latter model could be at the expense of student engagement and the ability to assimilate such skills into their practice: theoretical studies could be seen as an irrelevant component by the less culturally aware student. If universities are to provide a relevant, indispensable and sustainable role in their world stage, it is the intellectual, critical, investigative and adaptive attributes of the degree, not the name of the award, that should form the basis on which courses are designed, taught and defended.

Entry into the marketplace is the point at which the interface between the degree course and employer expectation is tested, and which is a measure of characterising what function the role of the university in the 21<sup>st</sup> century should fulfil. In a research project of employer satisfaction with recently recruited graduates, Hong Xu and Hsin-liang Chen (2000) discovered that employers have higher expectations for the positions in terms of qualifications and responsibilities than the description of the

position reflects. In other words, there is a significant gap between the attributes listed in job advertisements, and reality in regard to how the education requirements, work experience, job responsibilities, and areas of knowledge and skills meet the actual demands of the job. This raises the question of employer perception of the relevance of vocational higher education and an obvious dearth of communication between the universities and industry. Little et al. (2003) in a Learning and Skills Council research project found that there was evidence, in some sectors, of large employers trying to move away from reliance on specific higher education qualifications as an indication of an individual's possession of certain skills and attributes. In one instance cited by Little, a typical graduate recruitment programme had resulted in artificial development initiatives that did not necessarily meet their business needs. As a result, this was replaced by a wider recruitment initiative to draw in young people from sources other than degree courses, and focus more on the jobs and roles currently available. In this way, they hoped to tailor their recruitment, selection and induction much more to role and career path.

Such evidence could be cause for concern, as it suggests a divergence between the needs of the growing marketplace and the provision by universities in the uncertainty of the shape, role and responsibility of higher education. This deficiency could be addressed by professional practice modules, driven by employer collaboration, work placement components within specialist courses that open a dialogue between employer, course designers and student, and employer input into course design. Within this opportunity, Little finds that, in certain areas of professional employment, demand and provision are being driven by employers seeking new types of education and training programmes to develop the appropriate set of high-level vocational skills now required in their industry. On a positive note, in these evolving demands, the essential transferrable skills will always apply and Bloom's well-known taxonomy – the application of knowledge, based on comprehension, which is consequently analysed and synthesised, is finally evaluated (Krathwohl, Bloom and Masia 1973) – has the potential to form the fertile foundation for the confident nourishing of innovation within the vocational graduate's professional practice. A graduate who has been conditioned to re-evaluate their role in any given, and fluid, situation can react positively to the possible problem of employer intransigence and cultural myopia, identified by Kelly (1999) and confidently define their role within apparently rigid professional practice parameters.

Supporting this, Brint (2003) defines the professional sector of the occupational arena as one that relies on higher education as a requisite to access to key markets. In an ideology that is described by a collective organisation of common consent, the media professions demand, as Morgan (2002) notes, graduates who are curious, insightful, communicative and who have a clear understanding of the cultural, political and economic environment in which they operate. As we have already seen, the university, therefore, needs to make its students aware of the segregation between the technical application and the professional and theoretical directive and draw empowerment through the symbiosis of both. As Freidson (1986) observes, in an occupationally less secure world, authority can be assumed through an occupational principle, a self-empowerment, as opposed to the administrative authority based on the traditional, hierarchical employment structure (Freidson 1986).

Universities must instil this idea of authority invested in the practice but in such a way that the elements that comprise and justify that authority are definable, recognisable and flexible enough to meet the needs of changing knowledge domains and commercial markets.

To conclude, the successful graduate in vocational subjects will be defined by an ability to transfer essential skills in creative thinking to a fluctuating professional arena, express a clear articulation of role, and adopt a flexible approach to problem solving. They will have the confidence of their own ability to define their value and potential and to apply that to a redefined contribution to the global industrial and technology-based markets. As Kemp and Seagraves (1999) assert, these intellectual and personal skills should be underpinned by the acquisition of transferrable skills that lie outside – though allied with – their specialist subject. They will have the capability to see processes evolving outside the demands of the immediate task or brief and to manipulate those processes, to their advantage, by importing their constituent ingredients into their practice. In addition, they will be able to communicate verbally, visually and formally and with eloquence in order to exercise powers of persuasion.

Universities are already meeting the need to nurture these attributes – examples are the multi-skilled practice and integrated transferrable skill model within specialist strands in Digital Arts at the University of Worcester, and a similar model in the Department of Creative Industries at the University of the West of England – and it is only by collegiate cooperation, and by the sharing of good practice, that the university of the 21<sup>st</sup> century will achieve, and maintain, its relevance as a provider of graduates who are matched to professional practice whilst continuing as crucibles of learning, knowledge transfer, research and development. Such a challenge will require awareness, the ability for reflection and monitoring, and a stronger interface with industry: the employers who, in turn, must maintain an open minded understanding of the need for innovation over mere vacancy filling. This is a far step from the 19<sup>th</sup> century model and the formation of these elements is already in place, in programmes, such as those above, that extend experimental thinking, critical analysis, professional practice and, above all, creative processing but these are simply the foundation of a development within the curriculum. The interface with the post-industrial world is complex and fluid and it is only by a continuous, and responsive, alliance with this market that we can continue to build courses of relevance to industry but, simultaneously, preserve pedagogic integrity.

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