Realisation of the Knowledge-Based Organisation

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Abstract

This paper reports a single case study of a knowledge transfer partnership in the construction industry, and suggests that the knowledge-based organisation has emerged as both a major contributing factor of the project's success and the product of the successful partnership. Components of the theoretical knowledge-based organisation are explored in light of the case observations; an example of the benefits of blending of theory and practice. Creating, capturing and sharing knowledge became a single process through the application of learning to learn, evidence-based management and communities of practice. Consequently, this study evaluates the efficacy of these educational interventions. The paper concludes that the tripartite Knowledge Transfer Partnership has evolved to a sustainable knowledge-based dyad.

1.0 Introduction

The aim of KTP project 8293 was to transform the Business Partner Company into a knowledge-based, client orientated organisation. Thus, Eric Wright Group becomes a school that facilitates the contextual learning of individuals and sets in a way which allows them to innovate and satisfy the needs of clients. Several educational interventions adopted from Higher Education were used to support the outcomes of the KTP project. The paper is structured as follows. First, the KTP project is presented. The next section briefly outlines the concept of the knowledge-based organisation. This is followed by three educational interventions: learning to learn, evidence-based management and communities of practice. Each is discussed in terms of its impact on achieving the KTP knowledge-based objective. Finally, the aim itself is realised through reflection on the project outcomes and the legacy relationship which endures.

1.1 Background

Knowledge Transfer Partnership (KTP) is a partly government funded scheme aimed to strengthen the competitiveness, wealth creation and economic performance of the UK. Each partnership comprises a business (Business Partner), a university or college partner (Knowledge Base) and a recently qualified

graduate (Associate). This structure supports a collaborative approach to develop a business opportunity, idea or innovation. This section provides some background on the Partners and the Project.

The Business Partner, Eric Wright Group (EWG) operates as general contractor in the construction, civil engineering and facilities management trades. Although the Group divisions are interrelated, they can also be diverse in their own undertakings as the leadership track the ever-changing economic demand. The construction division has recently focused on building schools, hospitals and supermarkets. The civil engineering division consists of teams to deliver general infrastructure, highways, water and rail works. Taking a client orientated approach; the facilities management division provide energy and catering services in addition to life cycle and general maintenance. Together the Group comprises a flat matrix structure, flexing and mixing to meet client requirements. With the geographically dispersed staff typical of this industry and the multiple reporting lines, knowledge management is both a challenge and essential to the continued success of the Group.

The Knowledge Base is the University of Central Lancashire (UCLan) and specifically the Lancashire Business School. The Knowledge Base Supervisor and the Academic Lead for this project each spent a significant part of their early careers in industry. The two have taught in the Business School a combined thirty-two years. Individually, each is research active while maintaining links in both public and private sectors. These industry contacts have enhanced teaching methods with case studies, guest lectures and student placements. During this time, their efforts have resulted in a number of academic articles, book chapters and conference papers. The KTP provided a further opportunity to develop links and expand their knowledge of the construction industry.

The Associate had recently completed the Diploma in Management Studies when appointed to the role. The KTP project provided the perfect opportunity to use the knowledge gained from academic study, with the support of the Business Partner and Knowledge Base.

The aim of Knowledge Transfer Partnership (KTP) project 8293 was to design, develop and implement an organisational development programme to improve business performance and operational management processes; transforming the Business Partner Company into a knowledge-based, client orientated organisation. The project was carried out by following a carefully designed programme focusing on three main objectives of visual management, employee engagement and customer care all of which were dependent on information, communication and cooperation. An external macro analysis was conducted to better understand the industry, sector and market. Then, an internal micro analysis comprising of high level processes, culture survey and a financial ratio analysis was collated to inform the project team of the organisation status, structure and climate. KTP project 8293 was successful in that it provided measurable results for the Business Partner, a set of case studies for the Business School and the Associate gained work and research experience. Additionally, the project received the highest award of

'Outstanding' from the Technology Strategy Board independent audit. However, it is the less tangible outcome of the knowledge-based organisation which now, has become evident as not only a product, but perhaps a component of that success. The project team formed a tripartite affiliation: EWG, UCLan and Associate; each partner contributed to and benefitted from the relationship. It is suggested this affiliation established a knowledge-based organisation between the three partners from the very start of the project. What needed to be achieved was a sustainable future for the knowledge-based organisation beyond the project term. This article highlights some of the educational interventions applied in that transformation of the KTP tripartite relationship to a sustainable knowledge-based dyad once the associate joined EWG, and the UCLan sponsored affiliation had completed.

2.0 Knowledge-Based Organisations

The resource based view contends capabilities and knowledge are the inimitable assets which can lead to sustainable competitive advantage [1]. A knowledge-based organisation (KBO) has knowledge at its core [2]. Circling that core are three actions needed to maintain the knowledge-based status: create knowledge, capture knowledge, and share knowledge. Knowledge can be created or acquired through experience or education for the theoretical or practical understanding of a subject or activity. In other words, knowledge is created by learning. Explicit knowledge, the knowing what, can be easily documented and captured for dissemination. However, tacit knowledge, the knowing how, is where knowledge management becomes complicated. Therefore, a strategy is needed to capture the 'know how' that comes from experience so it may be shared. It is then by sharing the knowledge that the circle completes and each learner teaches the next. A term which appears regularly in the knowledge-based literature is organisational learning; defined as the process of improving activities through better knowledge and understanding [3]. In contrast, Senge offers the notion of a learning organisation, where individuals and groups expand their capacity to create the results they desire [4]. Even the term knowledge management may be confused with a software solution rather than the concept of capturing knowledge. Consequently, terminology can be unclear and inhibit the focus of the knowledge-based organisation. A clear example of a KBO is a research institution where the product is knowledge. However, increased competition and globalisation has emphasised the value of knowledge in keeping pace with the rate of change for all organisations.

3.0 Educational Interventions

Several educational interventions adopted from Higher Education were used to support the outcomes of the KTP project. Work based learning and adult learning in general require a specific approach that is both learner centred and immediately relevant. In this section, three interventions: learning to learn, evidence-based management and communities of practice are evaluated for their efficacy at the case company.

3.1 Learning to Learn

One way to create knowledge is through learning [5]. During the KTP project, the associate continued to attend university one day a week. A large proportion of the EWG staff members are continuing their professional development. This demonstrates the supportive organisational culture needed to facilitate learning. However, it was observed that the pressures of fluctuating workloads may inhibit lateral thinking. Taking time out for learning, such as attending regular lessons, should promote new ideas and innovations in the workplace. Ideas for improving business processes often lie just below the surface until brought up in a discussion, learning session or as a learning project. According to Knowles, adults approach learning differently from younger learners due to life experience, readiness and intrinsic motivation [6]. Adults find ways to apply what they've learned in different contexts. However, readiness is an assumption. Adults who have been out of education for a period of time can benefit from a re-introduction to learning [7]. Learning capacity is used to describe the way that individuals and groups are able to recognise, absorb and use knowledge. Learning to learn is a method to increase that learning capacity. At EWG learning capacity is aimed at the requisite critical thinking for innovation and business improvements. The intervention of learning to learn involves principles and skills which culminate in self-guided learning [8]. In order to engage staff in learning, the KTP project provided Myers Briggs Type Indicator (MBTI) testing to explore personal preferences. Further, the Honey and Mumford Learning Styles Questionnaires were used to strengthen awareness of different learning styles: activists, theorists, pragmatist and reflectors [9]. These learner centred activities provided the staff members with a better understanding of how they learn and some techniques to support the learning experience. Later, these skills proved helpful as the associate taught software workshops to a large and varied group of learners. The workshops were designed using a process of constructive alignment [10]. Each session plan begins with 'what do we want learners to be able to do as a result of the learning.' The sessions were part demonstration and part action learning. Arguably, all learning styles benefit from participating in action learning; it is how each experiences the activity that distinguishes the preference. Additionally, all learning styles benefit from feedback in order to underpin, expand and sustain the learning [11]. Sadler asserts that feedback is information about how successfully something has been done [12]. It lets the learner know if he has understood and developed the new knowledge or skills to a good standard. The final learning to learn skill to be employed is reflective practice. Reflection refers to a process in which an experience is recalled, considered and evaluated, usually in relation to a broader purpose [13]. It is in response to a past experience and involves conscious examination of the experience as a basis for evaluation and as a source for planning future action. The Gibbs model ensures that not only the actions but also the actor's feelings are considered [14]. Writing in a journal has been effective for individual reflection, while project review meetings help EWG teams reflect on the outcomes, best practise and areas for improvement prior to the next project.

Since the EWG workforce consists of experienced adult learners, the opportunity to utilise the knowledgeable internal resources adds to the Group's learning capacity.

Distinctive from learning through experience, learning by teaching involves the element of the pupil. It is the pupil who shares his own perspective of the experience. This component contributes to the construction of learning for all involved. It becomes most evident when considering not only the expected outcomes, but those actions for which the teacher has unconscious competence. As a result, teaching aids self-awareness in a way self-reflection cannot. Therefore, a training programme which makes use of internal resources has the advantages of knowledge creation, the transfer of tacit knowledge and contextual relevance [15]. Similarly, all the learning to learn activities: MBTI, learning styles, constructivism, feedback, reflection and learning by teaching have contributed a more effective knowledge creation at EWG. The next section examines knowledge capture.

3.2 Evidence-based Management

Knowledge management is the approach to leveraging the explicit and tacit knowledge residing in the business. Capturing knowledge has two concerns relative to project work. First, a system is needed to capture and organise the explicit knowledge, knowing what to do. This is achieved through compliance with a quality standard system. Next, a system is needed to capture the tacit knowledge, knowing how to do something. Case studies can document a distinctive set of circumstances on a project and describe the 'how'; this information can then be applied to similar circumstances at later date. A well organised library is needed to classify the cases according to subjects that the user can search when needed. However, each project can be unique unto itself. Therefore, staff members are left to make decisions in applying what knowledge is available. The term evidence-based management has various meanings and applications in the literature. For the purposes of this article, evidence-based management will be defined as 'the systematic use of the best available evidence' including statistics, internally collated key performance indicators, case studies, scientific research, journals, texts and membership in professional organisations [16, 17]. In Higher Education, students are required to 'evidence' each argument through citing reputable sources. However, this utility relies on skills, language, format and presentation. All too often, that which would be useful research, such as journal articles, is written in an impenetrable style that excludes practitioners. Learners must become accustomed to the language and style of journal writing. Universities teach research skills as both a source of knowledge and a method of assessment. Scope will be defined by topic, task, and timescales. The research question will guide the learner to focus the topic and find sufficient evidence to answer the question. This would seem the appropriate skills building exercise for later use in practice as in evidence-based management. Unfortunately, students typically complete only one or two research projects and therefore do not develop the scientific method, statistical or critical rigour as to assist in evaluating evidence in practice [18]. Additionally, part of the argument against conducting academic research in the case company has been time. It takes time to collect value free evidence and ensure it fits the particular context. Further, the skill set required to conduct a methodologically sound investigation takes several years to develop. Still, the use of academic research is desired at EWG. Ad hoc reports are

requested through contacts at the university. Additionally, the scientific approach is growing through a better understanding of statistics, observations, documentation and limitations. It is hoped that with greater uptake, the processes needed to produce and use evidence-based research for management decision-making will build throughout the organisation.

3.3 Developing a Community of Practice

Once an organisation has created and captured knowledge, it must find a way to ensure it is shared throughout its membership. Sharing knowledge in a matrix structure with dispersed teams poses additional challenges. At EWG project teams, and specifically site teams, rarely interact with other like teams. As mentioned before case studies can document a distinctive set of circumstances. Additionally, newsletters and best practise bulletins can share emergent learning. Still, timely and efficient sharing requires a more dynamic approach. Action Learning Sets (ALS) were used at EWG to attempt a democratic and consultative approach to business improvement projects. Although still in the early days, those who participated in the exercise appreciated the structured problem solving method. Revans first made reference to action learning in a 1945 report on the future of British coal mining where he recommended setting up a staff college. He recognised some problems do not have an answer; all that can be done is to debate the most reliable evidence and choose a way forward [19]. Similar to the challenge posited in the previous section; some project work will be unique. By teaching this technique, staff members have a tool to make collaborative decisions and share knowledge [20]. The learning outcomes from ALS include the solution, evaluation of the solution and much about oneself. Nothing is proven in advance, therefore, the reality of the task and possible associated risks engage the group in what has been referred to as, 'comrades in adversity' or a type of cooperation that is perhaps the ultimate learning outcome. The final point that distinguishes action learning sets from other types of learning is that the set is expected to actually get it done. '*There is no learning without action and no action without learning*' [19]. This supports the learning style premise that while some theorists prefer to prepare first, they may also learn after through reflecting and evaluating the process and outcomes.

A theoretical view of situated learning has been referred to as 'communities of practice' [21]. This formation or community is based on the pragmatist's philosophical position of social context. It is defined as an aggregation of individuals, engaged in a common enterprise, where its members share interpretations to find meaning. The process of social interaction allows members to share both explicit and tacit knowledge [22]. Equally, knowledge has been disseminated more effectively through discussion groups. Vygotsky referred to the zone of proximal knowledge as the distance between one's independent problem solving development to place of greater potential problem solving as a part of a group [23]. Consequently, this method of sharing knowledge is predicted to have a positive impact on sustaining the knowledge-based organisation and the organisation's learning culture.

4.0 Conclusion

The KTP began as a tripartite knowledge-based organisation between EWG, UCLan and Associate. What needed to be achieved during the project was a sustainable future for the knowledge-based organisation beyond the project term. The aim was to design, develop and implement an organisational development programme to improve business performance and operational management processes; transforming the Business Partner Company into a knowledge-based, client orientated organisation. The project was successful in that it provided the measurable results as described in the programme. However, it is the less tangible outcome of the knowledge-based organisation which is an on-going focus. This article has provided some insight into the meaning and significance of the knowledge-based organisation. It acknowledges the driver as a sustainable competitive advantage. Although there is no definitive measurement of the knowledge-based organisation, the components of creating knowledge, capturing knowledge and sharing knowledge are recognised as activities required to maintain the knowledge-based status. First, the project team found that although there was a supportive learning culture, some staff members benefited from a reintroduction to learning. Several options of learning to learn have been tested. It was personal preferences, learning styles and constructivism that have resulted in a learner centred approach to creating knowledge. Next, the idea of evidence-based management was likened to academic research methods. Although time consuming, this approach to capturing knowledge for use in decision making has merit and is growing as skills develop. Finally, the concept of communities of practice was introduced by way of action learning sets. This method of sharing produces greater social interaction, which results in the more effective transfer of tacit knowledge than any written means. Each educational intervention has significance towards the case company aim, to become a school that facilitates the contextual learning of individuals and groups in a way which allows them to innovate and satisfy the needs of clients.

The project ended in March 2013. The sponsored affiliation with the Knowledge Base has formally completed. The associate is employed at the Business Partner, thereby reducing the original tripartite relationship to a dyad. There remains a knowledge-based organisation in EWG with an inimitable ability to create, capture and share knowledge. The Associate continues to explore the efficacy of educational interventions to increase competitive advantage. Moreover, the relationship between EWG and UCLan endures with frequent knowledge sharing between the concentrated dyad.

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