Managing Knowledge Transfer Partnership for a rural Community: the Outcomes at Wirksworth, UK.

Structured Abstract:

Purpose

This paper proposes a knowledge transfer partnership model, using Higher Education (HE) students researching in the United Kingdom. It is focused on community engagement via charitable trusts, New Opportunities Wirksworth (NOW) & Ecclesbourne Valley Rail (EVR). The researchers designed and implemented a pilot study that explored the potential of a small, yet attractive and active, market town to diversify and regenerate using tourism. This project, which has been funded by the UK Higher Education Innovation Fund (HEIF), has been devised to operate and monitor a knowledge transfer partnership (KTP) in the culturally important heritage market town of Wirksworth, in Derbyshire.

Design, Methodology, Approach

A systems-thinking constructivist approach is used (Checkland & Scholes, 1981; Kolb & Kolb, 2005) and employs problem-based learning (PBL) through engagement of students in research and data collection. We identified that skills for sustainable development within the community are dependent on the re-integration of complex, inter-dependent and inter-disciplinary factors. A holistic approach to the learning and knowledge shared within the community underpins UK initiatives to promote capacity development in ways to change knowledge applications across product and service boundaries (Taylor & Wilding 2009; Hislop 2009; Leitch, 2006; Dawe et al 2005; Wals et al 2002; Haskins 2003;). Therefore, in addition to encouraging diversification and regeneration through tourism, this project supported the University of Derby’s academic agenda to promote experiential and entrepreneurial learning in students working at both undergraduate and postgraduate levels. This paper accords with the current University initiatives to meet the student employability agenda through the application of PBL and knowledge management (KM).

Findings

The creation of outcomes and recommendations for Wirksworth’s stakeholders provides sustainability through the knowledge creation and sharing processes. There are seven outcomes that chart a path to development and knowledge transfer and sharing. We simultaneously provided an environment for students to gain skills and a community to acquire new knowledge, and these are the outcomes and output of this project (Hendry et al, 1999; Brown & King, 2000; Kolb & Kolb, 2005). New learning styles may support inclusive academic practice (see related samples of PBL such as Ineson (2001) and Beresford (2001) in HLST resources 2001). Implications for building a knowledge transfer community through the social capital accumulated in the project is explored (Ellis, 2010; Mulgan, 2010; Senge, 1994).

Originality

In taking PBL from the classroom to the community, we have created a new knowledge transfer environment in which skills can be acquired and a regeneration strategy can be tested in a work-or-practice related setting. Students recognise that they are building learning for themselves that is unique in that it cannot be recreated in a classroom setting.

We see this project developing into a robust long-term partnership between communities and institutions with knowledge transfer benefits to teaching staff in addition to students. These benefits will include new skills for PBL, working collaboratively with partners in the community to develop key skills in HE students, innovation in assessment, inclusive learning and teaching, experiential and entrepreneurial learning in practice.

Keywords: tourism, knowledge transfer, social capital, social responsibility, problem-based learning, community, regeneration, sustainability

Article Classification: Case Study

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Introduction:

The aim of this paper is to establish a framework to understand how and why communities, including voluntary and third sector organisations, engage in networks to access the knowledge they require to innovate in the field of tourism. In this case study, a knowledge transfer partnership (KTP) model using Higher Education (HE) students researching and focused on community engagement is discussed. The researchers designed and implemented a pilot study that explored the potential of a small, yet attractive and active, market town to diversify and regenerate using tourism. This has been funded by the UK Higher Education Innovation Fund (HEIF) and devised to operate and monitor a KTP in the culturally important heritage market town of Wirksworth, in Derbyshire England.

The town has origins in the lead and limestone mining and quarrying sector dating to the Roman era. Today, Wirksworth is a bustling market town of 6000 people, characterised by unique cultural and heritage features and is now a site of renown for artistic pursuits. These cultural pursuits culminate in a regionally important annual arts festival every year. The town is adjacent to the Peak District National Park, visited by up to 20 million visitors per annum, yet is only twenty minutes’ drive from the cities of Derby and Nottingham in the English East Midlands. Wirksworth and the surrounding area has several visitor attractions, these include:

- The Wirksworth Heritage Centre
- The National Stone Centre
- The Ecclesbourne Valley Railway
- The Steeple Grange Light railway
- Carsington Water

However, there are limiting factors to regeneration and to making accessible the benefits of KT, which include a lack of car parking, a lack of cohesion between the various tourism attractions and events, the absence of a clear vision for the future of the town. In 2005 the town council, with support from the University of Derby, produced a strategy for tourism. It currently promotes it’s self as a “Fair Trade Town” and as the “Gem of the Peak”. There is a website promoting the town www.wirksworth.net however it is not well used.

The actions and strategies of Higher Education Institutions (HEIs), that support community development whilst up-skilling students and academics, can in broad terms be described as community KTPs. In the United Kingdom, these partnerships have traditionally been funded through the HEIF funds allocated to universities for the development of both students and organisations in which students are engaged in agreed KTP tasks (Mader et al, 2012; Casanueva et al, 2010; Cooke et al 2004; Asheim et al 2003; Curran et al, 1994). In this example, the University of Derby has piloted a community KTP that draws down funding to explore the potential of community partners to act as catalysts for development projects rather than the traditional corporate business partner.

This paper specifically reflects upon the University of Derby’s experience in piloting student undergraduate and postgraduate research outputs that have been based entirely upon members of two specific charities; New Opportunities for Wirksworth or NOW!, and the Ecclesbourne Valley Railway, or EVR, that commissioned work to support tourism, community engagement with enterprises including tourism and commissioned work exploring marketing and branding of the town.

Our focus has been on the creation of outcomes and recommendations for Wirkworth’s stakeholders that provides sustainability through the knowledge creation and sharing processes we have used. Through a systems thinking and holistic approach to the problems of engaging sustainability across disciplines and through community engagement we have identified seven factors required to support development, knowledge transfer and sharing (Zipin et al, 2012; Richards & Hall, 2000; Checkland & Scholes, 1990; Leiper, 1979). Research informing sustainable tourism that simultaneously provides an environment for students to gain skills and a community to acquire new knowledge are the outcomes and output (Hendry et al, 1999; Brown & King, 2000; Kolb & Kolb, 2005).

The paper is structured in sections as follows: we review the key literature concerning knowledge, knowledge transfer and tourism. The methodology is followed by a presentation of our key findings. We conclude with recommendation that support knowledge sourcing, transfer in communities and social capital accumulation.

It has been said that Community is a verb and is created through citizen inter-activity with both one another and their surroundings. It is explained as the inter-connection that happens when customers, colleagues or neighbours stop to purchase something, have a conversation, share a story, or do a deed for one another. It is also the inter-connection that occurs when academic researchers spend time listening to that community of locally situated experts and when local knowledge makers and owners question and thereby transform, transfer and utilise university knowledge practices (for more examples see Shaw et al, 2011; Baggio & Cooper, 2010). On the basis of this research the latter knowledge transfer only briefly occurs under conditions of interdependence, trust and understanding within in the local populace expertise.

A community can occur in complex functional, institutional or neighbourhood settings. Place is important as is familiarity and identity (Shucksmith, 2010). The challenge for any university researcher, and in this case student researcher, is to identify and thus soften the boundaries between university and community; between academic and local knowledge practitioners, and between the humans and the research questions and subjects/objects of student interest in a socially acceptable and responsible manner. The research activity transforms the meaning of community into a quality of action where connections can be made between concepts, people,
entities, institutions, problems and solutions that are simply not possible when mastery over a situation is the aim (Dale et al, 2010; Meyer, 2010; Bodorkös et al, 2009).

Our position, following a mainly European proposal is that SMEs use the ISO 26000 series as a framework for developing systems for managing environmental issues (Massoud et al., 2010). Cramer and Stevels (1997) assert that these international standards will lead to environmental improvements in both processes and products. However, as O’Laioire (1994) concludes, SMEs are not sure how to use an Environmental Management System (EMS) as a competitive tool that increases profitability and that facilitates the adoption of environmental innovations.

**Literature review**

**Knowledge and Knowledge transfer**

In order to understand the fundamentals of knowledge transfer (KT) we need to explore the foundations of knowledge sourcing practices, it is important to provide a general understanding of what we mean by the term ‘knowledge’ in this context. Drucker (1989) delivers a useful definition of knowledge, viewing it as information that changes something or somebody, either by becoming grounds for action or by making an individual or an institution capable of different or more effective action.

Knowledge, unlike simple information, is about action rather than inaction (Nonaka and Takeuchi, 1995). Knowledge can take various forms; the best known suggesting that knowledge in itself is either explicit/codified or tacit. Explicit knowledge refers to information that can be easily communicated among individuals and therefore communities encapsulated in formats such as, language, text, blueprints, operating manuals, codes or guidelines, whereas tacit knowledge - such as skills, competence, and talents – are more difficult to directly communicate to someone else in a verbal or other symbolic form. Codified knowledge is usually considered to be relatively less sensitive to space than tacit knowledge, with tacit knowledge flow bounded with specific spatial context (Bathelt et al., 2004). Community-based experiences derived from endogenous perspectives coupled to tacit knowledge underpin knowledge transfer (Moulaert, 2009).

However, research has indicated that today access to codified knowledge renders it less important as a source of competitive advantage. Tacit knowledge, on the other hand, is considered not to travel well, making it a key source of ‘the geography of innovation’ (Asheim and Gertler, 2005).

Knowledge sourcing or transferral from external sources has become increasingly important to local communities, which cannot generate internally all the knowledge necessary for new product, services and process development (Teigland & Wasko, 2003; Faber & Hesen, 2004). Within a community environment, the role of external networks and knowledge sources are increasingly being recognised as potentially important assets for creating and sustaining innovation and competitiveness (Huggins, 2008; Huggins et al., 2007; Lechner & Dowling, 2003). It has been stated that in order to compete successfully with others, communities may need to develop external networks to access resources they do not possess internally (Kingsley & Malecki, 2004). These networks of small businesses and other external entities such as a university are often considered to be particularly reliant on existing social networks through connections with colleagues, friends and family (Molina-Morales et al, 2010; Thorpe et al., 2005; Tracey & Clark, 2003). Evidence has shown that proximity to external knowledge sources facilitates their use and in turn improves the innovative performance of small businesses (Anderson et al, 2007; Meagher and Rogers, 2004, Lichtenhalter, 2005; Chesbrough, 2003; Grant and Baden-Fuller, 2004; Brown et al 2001; Stuart, 2000). Well connected communities that are engaged, in a healthy social capital context, are dependent on the existence of a flourishing enterprise sector with structural integrity, relational and cognitive components (Zhao et al, 2011; Nardone et al, 2010; Coole, 2009; Gilchrist, 2009; Granovetter, 1973). The presence of networks of these components either limits or expands the training and skills acquisition of the community and potential employment options (White & Green, 2011). Contemporay focus on social capital and relationship building focused our attention on the need for institutional change to address imbalance of social capital, low levels of re-investment in community-based enterprise and our own attention to the needs of charities in support of a better community (see for example, Ellis, 2010; 167; Ledwith, 1997,2). This focus is supported by the University as a charity, facilitating KTP through its corporate social responsibility mandate.

**Skills for sustainable development in the community**

Our precept of knowledge transfer is built around the practices of sustainable development in Wirksworth. We suggest that the concepts and practices of sustainable development are predicated on self-help, endogenous knowledge and practices are publicly developed and embedded within communities (Dredge & Schott, 2013; Clarke, Raffay & Wiltshire, 2012; Sikora et al, 2012; Yigitcanlar, 2012; Cook & Ward, 2011; James, 2011; Snyder et al, 2010; Vellecco et al, 2010). Our paper does not challenge these practices or any application of public policies (Leitch 2006; Haskins, 2003) expressed here. Conversely, we offer examples of endogenous development through partnership between HEIs, communities and businesses. These are opportunities for engaging HE students in many different facets of development through skills, aptitudes, documented archives of research that have been driven by public investment in HE. These are acknowledged as valuable and relatively inexpensive investments that can be and are now recognised as properly belonging to the community in which the learning occurs (Thomas, 2012; Taylor, 2003). For our own students we have seen the importance in the community of both placements and internships as pre-requisites to graduates setting up new business of their own (Procter, 2011)

Communities, especially smaller ones with regeneration needs, have been relieved to find the skills to resolve problems and those new relationships are becoming widely established that encourage knowledge transfer from HEIs to communities. These
relationships are becoming more user-friendly for key stakeholders in the community that undoubtedly suffered in the past from low engagement with HE students in a work-related, learning engaged for business incubation and development fashion (Knight & Yorke, 2013). Community-level experience in knowledge transfer is largely endogenous and this shared social capital underpins the transfer of new knowledge from community to students and back to the community (Akcomak et al, 2010; Moulant, 2009). Mulgan also posits that shared capital in communities is measured through the explicit articulation of community social capital outcomes and outputs that are exemplified by connexity (Mulgan, 2011, 2010, 2006). This connexity is demonstrated through the capture, transmission and storage of social capital (Laursen et al, 2012; Pender et al, 2012; Koponen, 2012, David et al, 2010). These processes are essential in measuring the community's quality of life, their co-creation of value, the accessibility of social capital and the extent to which communities are perceived to demonstrate innovation in value creation, and trust. Social relationship building through institutional intellectual processes that are educative, skills-enhancing and providing an evidence repository, is underpinned by the literature on community epistemological paradigms (knowing how we do it) and new ways of being (ontological paradigm) through regeneration (Ledwith, 1997, 2).

Therefore, we supplement through PBL: enterprise skills in students, knowledge transfer from the outer to inner world of the student, co-location of resources for delivery and repository of experiential learning, a demand-led approach to delivery (not supply led), and de-mystification of resources in both community and university. Skills derived from PBL can lead to the culling of bureaucratic approaches to learning and assessment, industrial placement, development of practice-based dating agency to provide placements and finally, a coordinated and well-resourced repository for retrieval of these practice-based outcomes. In modelling knowledge transfer and defining the learning organisation (in this case a community) we delve into the learning organisation model developed by Senge (Senge, 1990). We further develop the KT through an application of European and Australian literature referencing the development of community-based tourism (Dredge & Schott, 2013; Clarke, Raffay and Wiltshire, 2012, Thomas, 2012; Lundberg & Fredman, 2012).

New knowledge and understanding is emerging in the context of work-related learning that external organisations benefit from student and tutor engagement with PBL at the requests of both university and the external organisations participating in the programmes (Mader et al, 2012). These benefits are usually defined as resource-supportive in that the external partner can depend on outcomes defined in contract that are funded by the university (and therefore not by the external partner) and the opportunity for external partners to have an obligation-free review of potential new talent for recruitment.

A standard project using PBL techniques (Kolb & Kolb, 2005) could save an organisation some £10,000 and six months contracted consultancy if managed well and within the constraints of university assessment and programme award. Therefore, work-related learning project benefits external organisations, whilst enabling the university student to improve chances of employment and obtain entry or graduate level experience in a practical environment, all the while meeting university social responsibility objectives.

Communities often act as gate-keepers to explicit and implicit knowledge contained within the core group of stakeholders. These stakeholders have positions of power and privilege in relation to knowledge transfer and management. There are many complexities and contradictions embedded within KM in communities due to the combative and highly political approach to iteration of policy and planning with stakeholders. It is essential to any successful KT and KM with students and communities that access is secure and an overview of current good practices in regeneration is provided by gatekeepers (Weiermair et al, 2012; Henderson & Weisgrau, 2007; Taylor, 2003; Herbert-Cheshire, 2000). Broadly inclusive public choices are also essential for the embedding of knowledge that informs resource choices and allocation to tourism as well as other development choices (Michael & Plowman, 2002). Complex partnerships at societal, organisational and individual level are deliverable when working across stakeholders’ needs and alternatives and these have already been delivered and documented in new-world examples (Falk & Kilpatrick, 2000). Pedagogical approaches in social constructivism are supportive of community objectives in knowledge transfer and residual social capital accumulation where university values and aim map across to community values and aim as part of the student journey in experiential learning (example, Gibson, 2006 in Sweden and Scotland). Therefore, projects completed in communities by university students can have institutional and social, economic and environmental community benefits predicated on informational needs and outcomes coupled to institutional learning and repository, regulatory advances and embedded learning from systematic learning for both university and curriculum.

**Methodology**

As has been outlined, in the current Higher Education environment, all students must obtain evidence of having successfully negotiated and achieved tasks in applied research. These research and assessment tasks can be arranged with a range of public or private, profit and not-for-profit sector organisations. Mandelson (2009), Leitch (2006), Egan (2004) and Haskins (2003), amongst others (for example Deakin 2006 and Brown, 2002), have determined that UK government policy on skills demands that students provide evidence of experiential work-related learning. In addition to satisfying stakeholders that the research and teaching is informed by the contemporary issues in society we can assure ourselves of the currency and relevance of teaching, learning and assessment in Higher Education by appreciating that much vocation-specific learning is undertaken in a constructivist and problem-based learning context (see for example Hendry et al, 1999; Brown & King, 2000; Kolb & Kolb, 2005). Such constructivist approaches are often predicated for students and for teachers, on the delivery of experiential and, in the vocation context, entrepreneurial and applied skills. Put simply, students are expected to acquire vocational, transferable, cognitive and intellectual skills to meet contemporary socio-cultural, political, economic and more importantly, educational, expectations (Pearse, 2009). Moreover the learning community now buys into the contract to provide students with learning opportunities within the workplace and in not-for-profit organisations as part of their social exchange with the University. Again, this KT is explored through building the
shared vision as a dimension espoused by Senge (Senge, 1990). Additionally today’s curriculum within HEI has been responsive to the teaching of Corporate Social Responsibility and in this case study the student led selection of an appropriate research methodology is a two way learning experience and has been constructed around some of the core subject areas of ISO 26000 and its matrix of organisational management and governance, human rights, labour practices, environment, fair operational practices, consumer issues, and finally the one with the most pressing and immediate involvement being community involvement and development.

There were eight students engaged on the project. Four postgraduate students were selected from Derby Business School and four from School of Culture & Lifestyle (one subsequently dropped out after graduation). Our case study within the two charities at Wirksworth includes work-related learning in tourism management and marketing, operations logistics, financial planning, events and public relations. Some students further benefited by having travel and subsistence payments covering costs derived through regional skills funding to support innovation in new start-ups. Other students benefitted by having expenses paid through research informed teaching fund grants from the University. Students expressed their enthusiasm for the acquisition of new pragmatic skills endorsed by parties external to the University. Students also expressed appreciation for real-world learning that was driven by external parties at problem-based learning that was indemnifying the student and insuring the external party against inadvertent misadventure. These opportunities provided our student with a risk-minimised environment in which they can practice new skills and demonstrate to new partners the student employability portfolio without commitment beyond project (six to nine months). These timeframes evolve with experience and practice and as a result of review of project scheduling as well as academic calendars.

Our engagement with stakeholders has an explicit aim; to re-visit purpose and objectives of the on-going regeneration of the destination. Initial scoping visits by postgraduate tourism management students were designed as iterative activities to gather, analyse and re-present current aim and objectives of regeneration and marketing of the core elements (products and services) to the community. Participants in these charities were self-selecting. Usually they comprise of key representatives of trade, tourism, education, politics and welfare. We anticipated a mixture of key stakeholders engaging with the developmental process and this has proven to be the case. The elements of a questionnaire designed to tease out key indicators, issues, problems and barriers were presented in phase one. To complete this activity the stakeholders were necessarily interested in regeneration and their role in the community. The process of self-selection is important; it highlights awareness of the need for change, the need for different ways of tackling familiar problems and the need for additional resources to come to the discussion.

Students are seen as short-changed if they are not learning from lecturers working at the ‘frontiers of knowledge’; while researchers are hardly worth their salt if they are not regularly reporting back on their latest findings (Brown & McCartney, 1998: 117). As can be seen, contemporary research is the lifeblood of a university and the university cannot be an excellent teaching institution without it. The service perspective advocates that for their functions to be relevant, universities must involve themselves in the aims and aspirations of the particular society in which they are placed (ibid: 118). The service perspective sees the role of a university in terms of its serving a particular society. This opposes the ivory tower concept of universities, in that they are isolated from the society in which they are situated.

As lecturers and personal tutors we direct and manage students to consider this as experiential in line with the University’s strategic centres; the Centre for Entrepreneurial Management (CEM) and University of Derby Corporate (UDC). The regeneration through tourism student project meets the employability agenda through the application of PBL/KM in its core components: arts, creative industries and culture, trade and tourism, education and training, youth. Independent students developed cognitive, transferable and intellectual skills at appropriate levels in their portfolios. Additionally this project leads to variation in styles of assessment for various course modules in which inclusivity, and a wider learning and assessment strategy can be used leading to employability opportunities. These will match employers’ anticipated needs and across a diverse discipline range in both the public and private sector (in managing businesses in the arts, creative industries, business, management, tourism) as has been described above. Curriculum within HEI have been responsive to the teaching of Corporate Social Responsibility and in this case study the two way learning has been around the core subject areas of ISO 26000 and its matrix of organisational management and governance, human rights, labour practices, environment, fair operational practices, consumer issues, community involvement and development.

Figure 1: Delivering Outcomes to Communities and Satisfying the University
Source: Wiltshier and Edwards 2013
Therefore, using a systems thinking constructivist approach we use problem-based learning strategies for students by focusing on critical analysis and reflection as part of the feedback. We have matched the outcome against that expected by the participant organisations. Please refer to Figure 1 as illustrating the systems thinking approach to embedding new knowledge in the curriculum at University whilst satisfying the external partner.

**Discussion**

Our HEIF funded project depended also on the goodness of fit between the core values of the University and those of our community partner. The first factor was flexibility in the range of projects and possible outcomes, and a range of participant organisations that include micro-businesses, charities and third sectors, which we students can utilise and select for their problem-based learning. The second factor was internationalisation through a diverse cultural offer in tourism and business management studies that is marked by a range of aptitudes and skills is available. Previous experience had indicated that we could expect modest success; previous projects had linked the University to a volunteer run railwayHigh Peak Rail and to an English-language School in the district. Clients as well as students benefited from internationalism and applied research. In addition we were aware that there are public relations knowledge transfer spin offs as a result of these research activities.

A third outcome was student employability as the project was based upon our ability to provide graduates with portfolios of independent evidence of achievement from partner organisations in NOW! And EVR. A fourth outcome was sustainability and the extent to which we have the ability to embed learning by PBL in the community and in the curriculum design for the future of tourism and business management modules in courses. A responsible and responsive approach to learning is the basis for these projects. A fifth outcome was inclusivity as we reinforce the effectiveness of learning through problem-based learning in reviewing learning styles through collaboration with partners NOW! & EVR. New learning styles support equitable and diverse aims of good academic practice. There are two important expectations for academic practice and enhanced student skills; the ability to undertake independent learning using problem-based approaches we are effectively creating a new knowledge transfer environment in which skills can be acquired and tested in a work-or-practice related setting. Students were supported through supervision throughout their learning by module tutors. Students recognise that they are building a learning culture for themselves that is unique in that it cannot be recreated in a classroom setting.

Finally students are able to articulate and plan with the community aspects of reflective continuous professional development. We saw this project developing into a robust long-term partnership between communities and institutions with knowledge transfer and social responsibility benefits to staff in addition to students. These benefits will include new skills for PBL, working collaboratively with partners in the community to develop key skills in HE students, innovation in assessment, inclusive learning and teaching, experiential and entrepreneurial learning in practice.

For the partner we saw evidence of a third sector support plan. The project was designed to meet specific targets for Wirksworth’s Five Year Strategic Plan. This plan requires the town council to review existing products and services developed under arts, culture, tourism, trade, youth, education and training. Each sector requires review of the key activities planned and support in organising the events to develop independent and sustainable outcomes in such diverse areas of enterprise as: farmers market, carnival and special annual events, art gallery and workshops, High Street retail and the ‘web enabled’ community.

Supporting new enterprise with the development of applied research informed by PBL for local and regional HE students and potentially enabling graduates into enterprise within the community and/or the region.

The project utilised a team approach in the development and funding for the future. Our research focus for students was designed to meet the aim of both the town and its organisations as have been outlined. We matched student and academic staff in terms of activity, behaviour and practice with the contemporary demand from NOW! & EVR. Our additional objective was to offset difficulties in the operating environment for small firms and supporting projects exploring the climate for entrepreneurial activity and knowledge exchange (Cleverdon & Smith, 2009; Kestenbaum, 2010).

Students are nervous at the idea of engaging problem-based learning during their undergraduate and postgraduate studies. Some students prepare for the adventure in a sandwich placement course in year three of a possible four-year-long degree. Work-related and experiential learning opportunities are now common in degree programmes (Moon, 2013). The origins of popularity can be attributed to changing government policies in the UK (Leitch 2006: Haskins, 2003) and to increasing competition for scarce graduate positions in management; more so since the global economic recession of 2008. Our own experience has provided mixed evidence of engagement. Early attempts to engage with stakeholders resulted in tentative research informing key stakeholders. Stakeholders invariably felt embarrassed by the fumbling approach of students who were equally unsure of their position to grasp the issues in question, design a research activity that meets the timeline of their academic programme and that meets the expectations of stakeholders. The latter expect summary results within exceedingly short space of time; the students were encouraged to produce outputs expeditiously and with haste. Tutors observed that students needed scoping time, as do paid consultants and moreover key stakeholders needed to become familiar with the students’ capacity for PBL.
The samples of work presented through this analysis are diverse in the content and application. The students engaged in KTP activity were studying at undergraduate Honours degree level and at postgraduate taught Master’s degree level. The engaged students have knowledge commensurate to skills at Year 1, 2, 3 and postgraduate (taught one year programme) levels. These students work collaboratively at some stages of the engagement with both charities. Students were provided with outline briefs including specific aim and project objectives. They were generally expected to identify and collect data appropriate for problem solving at these levels of HE. Using business development models including generic analytical tools like SWOT and PESTLE they approached the specific tasks outlined by the charity as individuals, without direct involvement in the trouble-shooting, iterative process and documentation needed to resolve tasks commissioned. In short, these students were briefed sufficiently to engage with charities (clients) and to interact, report, debrief and review findings as independent students, engaged in work-related and professional development mode. The true essence of practice for graduate-level careers was the fundamental driver of the unified approach by these students from diverse backgrounds; their shared understanding of university continuous professional development and the philosophy and practice of work-related learning.

Figure 2: Mapping the KT to the Learning Organisations
Source: Modified from Senge, 1990.
Key: X = Not achieved; ? = Achieved partially; √ = Achieved

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<th>Knowledge transfer community</th>
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Initial Collaboration and case study interim findings:

As we have already identified key stakeholders, including Wirksworth Regeneration Board (New Opportunities Wirksworth (Charitable Trust, 'NOW'), and Ecclesbourne Valley Rail (EVR), are included in the case study being used for this research and they have commissioned research, to facilitate the town’s regeneration programme and to further the development of a town marketing strategy. In order to gain an understanding of what the locals and stakeholders perceptions are of the current state of regeneration and tourism is in Wirksworth, as well as any new ideas, primary research was carried out by students. This took the form of informal interviews with stakeholders, business owners and representatives of NOW.

Our students reported that the feedback they received and the concerns of the community were very similar, in that most stakeholders expressed the same key points. This in itself is positive, as a strategy can begin to be formulated from the points raised, knowing most stakeholders and locals have the same or similar ideas. Wirksworth is a small town and joined up thinking is vitally important for the success of any regeneration and marketing strategy to become successful. As mentioned by some stakeholders, there is limited communication amongst locals, business owners and stakeholders and the challenge now is to change that, to engage them more in how the town is to move forward and how they can gain as businesses and the town as a whole. It was mentioned that this can be difficult at times especially for local businesses to find a ‘mutual time’ to meet etc. due to the demands of business. Using Peter Senge’s (Senge, 1990) organisational learning framework and elements of systems thinking in designing the project we identified that the project has accomplished some aspects of community learning and knowledge sharing through transfer as indicated in Figure 2. We acknowledge that this identifies key aspects of our seven factor model but that many aspects are still unresolved.
Below are the suggestions put forward towards formulating a sustainable tourism strategy for regenerating Wirksworth. The partners in tourism can, by the re-positioning and redesign of a visible tourist information centre, create a focal point that is easily recognisable by visitors to the town and is easily accessible. The role of tourism information is shared amongst a variety of people working voluntarily and informally. The acknowledgement that tourism is dependent on information provision and sharing via technology and a central bureau has not been at the forefront of strategy for the past two decades and now needs to be capitalised on sharing resources and profits equally within Wirksworth. One partner, Ecclesbourne Valley Railways’ (EVR) website’s accommodation page has the biggest number of hits, as visitors search for information on where to stay or telephone them to ask and also what to do whilst in the town. This partner has staff on site seven days a week and is available to answer questions. This information should be on the town’s web pages as mentioned above a clearly visible tourist information site/location. The elements of skills for sustainable development and skills from a KT partnership are present.

Encouraging partnerships between local businesses to jointly market the town and increase its tourism activity, e.g. creating packages on special events such as market days, railway days, tours to include Carsington Water and other new events that will encourage overnight stays. Cafes, restaurants and local shops need to be open during such events to encourage visitors to spend more locally. Joined up thinking can work when community groups run successful Fair trade cafes during Farmers market, all of which was organised via networking. Best practices adopted from previous experience are shared, acknowledging Senge’s mental models reflected in the internal customer (student and staff) and external customer (resident community stakeholder) (Senge, 1990). Furthermore, the development of new intellectual resources and embedding new social capital reflects the original intention of regeneration strategy, activity and reflection. Therefore, the University has taken steps to clearly link student PBL to meet the requirements of social responsibility that lie at the core of sustainable development. Also linking to the higher education sector’s commitment to broaden the application of PBL to community, and embed the inner and outer world of the students’ experience to reflect the explicit and implicit needs for the community under scrutiny (Ellis, 2010; Taylor et al, 2009; Mulgan, 2006; Ledwith, 1997).

With regards to extending the visitor season, Wirksworth’s peak tourism season is similar to the UK summer. It would be difficult to extend it here in Wirksworth alone so it may be worth holding one-off events during the off peak season instead to generate income and interest to continue to sustain tourism and the economy. Without doubt the students emphasised encouraging and optimising the use of local resources and businesses to enhance the local economy; such as using locally grown produce in both food outlets and local market (currently twice weekly). A team learning outcome is being considered and building a shared vision through experiential learning facilitated partly by students and partly through experience of stakeholders (public sector tourism marketers).

In order to attract inward investment, there needs to be improvement in transportation links, housing, leisure facilities and accommodation (hotels, guest houses, bed-and-breakfast). The current skills-base is not well known or articulated through local government or development agencies. The stakeholders have expressed uncertainty as to what kind of inward investment the town would attract. A lack of confidence about the skills-base, presence of multinationals, any publicly-listed companies coupled with the limited accessibility by road and rail and infrastructure will shape the scale and scope of expanding tourist offers in Wirksworth. In this context the stakeholders acknowledge the need to model a systems-thinking approach, apply mental models and embed some team learning and KT activity to confront contradictions and avoid conflict between investors, conservators and third-sector stakeholders.

Tourism cannot be the only ‘pillar’ to support the economy, especially as it is seasonal. So emphasis should not be on this industry only, but other mechanisms to support the local economy must be encouraged for economic sustainability all year round (Curren et al, 2000, 1994, 1993). This is where new creative industries can lead the charge and drive sustainable sources of income. The community acknowledges that an eight year old tourism strategy is not informing new projects or partners, nor does it reflect the dynamism of the learning organisation that shares a student and staff resource from the local University. In this context Senge’s building shared vision, team learning and personal mastery are championed by self-appointed community spokespersons and the external stakeholder is beginning a long journey towards development (Senge, 1990).

Evidence in the scoping study identifies that limited communication exists between key stakeholders.

On-going project work is engaging stakeholders in best practice for the benefit of businesses and the town as a whole. A team comprising both undergraduate and postgraduate taught students engaged the literature on rural enterprise, identity and brand management, and tourism marketing using a range of contemporary media applications, strategic alliances, investment appraisal of heritage risk management through observing and interpreting key enterprise and an events strategy.

Our focus on strategic enterprise outcomes and enduring recommendations for partners provides sustainability. The research determines the extent to which we have the ability to embed learning by PBL in the community. A responsible and responsive approach to learning is the basis for these projects. By taking PBL from classroom to practice we are effectively creating a new knowledge transfer environment in which skills can be acquired and tested in a work-or-practice related setting. This project will develop into a robust long-term partnership between Wirksworth and the University with knowledge transfer benefits. These benefits, embedding social responsibility and new social capital acquisition and retention, include new skills for PBL, working collaboratively with partners in the community to develop key skills in HE students, innovation in assessment, inclusive learning and teaching, experiential and entrepreneurial learning in practice.
Conclusion

Our exploration of KT is highly focused on community's needs and endogenous approaches to resource allocation and cost-effective problem solving. We followed the approaches of Taylor et al (2009), James (2012), Thorpe et al (2005) insofar as bottom up knowledge capture and management approaches and solutions.

We emphasised the importance to students and supervisors of reflexive approaches to learning. The student outputs are delivered to key informants in real-time and are not usually subject to any blind peer-review and re-editing other than graded for assessment purposes. Therefore we recommend a fresh approach to the academic publications driven by work-related PBL and that HE student generated research papers analysing current situations and synthesising cost-effective and prioritised solutions should be stored in an e-repository for future reference and as part of a regeneration toolkit. A realistic evaluation of available annual and strategic reports is conditional on accessible material in the public domain. In order that our students prepare questions for the key stakeholders it is essential that knowledge resources in this context are not hidden, not inadvertently ignored by informants and are updated regularly to ensure currency and reliability. Our experience indicated that some ambiguity in strategic and operational objectives in this case study caused discomfort to students in their data collection and occasionally delivered a poor fit solution to conflict and created output that was dysfunctional. This has proven a barrier to innovation in regeneration activity connected to community development (Vellecco et al, 2010). This activity depends largely on the accessibility and reliability of project outputs stored and retrieved electronically by the institutions agreeing to provide a repository. At present, the on-line repository for the University of Derby is designed for access by staff and students of the institution but future work will enable interrogation through public internet portals. We have identified however, positive feedback from students in subject areas such as marketing, tourism management, events management, finance and strategic planning where the application of theory and concept to real-world scenarios in our project has resulted in on going opportunities for HE students with business and not-for-profit organisations in both faculties.

The benefits of the knowledge transfer partnership are summarised by the following key points. Students could offer an external perspective by looking at a project through fresh eyes, see through barriers, reveal new opportunities, and bring learning from previous case studies. This maps against Senge’s & Mulgan’s perspectives as presented in the literature (Senge, 1990; Mulgan, 2011).

The community partners were afforded professional expertise in access to tutors with both academic and real business experience of marketing, finance and applied research. Additional resources were and still are provided through access to the resources of the University on-line repository (UDORA). Moreover the community benefits from time and student research and analysis and synthesis of findings on projects that are not viable for commercial partners to undertake without funding. This accords with Mader et al's perspectives (Mader et al, 2012).

Inevitably there are conflicts to be resolved in resource allocation that lead to reflection over project work demonstrating the tensions between the public sector and the private sector. The projects themselves lend weight to promotional activity and are therefore useful for internal marketing, for self-promotion and importantly for storing and retrieving captured knowledge. We can, for example demonstrate new knowledge through creating new repositories for Conference Derbyshire and our tourism and events management programmes. We also demonstrate how we are meeting the learning agenda at nexus of industry, university and students. We are also pleased to report that external resources, co-funding and match funding are forthcoming.

Through strong, longer term relationships with academia small tourism related organisations and indeed communities will be able to engage in this continual process of innovation which maintains their livelihoods within the region. The recognition of any knowledge gaps should be regarded as the foundation stone of this journey and one that the majority of identified businesses will have to overcome prior to acquiring new knowledge. A clear outcome of this case study is that more education is required of such businesses’ management and leadership philosophies for this to take place.
Figure 3: The following issues are relevant and important to develop enterprise skills in graduates:

1) Knowledge transfer from the outer to inner world of the student,

Initially students engaging in PBL at this site were uncertain as to resources, assembly and deconstruction of regeneration projects that include tourism as a force for development. The application of theoretical perspectives as outlined by Senge (1990), Shaw et al (2011) and Taylor (2003) among others did not elude students. We do however posit that our students struggle with the complexities of a service-centred community economy with diverse skills, aptitudes and capacities to marshal and deploy appropriate resources to maximise tourism and ancillary services. Our graduates reflect their PBL skills in their portfolios and have both an explicit (know what) and tacit (know how) understanding of both HE mission to support social responsibilities to community or destination and an understanding of constructed knowledge can be shared in contemporary applications and stored, then retrieved, for future application, practice and reflection. To re-state curriculum within HEI have been responsive to the teaching of corporate social responsibility and in this case study the two
way learning has been around the core subject areas of ISO 26000 and its matrix of organisational management and governance, human rights, labour practices, environment, fair operational practices, consumer issues, community involvement and development.

2) Co-location of resources for delivery and repository of experiential learning,

We emphasise the importance to students and supervisors of reflexive approaches to learning. The outputs are in real-time and are not usually subject to any blind peer-review and re-editing. Therefore we recommend a fresh approach to the academic publications driven by work-related PBL and that postgraduate research papers analysing current situations and synthesising cost-effective and prioritised solutions should be stored in an e-repository for future reference and as part of a regeneration toolkit. Figure 3 illustrates the relevant steps from student engagement to a review of practices which will be used to inform both community client and future students.

3) Demand-led approach to delivery (not supply led),

Our exploration of PBL is highly focused on community's needs and endogenous approaches to resource allocation and cost-effective problem solving. We followed the approaches of Taylor (2003), James (2012) and Thorpe et al (2005) insofar as bottom up approaches and solutions reflect the contemporary literature.

4) De-mystification of resources and culling of bureaucratic approaches to learning and assessment,

A realistic evaluation of available annual and strategic reports is conditional on accessible material in the public domain. In order students prepare questions for the key stakeholders it is essential that knowledge resources in this context are not hidden, not inadvertently ignored by stakeholders and are kept up to date to ensure currency and reliability. Our experience indicated that ambiguity in strategic and operational objectives caused discomfort to students in their data collections and inevitably delivered a poor fit solution to conflict and created output that was effectively dysfunctional. As has been mentioned, this ambiguity has proven a barrier to innovation in regeneration activity connected to tourism (Vellecco et al, 2010). As an outcome of this ongoing research it is paramount that organisations are exposed to the process and benefits of social responsibility through community involvement. The EU ISO 26000 researched guidelines currently show these benefits to include competitive advantages, higher productivity and motivation amongst employees; increased reputation and trust in order to attract and retain workers, owners, donors, sponsors, customers clients or users; higher levels of commercial acceptance of business models within the community.

5) Industrial placement,

One of the key indicators of success in student knowledge transfer is the capacity for the destination and stakeholders to engage competent graduates in an industrial placement in recognition of KT. Our project has not delivered a placement post-review. We would suggest that the accumulated capital has not therefore been acknowledged as shared and supported within the community (see for example Sikora et al, 2012). Within the ISO 26000 core subject of Community involvement and development, whilst for guidance only, there is a great opportunity for University students to have a relationship with the enterprises and for these enterprises to have a meaningful relationship within the community they serve. Future areas of research will be towards the promotion of such suggested areas of Community involvement; education and culture whereby organisations can help with lifelong learning and promote the learning culture; technology developments by means of supporting knowledge sharing and transfer; social investments with a focus upon education training and tourism health which may have to include wider agencies for change.

6) Development of a practice-based dating agency to provide placements,

The structure of the organisations reviewed here appears to have precluded on going engagement of student and graduate. The protagonists on both sides must engage in further dialogue to embed student research outputs in the strategic and operational plans for organisations (see example from Lundberg & Fredman 2012; Selby et al, 2011; Shaw & Williams, 2009; Kagan, 2007; Flohr, 2001).

7) A coordinated and well-resourced repository for retrieval of these practice-based outcomes

This activity depends largely on the accessibility and reliability of project outputs stored and retrieved electronically by the institutions agreeing to provide a repository. At present the on-line repository for the University of Derby is designed for access by staff and students of the institution but future work will enable interrogation through public internet portals.
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