2006

Overcoming Organisational Resistance to Using Wiki Technology for Knowledge Management

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(3)   **Abstract**

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Although Wikis emerged in the public domain more than a decade ago, a number of business organisations are now discovering the advantages of using Wiki technology to manage knowledge. However, there are many who are not convinced about the merits of this relatively new Wiki technology and are not yet prepared to risk its adoption because it exhibits many ideas that have yet to be tested and many issues that have yet to be resolved. This paper studies the merits of using a Wiki for knowledge management. While some cases of corporate adoption of Wiki technology have been reported, cases of organisations deciding to disallow the instillation and use of Wikis are rarely reported. The paper focuses on the case of an organisation that has declined to adopt Wiki Technology by identifying some of the key organisational issues that have contributed to its resistance. These key issues include the challenge to centralised control of Information Systems, as well as social elements, such as a lack of recognition of authorship, vandalism and slander. The very nature of a Wiki makes it difficult to apply traditional Intellectual Property rights, such as copyright, and this may give rise to legal controversies and conflicts of interpretations. This paper concludes with recommendations on how to overcome the obstacles that can deter organisations from using Wiki technology to act as a knowledge conduit for the organisation.

Keywords: Wiki technology, resistance, knowledge management, organisation learning, social software

10. 1. Introduction

The practice of knowledge management (KM) in organisations has evolved rapidly over the last decade, as has the technology available to support knowledge management activities.

According to the Interim Australian KM Standard (AS5037[Int]-2003), early generations of knowledge management focused on the capture of explicit knowledge and sharing this through technology. Later generations are more focused on managing tacit knowledge without necessarily making it explicit, and with creating new knowledge rather than just sharing existing knowledge. The Standard itself (AS5037 2005) takes a more integrated approach, using the concept of a knowledge eco-system to assist organisations to understand the environment best suited for enabling their knowledge management activities. This paper critically examines the prospect that Wiki technology can be a tool to support this contemporary yet challenging view of knowledge management that is holistic, collective and contextual. An action research project was planned to set up a Wiki in an organisation and observe its contribution to knowledge management in the organisation. While the project had initial tacit agreement within sections of the organisation, it became apparent that management support would not be forthcoming. This paper reports the anticipated contribution to knowledge management of the Wiki project, and the issues of concern that led to its cancellation by management. The authors suggest counter arguments that may be of value to organisations considering the implementation of a Wiki, as well as setting an agenda for future research.

2. Emerging trends in Knowledge Management

The Australian KM Standard (AS 5037—2005) defines knowledge management as follows:
"A trans-disciplinary approach to improving organisational outcomes and learning, through maximising the use of knowledge. Knowledge management is concerned with innovation and sharing behaviours, managing complexity and ambiguity through knowledge networks and connections, exploring smart processes, and deploying people-centric technologies."

This definition is a considerable departure from the concept of knowledge management that was the norm a decade ago. Snowden (2002) identifies the emerging trends of three generations of knowledge management. The first generation, clearly associated with increased ICT capabilities, focussed on timely information provision for decision support. The second generation, triggered by the Socialization, Externalization, Combination and Internalization (SECI) model (Nonaka 1994), focussed on the tacit-explicit knowledge conversion as the one process of knowledge creation in organisations. The emerging third

generation uses complex adaptive systems theory to create a sense-making model of collective knowledge creation, disruption and utilisation that allows a pragmatic and conceptual alternative to the orthodoxy of scientific management (Snowden 2002). As the Australian KM Standard suggests, the emerging areas of increasing importance are: complexity, innovation, the creative economy, sustainability, working in a global culture and technology. The Standard recognises knowledge management as an interactive and iterative process, highly dependent on each organisation's strategic intent, environmental context, social networks and flow of stories and understanding of risk. The Standard is about transforming performance rather than conforming to a process (AS5037 2005). We now live in a world in which an information commons can be easily created and efficiently sustained. The use of new tools for collectively creating, modifying and sharing knowledge need to be taken seriously as a highly efficient and creative force in production (Von Hippel 2005). It is in this environment that one such tool, the Wiki, is joining the ranks of knowledge management systems.

3. Wiki Technology
3.1 What is a Wiki?
A Wiki is a web-based application that allows participants to write collaboratively, where they can continue to add to or edit the content of documents and dynamically determine the relationships between sets of documents. Such documents can be anything supported by the web with hyperlinks to anywhere on the World Wide Web including text, image and video. It is named after the Hawaiian term 'Wiki' meaning 'quick', 'fast', or 'to hasten' which is symbolic of the quick changes in the editing processes (Leuf & Cunningham 2005). A Wiki is therefore a collection of interlinked HTML web pages and has crosslinks between internal pages where each page can be edited keeping a complete record of such changes. In addition, any change can be easily reverted to any of its previous states. A Wiki can be said to be an evolving knowledge repository where users are encouraged to make additions to this repository by adding new documents or working on existing ones. The most well known example of a Wiki is the popular English language version of Wikipedia, which was started in 2001 and now has nearly 900,000 articles ('Wikipedia' 2006). It has since spawned off Wikipedias in dozens of other languages. Countless numbers of Wikis have been created in organisations since then, as knowledge management advantages have become more apparent.

3.2 A Wiki as Conversational technology

Wagner & Bolloju (2005) portrayed the Wiki as a type of conversational technology where knowledge creation and storage is carried out through collaborative writing. Constructivist learning theorists (Vygotsky 1978; Leidner & Jarvenpaa 1995) explained that the process of expressing knowledge aids its creation; and conversations benefit the refinement of knowledge. Cheung et al maintain that conversational knowledge management fulfils this purpose because conversations, e.g. questions and answers, have become a source of relevant knowledge (Cheung et al. 2005).

4. The Merits of using a Wiki in an organisation

4.1 An Ideal Collaboration Environment
Online collaborative technologies have proliferated with mixed success. The Wiki is one of the obvious successes offering users the much desired capability to co-create and co-evolve a knowledge repository. Central to the concept of a Wiki is that a Wiki user does not need to have any technical (computing or web-related) expertise to add, edit or delete a page. This means that even a novice user can contribute to the knowledge acquisition process in an organisation. Blake (2001) states that the open platform makes it versatile to create clones to support corporate or departmental intranets.

4.2 Promotion of Organisational Learning
The definition for organisational learning appears as different variations but there is a common thread among the differences. Argyris and Schoen (1978) pioneered the concept of organisational learning where the organisation is able to learn as an independent learning organism. An organisation that wants to survive and grow in the global competitive marketplace needs to familiarise itself with 'organisational learning' (Argyris and Schoen. 1996; Friedman et al. 2005). How successful an organisation is at being able to acquire and deploy this knowledge, will determine its competitive advantage. The Wiki takes advantage of the collaborative efforts of all members of the organisation to create an effective library of knowledge.

5. Growing evidence of Wiki popularity

A Wiki developing company based in the Silicon Valley called 'Socialtext' (2006), states that since 2002, more than over 400 organisations, including twenty Global 2000, from business, non-profit and academic sectors, have developed a Wiki for their organisations. The Wiki's popularity stems from allowing employees collaborate and communicate better electronically by transforming fragmented knowledge in corporations into usable and easily accessible data (Blake 2001). Hof (2004) and Udell (2005) claimed that major corporations including the Disney Corporation and British Telecommunications are using Wikis. The Disney Corporation has been using a Wiki since 2000 and the engineering team "considers it a must-have resource". The engineers post and maintain development specifications and notes, including pointers to resources. This Wiki captured the attention of a Research and Development group to set up another Wiki in 2001 which quickly became the central resource for ideas, notes, 'how to's', specifications, and brainstorming. British Telecommunications (BT) has been using a Wiki since 2002 within their development and design areas. There are up to 50 active Wiki users in the Development Area. A Wiki was first used by one of the project teams to manage their project for daily routine reports and general operational documentation. In 2005, a formally managed and hosted Wiki was currently installed to serve all BT labs.

6. Redeeming a knowledge acquisition bottleneck: a case of Wiki rejection

This research project was originally planned as a piece of action research where the researchers would participate in the setting up a Wiki in the case organisation and observe its contribution to knowledge management in the organisation. The authors recognised that there was an obvious bottleneck in the organisation in the acquisition of knowledge. The case organisation had to deal with knowledge inaccuracy, lag time between when the knowledge was created and when it can be shared, difficulty in converting organisational knowledge and that maintenance needs will grow correspondingly with the growth of the knowledge base (Wagner 2006). It was envisaged that a Wiki could be implemented to remedy problems in these areas within the organisation, allowing staff access to create, edit and access critical organisational documents.

Although these knowledge management issues were widely recognised in the organisation, the management was not prepared to go ahead and trial a solution based on a Wiki. The research plan was altered to one which would use the limited literature on Wikis to identify and examine the reasons for the organisation's reluctance to proceed with the Wiki project.

7. Management concerns leading to the rejection of the Wiki

7.1 Limits to power sharing

Much of what is discussed above on the merits of promoting an open democratic approach to knowledge sharing has been ignored by the case organisation which favoured a traditional

organisational structure. The use of a Wiki may flatten the organisational hierarchy, changing traditional and hierarchical communication channels (Stenmark 2003). If knowledge is power, then senior executives may be reluctant to share this power with their subordinates.

7.2 Centralised IS control

There are a number of reasons for centralised control. The case organisation maintains that it offers better quality control in its existing approach to documentation management with formal editing opportunities, review and verification stages. Their implementation of specific objectives in this regard makes it a simple task to ensure local compliance and checking if these objectives have been met. A centralised and highly structured environment will make it difficult to adopt a 'community approach' towards knowledge acquisition. Knowledge management priorities are linked to organisational structure and as Santoro and Gopalakrishnan (2000) argue, knowledge management priorities are affected by environmental structures.

8. Social concerns

If the Wiki can be described as a 'social software' (Swisher 2004), then there are social factors that must undergo some changes before the Wiki can improve knowledge management.

8.1 Open to vandalism

Wiki vandalism is another reason cited by the case organisation for its reluctance to implement a Wiki. Wiki vandalism involves editing a Wiki in a wilful and destructive manner to deface the website or changing the content to include irrelevant content. There is a famous precedence for this concern. The Los Angeles Times experimented with a Wiki editorial and invited readers to collaborate online to add facts or update information. This 'Wikitorial' only lasted three days because a few readers had posted obscene photographs on the site. The newspaper had to discontinue the website to prevent future disruptions (Shepard 2005).

8.2 No rewards for work

There is no recognition of authorship in a Wiki because pages can be freely written or edited by anybody. This goes against the innate need by workers for recognition, as well as a belief that the source of contributions should be accurately reflected. The Wiki software uses the 'contributors tag' for general name recognition of 'good' authors or editors. However, this

might lead to disputes among the contributors that they have not contributed 'enough' to the article to be considered as one of the authors or editors.

9. Legal concerns

9.1 Intellectual property

The original rationale for copyright was to foster artistic and practical creative work by giving a short-term monopoly over certain uses of the work. The ability to protect intellectual property is being undermined by the use of a Wiki. It will be difficult to determine the true source of authorship because there are many authors contributing to the website.

9.2 Libel Liability

The insertion of false and malicious content about groups and individuals might make the organisation liable for libel. John Seigenthaler, a former U.S. Assistant Attorney General who worked under Bobby Kennedy was dismayed when a false Wikipedia entry listed him as having been briefly suspected of involvement in the assassinations of both John Kennedy and Robert Kennedy (Seigenthaler 2005).

10. Solutions for overcoming obstacles

The authors will now present a response to these challenges, with support from the literature. This is inspired by the belief that the Wiki is potentially an excellent conduit for collaborative knowledge management in organisations because employees can work together to create, acquire and maintain knowledge, rather than relying on a few key personnel.

10.1 Decentralising IS control

A Wiki will encourage corporate learning across product groups and departments. Decentralisation will occur because quality assurance is done by qualified peers. It is assumed that management hires competent employees, and thus any inaccurate entries will either be corrected voluntarily by the original contributor, or by other members of staff.

10.2 Preventing vandalism

Research from 'IBM' (2003) claims that most vandalism to the Wikipedia is repaired within five minutes. A Wiki that is used in the work environment generally covers topics that are less emotive and controversial in nature. In addition, revision control will help to prevent abuse and track changes. If a person erases one or more pages, it will be easy to revise to the previous 'uncorrupted' version. A simple tagging method such as having employees accessing

the Wiki using their user name and password would discourage the malicious alteration of documents, as this would be known as a career limiting move.

10.3 Collaborative Work

Schmidt and Bannon asserted that group cooperation is driven by interdependence in having work done (1993). Stvilia et al. (2005) goes further by saying that Wiki software does include an interdependence mechanism. Although a Wiki gives participants on disputing sides the freedom to revise their opponents' contributions, a Wiki challenges the opponents to build consensus so that the work can get done. The very openness of the Wiki invites opportunities for improvement.

10.4 Overcoming legal concerns

Wikipedia uses a grants free access to its content similar to the license used by free software called the GNU Free documentation License. . To ensure that the Wiki can be used by all employees, the same license will apply to the content of the Wiki. 'Wikipedia' maintains that the content will be subject to modification, and it can be copied and redistributed. Acknowledgement of the authors of the Wikipedia article used will be a consideration. American legal experts assert that Section 230 of the Federal Communications Act (CDA) 1996 makes Wikipedia safe from legal liability for libel, regardless of how long an inaccurate article stays on the site. Wikipedia is a service provider and not a publisher, which makes them immune from liability for libel (Terdiman 2005).

11. Conclusion

This paper has provided evidence that many companies have successfully used Wikis to work collaboratively and shown how the Wiki will 'write itself', depending on the users to contribute and maintain this growing repository of knowledge in the organisation. It also examines the reasons why the case organisation has dismissed using Wiki technology for knowledge management and how Wikis can be useful in knowledge management work. Based upon the literature, this paper argues that the risk of Wiki rejection, as illustrated by this case organization, can be contained through a number of strategies. Compared with traditional Knowledge Management systems, a Wiki places less emphasis upon centralised control, strict discipline, and extensive monitoring of the systems to manage knowledge in the organisation. Relinquishing this control by using a Wiki to broaden the responsibility for Knowledge Management in an organisation should be seen as a benefit and not a threat.

Further research is indicated on constructivist learning theories and their effects on conversational technology. By linking collaborative knowledge management priorities to conversational technology, organisations can avoid the knowledge acquisition bottleneck.

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