ABSTRACT

Research capacity can be built by collaboration between industry and universities, and Knowledge Transfer Partnerships (KTPs) are an ideal way to do this. While good collaboration and team-work has been recognised as crucial for success, projects tend to be evaluated on outcomes and not collaboration effectiveness. This paper discusses best practice for how a KTP project team might work together effectively.

KEYWORDS: Project Management, Research Collaboration, KTP, Action Research

1 INTRODUCTION

Collaboration between industry and knowledge bases i.e. higher education institutions (HEIs), public as well as private sector research institutions and organisations (Legg, Holifield and Galis 2007) has been cited as a major contributor to effective capacity building (e.g. Ternouth et al. 2012; Wilson 2012). Given that “[a] key driving force for university-industry knowledge transfer is to move knowledge from academia to industry, a process that requires the engagement of both parties” (Ankrah et al. 2013, p.51), the UK government has been running a programme comprising individual collaborative projects between industry and HEIs, known as Knowledge Transfer Partnerships (KTPs), to promote collaboration. This programme has been active for over 35 years in the UK (Legg, Holifield and Galis 2007; Howlett 2010; Technology Strategy Board Website 2013) and has widely been seen as effective (Lambert 2003; Gertner, Roberts and Charles 2011; Wilson 2012), with a “track record of successful knowledge exchange between universities and academia, deploying graduates to support innovative companies” (Wilson 2012, p.57).

Conceptually, there is strong basis for assuming that good collaboration enhances the chances of attaining a successful outcome. However, there has been little demonstration and evidence in the literature on evaluating how collaboration actually contributes to project success. Brinkerhoff (2002) wonders
whether, and how, partnership enhances performance, while Howlett (2010, p.14) contends that “knowledge transfer between universities and business, is not widely covered in the literature and its mechanisms and processes are not well described”. Furthermore, studies and evaluations of project success tend to be measured on outcomes (Brinkerhoff 2002; Ternouth et al. 2012) and few actually explore the effect of collaboration nor examine the role of the KTP Associate, who is the chief implementer of the project work and arguably the person closest to the project. As the Associate has a key role to play in enabling success of the project, we argue that the Associate’s perspective can be valuable for improving practice.

Each Associate is typically restricted to one opportunity to manage a KTP project, with KTP rules prohibiting the employment of Associates on subsequent projects (Technology Strategy Board 2010, p.8). Moreover, each Associate’s knowledge of the project and his or her personal view towards how things can be successfully implemented depends a lot on the Associate’s underlying skills and experience, as well as the support given during the project, which does vary from project to project. For example, what may be construed by someone as a poor form of collaboration may in fact be something quite generous in a different setting. To complicate matters, having a consistent way of exploring collaboration across different KTP projects is difficult as they are all unique projects in very different fields and address very different problems. There is no common reference point for which one can compare the extent of collaboration between projects.

This paper serves to help advance the discourse on how collaboration impacts project success by exploring collaboration in two different projects. This is possible because the lead author has been in the unique position of having worked in two KTP projects and can reflect on both experiences. In the next sections we will describe what a KTP is, outline the method and present the cases and discussions. As the majority of KTP projects involve universities as the knowledge base partner, the term ‘university’ will be used in this paper to represent the knowledge base.

2 KNOWLEDGE TRANSFER PARTNERSHIPS AND THE ROLE OF THE ASSOCIATE

KTPs are projects jointly funded by an external business organisation (referred to as a ‘company’ in this paper) as well as the government innovation agency Technology Strategy Board (TSB) and/or other research funding agencies. A KTP project is described as:

A relationship formed between a company and an academic institution ('Knowledge Base' partner), which facilitates the transfer of knowledge, technology and skills to which the company partner currently has no access. (Technology Strategy Board Website 2013)

Howlett (2010, p. 8) elaborates that in a classic KTP project,

[1]he company must have a need for a demanding project of a strategic nature. This must be something that will lead to real business benefits in terms of increased turnover and profit, or safeguarded market-share. The project must also be something that the company could not do for itself, without the help of the Knowledge-Base Partner.

The KTP Associate is the chief implementer of a strategic project for a company, having one foot in both camps of company and university. KTP Associates are intended to be recently qualified graduates, who are

employed by the knowledge base partner but work in [the] business to manage the project, apply their own knowledge and ensure that the expertise of the knowledge base partner is embedded into [the] business. (Technology Strategy Board Website 2013)
The KTP Associate is typically relatively inexperienced in handling projects, especially those involving cross-boundary collaboration. The Associate is offered an opportunity to handle a strategic project for a company, and in so doing, hones his or her skills in a variety of ways, including leadership and project management.

Given the many barriers to successful projects (e.g. as cited by Perkmann, Neely and Walsh 2011; Bruneel, D’Este and Salter 2010), the challenge for the Associate in ensuring project success is considerable. However, current research seems to have largely ignored the importance of the Associate in promoting and improving collaboration in KTPs.

In a review of different definitions of collaboration, Hara et al. (2003, p.953) found that “working together for a common goal” as well as “sharing of knowledge” was vital. Also, Perttu et al. (2010) proposed 8 antecedents and 5 mediators for collaboration affecting 3 kinds of collaboration outcomes. These are summarised in Figure 1. The methodology used in this paper is action research coupled with a reflective style of writing. A reflective style has been chosen as it can contribute to personal development as well as improve work-based practice (Jasper 2005; Sen 2010). Two case studies of collaborative projects are explored, one being a private sector company and the other, a third sector (not-for-profit) organisation. The cases are first presented separately, then compared using the collaboration antecedents as proposed by Perttu et al. (2010).

![Collaboration antecedents, mediators and outcomes](image)

**Figure 1: Collaboration antecedents, mediators and outcomes (adapted from Perttu et al. 2010)**

### 3 CASE STUDIES

#### 3.1 Case 1: PSC

PSC is a small company operating in the medical recruitment sector mainly serving the National Health Service (NHS). Due to new government policy, the NHS was anticipated to undergo significant changes. Having previously been introduced to a freelance consultant with an innovative organisational change product, the directors felt that there was good basis for expansion of their services into providing consultancy in organisational change for the NHS. They set up their consulting arm after successfully bringing in another partner for this part of the business. A KTP was established to develop an academically validated in-house consulting methodology for the company.
The Associate of this 2-year project was involved in developing a consulting methodology which made use of and linked up the company’s existing knowledge of two products for organisational change, as well as to identify any other products that fit within the consulting methodology. To do this effectively the Associate needed to set up a steering group to advise and oversee the work. Also, the Associate would be involved in testing out this methodology in interested companies. This meant the Associate needed to be familiar with how the products worked and interacted. The Associate’s role would cover both the implementation of the methodology on a trial basis and the validation of the way the methodology worked. PSC, who already had some existing links with a number of hospitals and NHS Trusts, had responsibility for sourcing the clients and leading negotiations.

Most of the Associate’s early work involved setting up the steering group and conducting research into the organisational change approach that could be adopted by PSC, as well as the exploring the market for suitable opportunities. The Associate analysed NHS Trust performance data and identified potential targets which PSC could approach, based on the assumption that the lower-performing Trusts would be in more urgent need of support and could be more receptive to PSC.

The working practices and culture at PSC was very different to the Associate’s previous employment, where he had worked on the technical team at a manufacturing firm with circa 500 employees. PSC, being a small company consisting of 3 directors who were co-owners of the business and who worked mostly independently, had a very different internal culture and spirit of collaboration, which required an empathic approach. For example, in the early days of the project, the company team disagreed about how the KTP should be managed. A meeting was called where everyone collectively explored the issues and agreed steps to address them. In the weeks following this, the Associate’s working relationship with company colleagues improved as the team became more open and comfortable with expressing opposing views and fresh perspectives. This was especially apparent with the Company Lead, leading him to remark some 6 weeks later that he had never before enjoyed such a good working relationship with someone following a significant disagreement at an early point in the working relationship.

The core project team was small, consisting of an Academic Supervisor, a Company Lead, a Company Facilitator and the Associate. There was also a second university supervisor on the team, but he did not get involved as his expertise was not needed in the early stages. Due to operational pressures and differing engagements, the full team did not meet together very often. Usually, the Associate met the Academic Supervisor separately at the university and brought back ideas for discussion with the company supervisors. Besides the core team, the Associate worked mainly with two other people: the external partner to PSC’s consulting arm, as well as the freelance consultant whose product would form an integral part of the methodology. When the Associate assembled the steering group, he took on organisational duties such as planning and producing the material for discussion, as well as arranging logistics and running the meetings.

As the methodology development progressed, the Associate started producing materials for use in client contact and prepared PowerPoint slides to explain the concepts behind the PSC’s consulting methods. He also authored 4 white papers on problem solving in healthcare, as well as a number of thought leadership articles for use on the company website.

As a company, PSC were not experienced in the consulting arena. They had a website which was somewhat basic and did not reflect the professionalism associated with a consulting company. The Associate presented a proposal to redesign the website, aimed at making stylistic changes to its look-and-feel as well as improving the clarity and content. He also offered 4 suggestions as to how the company could be positioned. While the response from colleagues was good, there was some resistance internally from the partner who had designed the website and initial marketing materials. Given that all the directors were also actively involved in running the medical recruitment business, the company decided to postpone the website changes and instead concentrated on supporting the development of the methodology and pursuing potential leads with healthcare companies.

PSC managed to make some good links with industry, but securing commitment from an organisation to trial the methodology proved to be more difficult. 11 months into the project, PSC, without prior warning, notified the university of their intention to terminate the project because their core business in
medical recruitment was suffering from significant financial pressures. The fact that PSC had been unable to secure a client to trial the consulting methodology meant that the timescales for validation were delayed, impacting on the anticipated payback time for PSC.

The business had not anticipated the difficulty in gaining a foothold for consulting in their intended market, perhaps having mistakenly thought they had been sufficiently familiar with the marketplace. Also, PSC might have underestimated the length of time it would take to secure organisations for trial. In terms of collaboration, the team could have communicated better through more frequent meetings between all members of the joint supervisory team. Given the relative inexperience of PSC with the area of business it was trying to get into, a closer working relationship with the university, as well as getting the 2nd university supervisor involved from the start, could have promoted collaboration and given PSC access to broader and more timely advice. This might have resulted in an earlier realisation that the company’s sales strategy needed overhauling weeks before the eventual demise of the project.

3.2 Case 2: NFPC

NFPC is a not-for-profit organisation of circa 15 employees focused on the skills arena of a particular industrial sector in the UK. It is based in the same premises as, and shares some functions with, its parent company (circa 45 people), a skills organisation with a larger footprint in industry. NFPC’s aim is to improve the collaboration of disparate companies in the sector so as to ensure the overall workforce is adequately skilled to meet the needs of industry. NFPC functions as a membership organisation, with companies paying an annual subscription for services that it provides e.g. lobbying the government, or helping to lead funding negotiations on their behalf. NFPC also has scope to develop products and services to further help the sector improve both the way it conducts training as well as the way new entrants are attracted.

NFPC identified knowledge management as an area where it could improve its service offering to the sector. A KTP was set up to explore how knowledge in the sector could be retained for the sector, especially in light of an ageing workforce which would see the majority of current employees retire or otherwise leave within the next 10 years. The intended scope of the project was to develop and implement a software system for knowledge capture and sharing, and would last for 2 years.

During the project it was found that the initial objective of the project was not necessarily what the sector required. When he first started at NFPC, the Associate had little knowledge of the specific industry and forged links with people in the industry by visiting some members to understand more about the sector. Subsequently the Associate found that a software system for knowledge management was not a priority for the companies concerned. Their reception to this idea was, at best, mixed. The Associate then decided to explore the wider issues surrounding knowledge retention and knowledge management in the sector, focussing on 3 specific roles, and ran a questionnaire to solicit further feedback.

7 months into the KTP, NFPC as well as its parent announced plans to restructure, and after another 2 months the Associate was moved into a newly-assembled Product Development team but continued to report to his existing supervisor in the original department. This necessitated some review and realignment of the Associate’s work. There was also significant uncertainty regarding NFPC’s business strategy and its impact on both the new Product Development function as well as the applicability of the KTP. After a few weeks, in an effort to address these issues, the team decided to involve the Head of Product Development directly in the management of the project, with her taking over the role of Company Lead. This made sense as the existing Company Lead was focussed on other responsibilities post the business restructure. After two strategy meetings to review the project and redefine deliverables, a new strategy was agreed. Instead of procuring a knowledge management system, the Associate would work on piloting and proving initiatives that contributed to knowledge retention for the sector. This was felt to be a better fit with NFPC’s existing internal systems and was also less risky as the procurement of a software system would have brought its own set of not insignificant financial and implementation challenges.
In terms of structure, the core project team consisted of a Company Lead, two university supervisors from different departments (the University Lead provided administrative sign-off, while the Academic Lead provided input on knowledge management), and the Associate. While the team was supportive, it was not always easy to get co-ordinate their busy schedules. For example, when the Associate started, he did not manage to get a kick-off meeting in place with everyone present until around 4 weeks into his employment. These pressures continued throughout the project, and were also present internally in NFPC. This was because, as a membership organisation, colleagues were frequently away from the office meeting members and other stakeholders.

With the new project strategy the Associate began to work much more closely with his new team. While colleagues were still not always easily contactable, the Associate now had better access to an experienced colleague who could provide more timely input into his work. His new team was also closer to the ground in terms of implementation so they could offer useful practical insight into some of the issues the Associate was considering.

At the time of writing, the project is approaching completion, having entered its final 4 months and on track to proving the implementation of some useful initiatives for knowledge retention in the sector.

3.3 Comparison of cases

Table 1 gives a comparison of the two cases using the antecedents suggested by Perttu et al. (2010).

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Case 1: PSC</th>
<th>Case 2: NFPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roles &amp; processes</td>
<td>Small core team with busy individuals. Team meetings were usually split and</td>
<td>Larger core team with busy individuals. More complex to manage. Regular</td>
</tr>
<tr>
<td></td>
<td>infrequent (approx. once every 4 weeks). Occasional joint meetings.</td>
<td>team meetings (every 2-3 weeks) online or face-to-face, attended by all</td>
</tr>
<tr>
<td>Trust between actors</td>
<td>Not a good start to begin with, but built up well over a matter of weeks,</td>
<td>Generally good support from the team. Company support in terms of strategy,</td>
</tr>
<tr>
<td></td>
<td>especially between the Associate and the Company Lead</td>
<td>direction and resources had not always been strong but improved over time.</td>
</tr>
<tr>
<td>Physical &amp; cultural proximity</td>
<td>As not all team members met together there was less physical interaction.</td>
<td>Physically the team was meeting up in one single location, although there</td>
</tr>
<tr>
<td></td>
<td>Culturally things were fine after the first few weeks.</td>
<td>were frequent pressures on individual attendances due to clashes in</td>
</tr>
<tr>
<td>Alignment of incentives</td>
<td>The nature of KTPs mean that the company and the university draw different</td>
<td>Culturally there were no major issues.</td>
</tr>
<tr>
<td></td>
<td>benefits from participation in the project, hence incentives are not always</td>
<td>As per PSC case, due to the nature of KTPs, incentives are not always</td>
</tr>
<tr>
<td>Commitment to project</td>
<td>Could be better. The lack of regular catch-up meetings probably impacted on</td>
<td>Generally good support (mostly deduced from commitment to and attendance at</td>
</tr>
<tr>
<td></td>
<td>collaboration and commitment. Could have made better use of university input</td>
<td>team meetings). University collaborators could have been more involved by</td>
</tr>
<tr>
<td>Goal congruences &amp; collaborative</td>
<td>Generally all parties were in agreement as to the goals of the project, but</td>
<td>learning more about the sector and understanding the contextual issues,</td>
</tr>
<tr>
<td></td>
<td>the nature of KTPs is such that different benefits would be drawn by each</td>
<td>allowing better advice to be given to the team.</td>
</tr>
<tr>
<td></td>
<td>party e.g. testing a</td>
<td></td>
</tr>
</tbody>
</table>

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goals | methodology was good in the university’s view, but that did not necessarily translate into sales which the company needed | and contacts made from this project could lead to increased uptake of courses
Conflict resolution | Initial disagreement was swiftly resolved (within a few weeks). Good example of how conflict resolution promotes collaboration. | Main conflicts were strategic in nature – different views as to the company should be doing. Resolving this took a much longer time (around than 6 months).
Expectations fulfilment | This was largely positive as the Associate had in the main delivered what was agreed, and the company supervisor expressed strong satisfaction with the quality of the Associate’s work. | Largely positive – NFPC received good feedback from members and the Associate was rated “high performing” within this project.

Table 1: Comparison of cases (using antecedents from Perttu et al. 2010)

4 DISCUSSION

Comparing the examples of antecedents as discussed in Table 1, the main issues affecting collaboration in the projects are based around managing the structure – in terms of roles and processes, as well as physical and cultural proximity. In order to foster stronger commitment to the project, the Associate needs to be an effective “flow-keeper” (Masiello 2009, p.505): an enabler or facilitator, who “get[s] communication, information, negotiation, listening and explaining, and focus flowing” between participants. In terms of designing congruent goals, part of the responsibility lies in the way the projects are initially set up. The business case needs to be clear, responsive and achievable. It is also a priority to be aware of timescales and be proactive about getting hold of the right people at the right time to work on suitable parts of the project. Communication and shared value and vision-setting at the onset of the team’s formation is paramount which should be achieved through the mini project at the start of the KTP.

Conflicts arise in every situation, especially when two types of organisations with very different operating models (e.g. a company and a university) work together. As Bammer (2008) contends, one of the key aims of collaboration is to effectively harness differences to facilitate innovation. The role of the Associate is crucial in both encouraging healthy debate and managing these conflicts so that the project gains overall from the interplay of different perspectives. The Associate also needs to establish good trust and expectation fulfilment as these ensure continued commitment from all sides.

5 CONCLUSION

In this paper we have explored the role of the Associate in influencing collaboration and how this has occurred in practice in two cases. It is hoped that this paper will inform practice, helping other Associates in the future to manage their projects effectively.

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REFERENCES


