

Character and impact of social innovation in higher education

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Abstract

This article offers a strategic multi-layered model for assessing the character and impact of social innovation in higher education connecting social and economic benefit. Whilst research to date has recognised the varying importance of the social and economic benefit of social and technological innovation, the literature is mostly silent on the contribution of purpose and strategy in achieving effective social innovation or how a regionally embedded university can maximise its impact in its community and the wider society. Whilst technological innovation is a critical component of future economic growth, social innovation is equally important in building social capital and in improving life chances. Governments have widely recognised that a university provides economic, environmental and cultural benefits to its community and, critically, should play a central role in re-balancing the economy of a community under stress and promoting growth in one that is prosperous. In the absence of well-documented, convincing examples of such re-balancing, this article offers a case study of The Hive, the first combined University and Public Library in Europe, an example of a strategic approach to social innovation in higher education that is bringing current and potential social and economic benefit to the community in which it is located. A measure of impact is proposed that is multi-layered and reflects the range of qualitative and quantitative impacts of social innovation. This paper has value to all those concerned to identify, plan and maximise the beneficial impact of social innovation in higher education institutions both on their economies and their communities.

Key words: Higher education, strategy, social innovation, impact, economic development

Introduction and context

This article offers a strategic multi-layered model for assessing the character and impact of social innovation in higher education connecting social and economic benefit. It is written in an English context, though its principles may have wider relevance and application. Whilst research to date has recognised the varying importance of the social and economic benefit of social and technological innovation, the literature is mostly silent on the contribution of purpose and strategy in achieving effective social innovation. Social innovation is variously defined, though central to most accounts is the idea of managed change involving new ideas flowing into or out of an organisation to create wider public benefit or value. This contrasts with the dominant model of innovation that equates it with technological development, a model promoted by successive governments through technology strategy initiatives, and unsurprisingly supported by universities strong in science and technology, but of marginal significance to many HEIs, particularly smaller and specialist institutions. Education across all sectors has increasingly been dominated by a utilitarian discourse of means-ends analysis, that leaves little room for talk of ethics and the fundamental moral purpose of education, which I argue are central to any conception of social innovation in an educational context. Many smaller and specialist HEIs cannot demonstrate high levels of technological innovation, but many are very strong in social innovation by virtue of their focus on professional workforce development and transformative local and regional partnerships and civic engagement (GuildHE, in press). At the heart of this article is the proposition that the purpose of education is to bring about change and improvement in individuals and the wider society. It offers an educational perspective on social innovation designed to achieve transformational change, supported by

an illustrative case study of social innovation in an English university, a £60 million new build project creating the first joint University Public Library in Europe.

In an age of economic uncertainty, governments increasingly demand that education gives a strong economic return for the significant national investment that it absorbs. This call is frequently embedded within a discourse of lifelong learning that stresses jobs and skills. Higher education in particular is expected to contribute by providing highly skilled and entrepreneurial graduates who will drive forward economic growth through their active participation in the knowledge economy (Cabinet Office, 2006). Critics suggest that all too frequently lifelong learning debates are skewed by a government-led instrumentalist focus on the needs of the economy; that is, the effect of marketisation at the expense of educational and social benefits to individuals and communities (Field, 2006; Hemsley-Brown, 2011; Hodgson & Spours, 1999). Whilst technological innovation is a critical component of future economic growth (UUK, 2011), social innovation is equally important in building social capital and in improving life chances, for example through social inclusion, community building and higher level skills development. To be clear, my argument is not to question these economic priorities, nor to discount the value to the economy of technological innovation, rather that social innovation in higher education stimulates and sustains diversity, social inclusion, citizenship, and local learning communities and partnerships, that these too are central to economic growth and regeneration, and that it is therefore important to re-connect the social dimension of education with the economic.

It is important to recognise that universities have differing missions and priorities. In many countries, there are universities that prioritise, to different degrees, learning and teaching, research, and knowledge transfer. Indeed, within universities, these priorities vary, increasingly so as government research policies and funding presage increasing selectivity, leaving some subjects and departments with little choice but to seek alternatives to research to secure their reputation, growth and income. This can be challenging. Unless a university espouses a direct ambition to develop and foster its social and community presence and influence, the time and investment of resources needed to have a significant impact will be difficult or impossible to generate. However, as Brennan, King, and Yann (2004) have convincingly shown in their study of universities in 25 countries in Central and Eastern Europe, sub-Saharan Africa (including South Africa), Central Asia and Latin America, in each country studied researchers identified, despite national and geographic differences, commonalities in the “role of universities in regional regeneration and about their contribution to the creation of knowledge economies and fairer more socially inclusive societies” (Brennan et al., 2004, p. 58). As the role of universities as leading institutions in their society becomes more open to question (Collini 2012), it would be surprising if increasing numbers of universities did not seek to embed their institutions more securely within the local polity and economy, and to measure and evaluate their impact in doing so.

Although education for social change and community development has been a powerful theme informing many educational developments during the last century (Elliott, Fourali, & Issler, 2010) these debates have invariably been far removed from economic impact studies of educational organisations that for understandable reasons favour more easily quantified outputs. Undoubtedly one of the factors accounting for this gap is the absence of any consideration of the role of purpose and strategy in assessing impact.

Universities are in the business of knowledge creation and dissemination (Browne, 2010). It is widely recognised that universities play a major role in promoting and sustaining

economic prosperity, through their research, knowledge transfer, and creation of a skilled graduate workforce (Dearing, 1997). What is less clear in the policy or theoretical literature is how a regionally embedded university can maximise its impact in its community and the wider society – a problem identified by Andre, Carmo, Abreu, Esteve, and Malheiros (2009) who call for ‘a research agenda focusing more centrally and explicitly on the relationships between education/learning and socio-spatial cohesion, and which can frame more progressive public policies’ (Andre et al., 2009, p. 6). The need for this seems implicitly recognised in a recent government review of business – university collaboration, in which it is asserted that ‘a university provides economic, environmental and cultural benefits to its community and, critically, should play a central role in re-balancing the economy of a community under stress and promoting growth in one that is prosperous’ (BIS, 2012, p. 80).

In the absence of well-documented, convincing examples of such re-balancing, this article offers a case study of a strategic approach to social innovation in higher education that is bringing current and potential social and economic benefit to the community in which it is located. As the only university in Herefordshire and Worcestershire, two large counties in the West Midlands of England, the University of Worcester has developed a strategic role as an engine of regeneration and growth, locally and regionally embedded, whilst maintaining international excellence for its research specialisms and one of the strongest national student applications profiles in the UK¹. These themes are explicitly brought out in the institution’s strategic plan 2012-17 which outlines the university’s key role in generating investment in human and physical capital, but goes much further than this:

However, the role of universities in the 21st century extends far beyond the contribution made to the economy. In some areas of society the purpose and value of higher education is being questioned. It is therefore important that universities are able to demonstrate the wider role they play in society and their contribution to public benefit: the transformational role they play in the lives of people through widening access and inspirational learning and teaching; their contribution to the social and cultural lives of the communities they serve; the improvements they make in the health and wellbeing of people, through the application of research and knowledge exchange to public and other community services. (University of Worcester, 2012, p. 3)

It is important to recognise how explicitly the strategic purpose is expressed in framing the University’s role in innovation, educational development and regeneration. In other words, purposeful innovation doesn’t simply happen, it must be planned and managed in a way that can only be achieved if transformational change is at the heart of the University’s mission and values.

Measuring the impact of social innovation

The vital role of universities in contributing to regional economic, social and cultural development has been widely recognised in the policy and theoretical literature (CVCP, 1994; McNay, 1994; NCIHE, 1997; Rosenberg, 2004; Thanki, 1999). However, the character and extent of universities’ contribution to the harder to quantify aspects of social and cultural development is less evident, with the result that the importance of these

¹ In the period 2010-2012, the University of Worcester recorded the highest percentage increase in applications of all English non-specialist HEIs.

contributions is consistently underplayed. Thanki (1999) calls for “more effort [to] be made to develop assessment tools that are implicitly development focused [that] will continue to be grounded in institutional economics but will also incorporate national innovation system theory and build in qualitative analysis to deal with the indirect economic contributions to the development of regions” (Thanki 1999, p. 89). However whilst her contribution usefully recognises this gap, she does not develop how it might be filled.

A way forward is to use a measure of impact that is multi-layered and reflects the range of qualitative and quantitative impacts of social innovation. During the last decade, community and voluntary sector organisations have begun to use a measure termed the ‘Social Return on Investment’ (SROI) that can be used to calculate the social value created by a whole organisation or single activities (Cabinet Office, 2009). The methodology can be evaluative or predictive – retrospectively analysing the impact of past activities or assessing the potential of future ones. It is a detailed process, involving scoping with stakeholders (partners), mapping outcomes (showing the relationship between inputs, outputs and outcomes), evidencing outcomes (giving them a value), establishing impact (e.g., removing things that would have happened anyway or brought about by other factors), estimating the social return on investment (summing the benefits, subtracting any negatives and comparing the result to the investment), reporting using and embedding. This approach shares a number of features with cost benefit analysis and social accounting, particularly the key principle that a complex range of social benefits can be identified, assessed and given a value – although not necessarily a financial one.

The strategic multi-layered model for the impact of social innovation (Figure 1) is a step towards a balanced impact methodology. The model is designed to capture more subtle and qualitative aspects of the innovation of the joint University Public Library and to assign these a value, alongside more established quantitative economic indicators of impact. It follows the principles described above, but adds the important dimension of purpose and strategy, enabling us to address the question: how does this project contribute to the fundamental purpose of education? Education has at its core a moral purpose – to make a difference, to bring about improvements – and therefore “judgements about value are essential to the educator, both as the unconscious background to his (*sic*) enterprise and in the day-to-day conscious decision taking which is essential at many levels in a national system of education” (Bantock, 1965, p. 17).

Despite its two dimensional presentation here, the model should be thought of as a virtuous spiral - a sustainable cycle of escalating performance—in which the different elements combine to produce transformational change and improvement that is rooted in moral purpose.

<i>Aspect</i>	<i>Measure</i>	<i>Source</i>
Purpose and Strategy	Coherence Partnerships	Core values Mission statement Strategic plan
Education and Skills	Widening access Increasing participation Graduates	University Registry Partner colleges
Business	Development Growth Employee and other job creation	Chamber of Commerce

Regeneration	Business performance Inward investment	Economic Development Unit
Community	Engagement Inclusion	County Inclusion Team
Culture and Tourism	Visitors Leisure destination Exhibitions and events Users and diversity	Discover Worcester Destination Worcestershire Hive
Unforeseen	Any other impacts	As arising

Figure 1: Strategic multi-layered model for the impact of social innovation

I now discuss some key aspects of social innovation in order to characterise the nature of their overall contribution and in the final section I explore how these can be measured and evaluated.

Social innovation in higher education – case study

Purpose and strategy

If an innovation is to be transformative it must itself bring about a desired and desirable state. Transformational innovation in higher education, therefore, must be anchored in an institution's core purpose, which of course immediately takes us into disputed territory. Students, teaching and professional staff, middle and senior managers, governors, community, partners, government – all of these and more besides are serious stakeholders in the university and will define their own purpose and make different demands upon the university's resources and capability. University leaders, though, have a particular responsibility to ensure that these demands are balanced, particularly given the sharp turn towards a discourse of performativity that has had such an influential impact upon education across all sectors in recent times (Ball, 2003). Above all, though, there is universities' moral responsibility of service to humanity and society. Although deeply unfashionable to think and speak in such terms, to the extent that government, media and countless other stakeholders have adopted a utilitarian view of what a university is for, a moral perspective is vital to protect the higher purpose of universities. Since shared core values are critical to successful transformational partnership change projects (Elliott, in press), purpose and strategy need to be highly visible components of innovation discourse, in order that staff, partners and community understand the bigger picture. Such a perspective will also assist with practical issues, such as leveraging funding through strategic partnerships, and difficulties that may obstruct developing stages of the project, that may be difficult to overcome in the absence of an overarching vision-led frame of reference.

In 2012 The Hive, the first joint University Public library in Europe was opened, adjacent to the University of Worcester's new city campus that opened two years earlier on the site of the derelict Worcester Royal Infirmary. Working closely with local MPs, local authority councillors and officers, the university gained the support of the former regional development agency Advantage West Midlands, to purchase from the National Health Service the former hospital land and buildings. The University has renovated and adapted the main hospital building and is in the process of landscaping the remaining site, thus creating a new city campus, home to the Worcester Business School. Businesses in the city and employer organisations have been fully engaged in planning how the new library and campus will support new business growth and development.

At a time when many public libraries are being closed, the university entered into an innovative partnership with the local authority, Worcestershire County Council. The partners have a shared strategic vision that makes this development work for both: the County commitment to social inclusion is mirrored in the University's to widening participation in higher education. Both partners are committed to extending learning opportunities throughout the community. Set out over four floors, The Hive is an outstanding and eye catching addition to the Worcester Cityscape. A new building faced in glass and gold metallic sheets, it houses one of the largest childrens' libraries in the country, consistent with its aim to draw in children and parents to build a relationship with the university. The services and experiences offered will engage that part of the wider community who currently use few local authority services, as well as continuing to attract existing users. There is an aspiration that members of the public will be working alongside university students. For the University, the potential of the Hive, right next door to its city campus, for extending access and widening participation are immense; this outreach agenda was central to the rationale for the building project, and partners were invited to share it, and, crucially, did so.

Education and skills

The Hive and City Campus support the university's strategic aim to be an outstanding place at which to be a student and an outstanding place at which to study. Developing successful courses that attract students and prepare them for employment is one of the core functions of a university. The university has developed its curriculum in line with known and predicted needs, identified through close co-operation with employers, local businesses, professional bodies, and employer organisations. It has established a variety of collaborative provision and progression links with partner colleges and private providers in the region, and some innovative collaborative provision with national organisations, for example in parenting education with NCT (National Childbirth Trust). These contribute to widening participation and increasing access especially within the region as most of UW's students are part time and regionally based. A pool of highly skilled graduates is created, many of whom will remain in the region. Additionally a proportion of full-time students who travel from all over the country to study at Worcester will remain in the area after graduating. A study in the US estimated the proportion who stay to be 22% (Blackwell, Cobb & Weinberg, 2002). Many studies point to the higher earnings potential of graduates, meaning that more income can be spent in the region (e.g. Beck, Elliot, Meisel, & Wagner, 1995). Graduates have a positive impact upon society as professional workers in schools, hospitals, local government and a wide range of other professions and services.

Business

The new university developments will support existing business through the continuing professional development of employees, managers and leaders, provision of business information resources, meeting and conference facilities, providing a continual stream of newly qualified graduate and post-graduate talent, and attracting new businesses into the area (Greenwood, Griffin, Owen, & Pfalzgraff, 1996). There are specific benefits that Worcester Business School, relocated to the new City Campus, will bring to the regional economy (Cox & Taylor 2006), through its programmes and courses, events, business collaboration, consulting and advisory services. The Hive contains a business development library and extensive business resources and advice, with enhanced access enabled by the facility's extended opening hours during the working week and at weekends. The university grows as an employer through its campus and library developments, creating full-time and part-time job opportunities across a wide range of service and specialist sectors.

Regeneration

Research has shown that universities can have a substantial and influential involvement in regeneration and the creation of sustainable communities (Robinson & Adams, 2008). The University of Worcester has adopted a partnership approach to regeneration, working in close co-operation with local and regional authorities and economic planning bodies to create a consensus for transformational change, thereby ensuring that its plans support sustainable regeneration within its local community. The Hive and city campus occupy land and premises that were previously unused and derelict. The city council agreed to relocate its waste disposal site to make way for the new development. The vision for the initiative is to create a new learning and cultural quarter for the City of Worcester, serving the people of the region. During the development of the site, the City Council re-wrote its strategy: “Be recognised and promoted as a first rank university and cathedral city, with a high skill, high value-added economy, supporting growth in knowledge-based industries, whilst continuing to contribute to the growth of existing industry and commercial sectors and recognising the importance of tourism.”² The city campus and The Hive are central to this objective. MPs and key employer organisations were consulted and invited to join the challenge to create something truly different.

Community

From the outset, the university has predicated The Hive and city campus development on its mission to increase access and widen participation in higher education. Locating the new university facilities in the heart of the city, and the aspiration for a joint university public library were strategic choices in line with this mission. There are a number of linked aspects to this. Inviting children in with their teachers, families and carers, to enjoy books and other resources and facilities alongside university students, so to be in the university and to understand it is for them. Community services available via the local authority hub located on the ground floor of the Hive, drawing in people who may never have associated with a library or university. University staff working alongside local authority staff, with volunteers on duty to help and encourage full use of the facilities. Exhibitions, displays, performances, events, collections, and other presentations to showcase the work of the university and widen its reach to local people young and old. Whereas the university was formerly located solely on the edge of the city, it is now highly visible at the heart of the city, with pedestrian walkways linking directly to the city centre.

Culture, sports and tourism

Different aspects of culture, sports and tourism are directly supported by the university’s curriculum, including English and Drama, Heritage Studies, Business and Management, Sports and Exercise Science, Outdoor Adventure, History, Art and Design, Environmental and Cultural Studies. The Hive incorporates a History Centre that celebrates local history and heritage. The George Marshall medical museum is based in the city campus, attracting visitors into the university and connecting the university building with its former use as the Worcester Royal Infirmary. A major part of the university’s commitment to inclusion is provision for those with physical disabilities. The Worcester Arena will be the region’s first sports facility specifically designed for wheelchair athletes, and will be home to some UK wheelchair sports teams, as well as offering an inspirational facility for local school and community teams. The Hive features a flexible performance space and has a full programme of lectures, performances and other events of local and wider interest.

² <http://www.worcester.gov.uk/index.php?id=2542>

Measuring and evaluating the impact of social innovation in higher education

It is a core purpose of the university that it should bring about improvements, whether in learning and teaching, research or knowledge transfer. There is a range of quantitative measures that we can use to demonstrate improvements in performance, and some of these will be required to evaluate social innovation. However, these measures only reflect past performance and not potential. Since social innovation has far reaching effects that include both short-term and longer-term outcomes, quantitative measures of retrospective economic performance alone will not suffice. To capture the complexity and full and future potential of social innovation, it is therefore necessary to utilise a range of measures, both quantitative and qualitative. Taken together, this methodology can inform both planning and evaluation of future social innovation in higher education. Before identifying appropriate impact measures, there are process measures that are appropriate to draw out at this point. These are shared as a set of principles to guide social innovation in higher education rather than a rigid programme to be followed by others. Firstly, social innovation in higher education must be strategic. The development should be completely consistent with the values and mission of the university. Second, ethical leadership is essential, to ensure that the innovation purpose is educational to the benefit of students and the wider community. Third, the rationale for the innovation should be clearly communicated to all staff and students, so that the development is a whole university enterprise not belonging to one single part. Fourth it is vital to pay attention to the clustering of external partnerships that together give impetus and force to social innovation. These are often high level and include local and national politicians, employer organisations, regional and planning agencies, educational partners, arts, cultural and civic organisations.

Education and skills impact can be measured by growth in student numbers, graduates resident in the region, graduates from outside the region retained after graduation, positive impact of graduates in employment, employer engagement in course design, delivery and evaluation, earnings potential of graduates, progression links with partner schools and colleges, the quality of educational outcomes.

Business impact must be concerned with the effect on both existing and new business growth, inward investment, CPD and training events and take up of these, business expansion, support for entrepreneurs, employers attracted to the area, economic outputs and profitability, employment rates, business start-ups, apprenticeships.

Regeneration measures are highly visible and reflect the changing physical landscape, together with changing patterns of use, investment in land, buildings and associated infrastructure, environmental sustainability measures.

Community measures can draw upon a range of quantitative and qualitative indicators of stable and cohesive communities including health, welfare, education, crime, community based partnerships, neighbourhood and community surveys, and focus group data.

Culture, sports and tourism data are readily available through tourism and arts organisations, focusing on facilities usage, exhibitions, displays, installations, performances, events, day, weekend and long stay visitors, sports teams, events, competitions.

It is important to recognise that these factors are indicative, and that an important process in evaluating impact is initial scoping of benefits that are agreed to be within scope of

the innovation(s), and the relevance and adoption of these within each partners' own purpose and strategy. Once these are agreed, it is the combination and interaction of these factors that must be captured to demonstrate the power of social innovation. The point about multi-layered systems is that they defy simplistic analysis and explanation; they are complex because the reality is complex. Whilst the impact of technological innovation is relatively straightforward to demonstrate, the impact of social innovation is much harder to measure, and will require qualitative methodologies that are sensitive to social, cultural and environmental change. An evaluation model based the principle of social return on investment, linked to purpose and strategy, as suggested here gives universities a ready tool to demonstrate the subtleties of public as well as economic benefits of social innovation, and usefully connects the higher purposes of education with both. Social innovation in higher education is a radical and risky undertaking, because it questions the orthodoxy or assumptive world of formal educators that universities should research and teach and transfer knowledge from within the ivory tower. However, this is a challenge that universities must accept if they are to sustain their influence in a changing world that increasingly comes to question what a university is for.

In this article I have outlined a strategic multi-layered model for assessing the character and impact of social innovation in higher education connecting social and economic benefit. There is no doubt that, in the case study institution, it is impossible to understand the full impact of the city campus and joint library project without taking into account the purpose of the project and how it enhances educational provision, the range of social and cultural benefits, the way the project has brought strategic partners together, and the potential for further social innovation to benefit the university and its community. In essence the city campus and Hive projects are deeply educational, highly innovative, and will provide enduring inspiration to students, residents, businesses and the wider community. It is hoped that other universities will be similarly inspired to develop social innovation that seeks to create an enduring legacy.

References

- Andre, I., Carmo, A., Abreu, A., Estevens, A., & Malheiros, J. (2009). Learning for and from the city: the role of education in urban cohesion. Retrieved from http://www.socialpolis.eu/uploads/tx_sp/EF07_Paper.pdf
- Ball, S. (2003). The teacher's soul and the terrors of performativity. *Journal of Education Policy*, 18(2), 215-228.
- Bantock, G (1965). *Education and values*, London: Faber and Faber.
- Beck, R., Elliot, D., Meisel, J., & Wagner, M. (1995). Economic impact studies of regional public colleges and universities. *Growth and Change*, 26(2), 245-266.
- Blackwell, M., Cobb, S., & Weinberg, D. (2002). The economic impact of educational institutions: Issues and methodology. *Economic Development Quarterly*, 16(1), 89-95.
- Brennan, J., King, R., & Yann, L. (2004). *The role of universities in the transformation of societies*. London: Association of Commonwealth Universities, and Centre for Higher Education Research and Information.

- Browne, J. (2010). *An independent review of higher education funding and student finance (The Browne Review)*, Independent government report for Department of Business, Innovation and Skills. Retrieved from <http://www.bis.gov.uk/assets/biscore/corporate/docs/s/10-1208-securing-sustainable-higher-education-browne-report.pdf> .
- Cabinet Office. (2006). *Prosperity for all in the world economy – world class skills (The Leitch Review of Skills)*. London: HMSO.
- Cabinet Office. (2009). *A guide to social return on investment*. London: Cabinet Office.
- Collini, F. (2012). *What are universities for?* London: Penguin.
- Committee of Vice Chancellors and Principals (CVCP). (1994). *Universities and communities, A report by the Centre for Urban and Regional Development Studies for the Committee of Vice-Chancellors and Principals*. London: CVCP.
- Cox, S., & Taylor, J. (2006). The impact of a business school on regional economic development: A case study. *Local Economy*, 21(2), 117-135.
- Dearing, R. (1997). *The National Committee of Inquiry into higher education (The Dearing Report)*. Independent Government Report, Retrieved from <http://www.leeds.ac.uk/educol/ncihe/>.
- Department of Business, Innovation and Skills (BIS). (2012). *A review of business – university collaboration, (The Wilson Review)*. London: BIS.
- Elliott, G. (in press). Policy, performativity and partnership: an ethical leadership perspective. *Research in Post-Compulsory Education*, 17(4).
- Elliott, G., Fourali, C., & Issler, S. (2010). *Education and social change: Connecting local and global perspectives*. London: Continuum.
- Field, J. (2006). *Lifelong learning and the new educational order* (Revised ed.). Stoke-on-Trent: Trentham Books.
- Greenwood, M., Griffin, C., Owen, A., & Pfalzgraff, E. (1996). *University of Colorado: Economic impact study*. Boulder: University of Colorado, Colorado: Office of Central Information and Analysis.
- GuildHE. (in press). *Maximising and sustaining the contribution of small and specialist higher education institutions to regional and national growth*. London: GuildHE.
- Hemsley-Brown, J. (2011). Market heal thyself: The challenges of a free market in higher education. *Journal of Marketing in Higher Education*, 21(2) 115-132.
- Hodgson, A., & Spours, K. (1999). *New Labour's educational agenda: Issues and policies for education and training from 14+*. London: Kogan Page.

McNay, I. (1994). The regional dimension in strategic planning of higher education. *Higher Education Quarterly*, 48(4), 324-36.

National Committee of Inquiry into Higher Education. (1997). *Higher education in the learning society*. Report of the National Committee, London: NCIHE.

Robinson, C., & Adams, N. (2008). Unlocking the potential: The role of universities in pursuing regeneration and promoting sustainable communities. *Local Economy*, 23(4), 277-289.

Rosenberg, N. (2004). *Innovation and economic growth, Discussion paper for OECD*, Retrieved from <http://www.oecd.org/cfe/tourism/34267902.pdf> .

Thanki, R. (1999). How do we know the value of higher education to regional development? *Regional Studies*, 33(1), 84-89.

University of Worcester. (2012). *Strategic plan 2012-17*. Worcester: University of Worcester.

UUK. (2011). *Efficiency and effectiveness in higher education (The Diamond Report)*. A report by the Universities UK Efficiency and Modernisation Task Group, prepared by Professor Bob Diamond on behalf of Universities UK. London: UUK.

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