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A spotlight on knowledge management in a rehabilitation unit

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How action research helped to implement knowledge management in a rehabilitation service

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Abstract

This paper describes one of the case studies in a project that aimed to investigate and document the use of knowledge management tools and techniques using an action research approach in organizations from the public, private and community sectors. The case study involved a rehabilitation unit in the public hospital system.

Introduction

'Knowledge management' refers to the ways in which organizations acquire knowledge, distribute information, interpret information and remember what they have learned (Huber 1991). Recently, knowledge management has been identified as an important and emerging concept in how organizations cope with a rapidly changing and complex world (Andrews & Delahaye 2000; Chauvel & Despres 2002). Even though knowledge management has been advocated by many commentators, very little research has been conducted to investigate the implementation of knowledge management systems in organizations. There is some evidence in the literature that certain tools and techniques have been found to help in managing organizational knowledge effectively but the processes that underpin knowledge management activities are poorly understood (Andrews & Delahaye 2000). These tools and techniques include: 'storytelling' (Denning 2002; Prusak & Cohen 2001); 'after action review' (Dixon 2000; Collison & Parcell 2001) 'community of practice' (Wenger & Snyder 2000; Wenger, McDermott, & Snyder 2002); 'knowledge maps' (Despres & Chauvel 1999); and 'just do it' (Davidson & Voss 2002).

Previous research in knowledge management has predominantly used survey research. Due to the increased importance of 'tacit' learning in knowledge management (Davenport & Prusak 1998; Nonaka & Takeuchi 1995) the authors are of the opinion that action research, due to its participatory and responsive nature, will provide important and richer insights into the implementation of knowledge management in organizations. Thus, this project promises to build theory and develop practice in a relatively new and, as yet, poorly researched area. In practical terms this project hopes to improve the way knowledge is managed within organizations.

The key research questions addressed in this study were: (1) How can a work group improve knowledge management in their workplace? (2) How do action research processes assist in developing effective knowledge management practice?

Research design

Action research is a participative process involving cycles of implementation, data gathering and reflection. So we decided that action research was an appropriate approach to address this project's research questions, since the aim was to both understand the phenomenon under investigation as well as create a real change in the workplace.

Meetings, facilitated by the second author, and interviews were held on site at the rehabilitation unit. The aim was to: develop a common understanding of knowledge management; identify current knowledge management strategies in the four main areas described above; and to introduce knowledge management techniques to the participants. Finally, an 'action plan' was developed through the joint selection of the most suitable tools for that organizational setting. These tools included:
- after action review;
- communities of practice;
- knowledge mapping; and
- storytelling.

Action research was to drive the research process because it involves participative and cyclical processes that are data driven. Each research cycle involves planning, implementation, data collection and then reflection on the meaning of the data. The next cycle then commences based on the analysis. The data-driven nature of the approach meant that it was not until the closing phase of each cycle (analysis) that we knew in detail what should be undertaken next. Data collection processes were designed to include group sessions, interviews, journal keeping, and notes of meetings. Data analysis was carried out using qualitative methods of analysis based on 'grounded theory' (Glaser & Strauss 1967). These methods identified common patterns and themes within and between organizations to derive conclusions about the successful implementation of knowledge management.

As this project was based on action research, many of the 'outcomes' were not explicitly apparent prior to conducting the research. However, outcomes were examined during the ongoing feedback sessions with staff involved in the project. It was anticipated that at least one of the strategies would prove to be useful, easy to incorporate and beneficial to the organization. Other indicators could be the 'problems' of implementing knowledge management within the business, such as negative comments, difficulties and rejection of a strategy. These are as important as positive issues within this type of research.

Getting started

The project commenced with a meeting in March 2004 held in the rehabilitation unit and involving managers and other leaders. A briefing on knowledge management was given and papers on the subject were provided to participants. The proposed research approach was also outlined. After all the questions had been answered about the project and about the nature of knowledge management the discussion then turned to how to start the project.

As it happened, there had been a recent incident involving one section of the rehabilitation unit that was of particular concern and appeared to demonstrate problems with knowledge management practice. A key person, 'Z', who worked in the section, had become suddenly and unexpectedly absent. The absence of Z created a big problem for the section because this person had a critical role. All records, including the information necessary for the day-to-day functioning of the unit, were managed through a database which only Z knew how to operate. The absence of Z on this occasion created a 'critical' situation because of its effect on staff and, more importantly, patients. The term 'havoc' was used to describe what had happened in the section. The practical, day-to-day running of the section was disrupted in a variety of ways including: the coordination of transporting clients; distribution of name badges; allocation of drivers and volunteers; making of appointments; obtaining information needed by administration; and use of the computer.

The group decided that, given this incident, that this section of the rehabilitation unit might be a good place to start the project and see whether or not knowledge management had relevance and practices could be improved. The manager of the section was particularly enthusiastic and provided critical support over the ensuing weeks as we worked with the staff.

Implementing knowledge management practices

Getting agreement

Like many areas in rehabilitation, the staff of the section consisted of a multidisciplinary team: nurse coordinator; medical specialist; nurses; wards men; occupational therapist; physiotherapist; administration assistant; and social worker. Consistent with our participatory action research approach this team became the 'action research set'. That is, they became co-researchers in the project and would be the focus for cycles of planning, action and review that are characteristic of action research. They would meet from time to time to consider some ways of improving knowledge management, implement this plan and review it later to see if it had worked and what could be done next. Review was aided by data collection and analysis by all the co-researchers. In short, the rehabilitation team had full ownership of the project. The authors played the role of facilitators in guiding the research process.

At our first meeting, held early in 2004, the staff of the section were briefed about the project and they agreed to participate. However, the manager had undertaken some 'groundwork' first by preparing staff for the project and obtaining 'buy in' by every member of the team. In fact, despite busy workloads there was a lot of enthusiasm for the project. In part, this came about because of the recent experienced difficulties.

The research design and their role as co-researchers were explained. At the same time, the principles of knowledge management were explained and some written information was provided to each staff member. A date for a second meeting was set. The purpose of

this meeting was to undertake a review or 'stock take' of current knowledge management practices. So the group was asked to think about their current knowledge management practice over the ensuing month and report back at the next meeting.

Problems and issues in knowledge management

As might be expected, staff within the section varied across a range of dimensions. There were quite different attitudes to work and how the team should function to meet the needs of patients. There was also a great deal of difference in the skills levels of staff. For example, some did not know how to use a computer and, therefore, could not access the database which contained critical information for the day-to-day functioning of the section. Thus power to act was not distributed evenly as a direct result of differing levels of knowledge.

The pace of work was described as 'distressing' and concern was expressed as to where there would be time for a luxury such as knowledge management. There was the issue of priorities – the need to act in the Theory Y organization (McGregor 1960) versus the need to do knowledge management and other 'soft' things. However, it was acknowledged that there was a need to ensure that the recent crisis did not recur.

The workplace has been described as largely functioning around employees' professional roles which, naturally, have limits. Understandably, staff tend to be protective of their roles and, in some instances, the roles make them feel that they have a purpose in the organization. Nonetheless, staff in the section recognized that strict role delineations and difficulty in sharing roles restricted information exchange. From a teamwork point of view, strict adherence to roles and, therefore, tasks could have negative effects, as was evident when Z was away on sick leave. There was also an absence of succession planning with no appointed deputy when the leader was away. Role protection can also cause resistance to change, a natural and very normal human trait.

One of the findings that surprised everyone was how little they knew about each other's knowledge of the functioning of the section. People were simply unaware that certain staff could not use the computer or access the database and that others had large amounts of knowledge. One staff member, for example, had stepped into the breach while the leader had been away and managed to solve a few problems because that person had special knowledge that had been obtained informally. However, this decision to act had no formal authority.

In effect, information in this section was centralized and only one person had all the information needed to manage the service. While that person was away the staff actually implemented a few changes on their own initiative but these were quickly reversed later and the old routines reinstated. In short, the section was, in McGregor's (1960) terms, a Theory X organization.

The situation was complicated by the presence of volunteers in the section, who were also considered to be a knowledge management issue. It was understood that when staff

and volunteers left, their knowledge left with them and this was a problem for continuity and quality of care.

The group agreed that there was need for greater joint effort and an effective knowledge management strategy. So it was agreed to meet again in a month's time and look at some strategies to improve their knowledge management practice.

Strategies for change

When we convened for the strategy meeting it was obvious that there had been some discussions among staff already about what might be done. One of the clearest decisions was that training for other staff on how to access and use the database was needed as soon as possible. The leader of the section agreed to undertake this within the next few weeks.

It was suggested that there needed to be a greater sharing of roles so that information could be exchanged and gaps in the service (other than clinical roles) filled when someone was away. When solutions to this problem were discussed resource management problems were raised as the main barrier to progress. For example, rotating staff through positions or 'buddying' was seen as impossible because there would be no replacement provided to carry out the person's normal tasks. There was also resistance because it was felt that the team dynamics might change (as, indeed, they would since this was the main aim). In particular, there was difficulty in accepting the need to share administrative function and knowledge despite the fact that chaos had reigned and the service was compromised when this had been lost. As noted above, one's organizational role can become a comfort zone from which it is difficult to move, especially when workloads are heavy.

It was agreed to improve the induction program for new staff and volunteers to include all necessary information. In addition, policy manuals were to be rewritten so that effective management of the section could be undertaken no matter who was away. These manuals were to be reviewed by someone external to the section to ensure their inclusivity.

One of the most important decisions, in our view, was to include ongoing monitoring of knowledge management practices in the current quality assurance system. The section held a quality meeting every month and they included knowledge management as a permanent item on the agenda. This ensured the systematization of knowledge management within the processes of the section and, importantly, changed its status as a project to one of permanency.

Regular in-service sessions were planned to ensure information exchange. In addition, every second staff meeting was to be used as an information exchange session. Strategies were developed for passing on information informally in a conscious way as well as formally. This was in preference to waiting for a crisis to happen and then passing on information. It was also decided to use contingency planning as a means of dealing with

future crises should they occur. It was agreed that certain administrative tasks would be delegated so that decision making could be shared more evenly. One very specific issue was the need for more information exchange for discharge planning.

A final meeting was held about two months later. At that meeting it was evident that staff were very keen to push the issue of knowledge management forward. It was agreed to place the strategies described above on the business plan, and to monitor progress through the quality assurance process. In-service had not yet taken place but a schedule had been prepared and was to start soon. Since then the types of inservice/information sessions held have included storing and compiling the medical record, booking clients in to the section both for assessments and therapy, accepting and organizing referrals, running the equipment loan system, review of the induction manual and access to the database.

The team revised the induction manual, which included specific sections for each role in the service, and sample forms. Rotation of staff was discussed, but an alternative of rotating a variety of specific tasks appeared to be more practical and popular. This process empowered all team members by gradually giving them experience at performing important tasks not normally associated with their role.

It was then decided that the researchers were redundant because the monitoring and implementation of knowledge management practices were thoroughly systemized.

Lessons learned

There are a number of interesting issues arising from this case study. They largely involve organizational function. In specific relation to this project on knowledge management, this function has a direct effect on when and how information is shared within an organization. Here we saw how when an organization operates as a group of individuals delineated by professional roles that information sharing both formally and informally is hampered. In this case it was such a problem that the service itself was compromised when one member of the organization was absent for a while. It is interesting to reflect on what happens in these types of organizations when someone is absent for a while or leaves and takes their knowledge with them.

As far back as 1947 Kurt Lewin demonstrated that democratic organization enables groups to manage in the absence of leadership. This occurs because when people are empowered with knowledge and understanding they can reorganize in the face of a leadership vacuum. Similarly, the centralization of power and control described in McGregor's (1960) Theory X organization is antithetical to empowering others, knowledge sharing and shared decision making. In fact, it is difficult to see how any organization concerned about knowledge management or learning could operate with anything other than Theory Y principles (Schein 2004). Action research provides a variety of democratic processes that facilitate Theory Y culture.

Thus, it is the culture of an organization that determines the extent to which knowledge is shared among the players. According to Schein (2004, p. 26) culture consists of three levels. The most superficial appears as artifacts, the visible organizational structures and processes. The second, deeper level consists of strategies, goals and philosophies. The deepest level involves the underlying assumptions, held unconsciously, and consisting of beliefs, perceptions, thoughts and feelings. It is this deeper level that really drives what happens formally and, most importantly, informally, in an organization. Argyris and Schon (1996) differentiate between 'espoused theory' (what we say we believe) and 'theory in action' (what really happens), and the two are often quite different.

At this third level, changing peoples' beliefs about the world is remarkably difficult and human beings are prone to paying lip service to change while holding on to power. However, action research (and action learning) provides the opportunity to change processes and, hence, behaviours. According to Festinger's (1957) Cognitive Dissonance Theory, people need to have congruence between their real beliefs and their behaviour, otherwise they experience anxiety. If behaviour changes then beliefs and values are more likely to change. It will be interesting to see whether the changes brought about by the action research process will create lasting change. Careful monitoring of the situation will be required to ensure that knowledge is indeed distributed and the strategies implemented. This monitoring needs to be 'top down' and driven by management, otherwise there may be a slide back to old ways and the centralization of information and, ultimately, power.

The final stage of the research has yet to be implemented. This will be a 'stress test' of the knowledge management practices by creating the same situation that brought the problem to light in the first place, namely, the removal of critical personnel without notice. The test would be whether or not the action created the same chaos as previously experienced. The situation, however, will be controlled to ensure clients are not adversely affected.

Nonetheless, the action research process brought about interesting changes in process and enabled problems to be brought to the table. While the initiative was very much driven by management in the face of a problem that could not be allowed to recur, the 'bottom up' nature of the process enabled those involved to own the problem and the outcomes. As mentioned above there was a readiness, very early in the process, to incorporate change strategies into existing mechanisms, such as the quality assurance system. Any change process aims to achieve this outcome. Managers could well learn from this strategy, especially in an environment when one more meeting to attend or job to complete might break the camel's back. It is essential that change is not viewed as another 'add-on' but is incorporated into the normal day-to-day activities of the organization.

It was encouraging to see the positive effects that knowledge sharing and the redistribution of power had on those working in the section. There was a great willingness to learn and to be involved in decision making despite already being very busy. Apparently this willingness was fuelled by two factors. One was a desire to make sure that the best possible service was provided to clients under any circumstances and

the need to avoid the chaos that had previously occurred. The second was the intrinsic need to be fully involved and to be empowered.

A start has been made in implementing similar processes in other parts of the rehabilitation unit. This has resulted in ensuring that others are trained in the use of three key databases which are critical to the day-to-day functioning of the service. This ensures that there are others who can step into the administrative role when required. One induction manual has been completely rewritten and is proving to be a model for the other areas of the rehabilitation unit. A new policy of training new clinical staff to provide cover when needed has been implemented. "Buddying" of administrative staff has commenced and rotation of these staff through the different areas is about to start soon.

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