BOOK REVIEW

Socio-Technical Knowledge Management: Studies and Initiatives

Reviewed by Dianne Willis

Meliha Handzic
Socio-Technical Knowledge Management: Studies and Initiatives
IGI Publishing
ISBN 978-159904549
316 pages
Copyright 2007

On first reading this book, I could not decide if I was delighted with the breadth covered or if I felt I would have preferred more in-depth coverage of fewer issues. On second reading, I still was not sure. In the words of the author herself, ‘this book embraces difference, as evidenced by a wide variety of studies presented in 22 chapters that differ in perspectives on knowledge (explicit and tacit), in levels of analysis, (individual, group and organisational), in the concerns of research, and those of practice (e.g. people, culture, structure, technology, processes and performance)’ (p309). The book’s major contribution to the field lies in the empirical research undertaken on an international level.

However, given the preponderance of academic examples, this also constitutes one of the book’s weaknesses. The result is a structure which I believe lends itself more to a ‘dip in’ approach to see if the aspects covered by the chapters are relevant, rather than a textbook to work through systematically.

One of the stated aims of the book is to provide empirical investigations of various social and technical mechanisms which can contribute to understanding of the field of knowledge management and how that understanding can aid decision making. Obviously, the varied empirical research goes a long way to achieving this aim and the research is carried out in a range of different situations adding depth to the results. This same research can also help to point out limitations as well as benefits of a socio-technical knowledge management approach, which is also useful.

Starting from a premise that knowledge management needs to be integrated into the strategic management of organi-
sations, some indicators of suitable tools and methods will bring an element of objectivity which is to be welcomed by researchers in the field of Knowledge Management. The book addresses three issues, the integration of knowledge management and organisational strategy; the rigour of knowledge management and the need for a bridge between the theory and practice of knowledge management. The book is divided into four main sections: Theoretical Foundations of Knowledge Management, which outlines basic knowledge management frameworks and provides a structure for the rest of the book; Studies of Technology-Based Knowledge Management Initiatives, which focuses on the role of information and communications technologies in the knowledge management process looking at how traditional and new technologies support the creation, transfer and utilisation of knowledge; Studies of Socially Orientated Knowledge Management Initiatives, which considers social contingencies that influence the effectiveness of knowledge processes, including organisational culture and structure; and Issues and Challenges for Knowledge Management Practice and Research which outlines the major issues and challenges from research and practice in the field of knowledge management. In my opinion, a concluding section summarising the main findings of each of the sections would have been useful to help those to whom the field is a relatively new one.

Section 1 looks at the role of corporate memory in organisational learning and a survey was carried out amongst students in Australia and Europe. Findings provide strong support for dominant approaches at the group level and that recognisable enquiry archetypes emerge for most individuals. Knowledge space is also examined which helps managers construct a more knowledge-conducive environment.

Section 2 includes empirical testing of a specific electronic brainstorming system aimed at stimulating creative and innovative product design which provides users with external stimuli. The tool was found to be helpful with the chosen subject group, users generating a greater number of ideas in similar categories. The next chapter looks at usage and effectiveness of a range of technologies, email, presentation software and voice conferencing. Unsurprisingly, usage of technologies was found to be place/time dependent. Interestingly, the findings of the next chapter looked at lack of enhancement in performance as a result of helpful stored information. It was found that people utilise effectively only a small portion of knowledge available in electronic memories. Chapter 7 addresses visualisation in knowledge management in a time-series forecasting context. Chapter 8 looks at making sense of turning data into knowledge where room for improvement was found since useful marketing insights remain untapped. Chapter 9 examines an e-learning portal comparing attitudes of employees of a large Asian organisation with digital and traditional classroom learning. There was an overall preference
for e-learning in explicit knowledge, but not tacit. Chapter 10 reports on a quality monitor system which can enhance a decision maker’s ability to identify and utilise the best content for the task. Chapter 11 looks at neural networks where the biggest problem identified is determining the best possible set of model parameters.

Section 3, Socially-Oriented Knowledge Management Initiatives is likely to be of most interest to the journal readers. Chapter 12 finds that the opportunity to experiment leads to improved decision performance; however, optimal performance was not achieved. A holistic approach to managing knowledge and combining and integrating various initiatives is needed. Chapter 13 looks at promoting knowledge sharing through personal interaction; people perform better when sharing knowledge with others. The social environment is an important enabler and facilitator of knowledge sharing. Chapter 14 examines the value of social interaction in promoting people’s working knowledge and performance in decision making in relation to task complexity. Subjects performing complex decision tasks were found to process task information more efficiently.

Chapter 15, Communities of Practice, explores the social dynamics and effectiveness that a community of practice creates for members. This research confirms the value of informal socialisation, critical for promoting effectiveness. Chapter 16 compares the effects of informal and formal socialisation on organisational performance. The chaotic unstructured nature of socialisation is critical for promoting creativity. It allows generation and transfer of high-value tacit knowledge as well as sparking fresh ideas. Chapter 17 looks at organisational culture where multiple cultures, lack of social interaction and commonly shared work do not affect competitive position. No, one generic culture ensures success. Chapter 18 finds no change in the amount and nature of student contributions to discussion boards between graded, mixed and non-graded formats. Intrinsic rewards are as powerful as extrinsic. Commentary on other’s work is more common than new ideas. Chapter 19 looks at major steps towards building an educational system of knowledge management professionals that meets the requirements of the knowledge industry. It finds there is no clear consensus about what roles they play and what competencies and skills they need to have.

Section 4 examines issues and challenges facing knowledge management professionals. It discusses the virtuous circle of teaching, research and professional consulting work and perceived importance (in theory) and perceived implementation (in practice). It gives insight into knowledge management practices in a knowledge intensive organisation where there is a high level of awareness of knowledge management but a low level of implementation. Chapter 21 is concerned with how to choose the correct strategy and looks at codification or personalisation. The findings are that
only codification had a significant impact on performance.

In terms of balance of research between academic and practitioner research, the balance was in favour of academic and much of this research was conducted in Australia, however, some in-depth discussion of how the findings could be taken forward into the practitioner domain would have been helpful. For example, one of the books’ findings is that academics are more concerned with communication and collaboration and non-IT forms of support, whilst practitioners pay more attention to IT-based initiatives. The implications of this result could be of great consequence to subsequent research.

The author expects that the findings will enable the reader to understand the benefits and limitations of sociotechnical knowledge management. What the book gives is a variety of insights into these areas which are helpful, but which by no means provide the whole answer. Even after undertaking a wide range of empirical studies the author accedes that the book is only a partial answer, not a full one. The area is too complex and is still regarded as emerging in terms of theoretical approaches and empirical results. A further issue noted was that most chapters presented empirical research, qualified by the statement that ‘further research is necessary’, except in Section IV of the book where comments were more positive. In some cases, the findings confirmed a common sense attitude and approach, but confirmatory research is always useful. Has the author succeeded in her initial aim? Having stated previously that the field is far too complex to be covered in one book, this book provides a useful reader for those new to the field and those with some experience. There was a tendency for the chapters to present ‘sound bites’ on a topic, but given the author’s express comments about the nature of the book, this is to be expected. Each ‘sound bite’ has its function, but many of them left me wanting to read more. The format is easy to read and well-structured and mostly uses terminology appropriate to someone new to the field of study.

The overall strength of the book lies in the empirical studies and what can be taken from them. Given that the author has taken a particular approach, then the best that can be made of the evidence has been and the book achieves its aim of being a well-written piece backed by empirical study. A follow-up book with more practitioner-based studies would be of great value to the field of sociotechnical knowledge management.
Dianne Willis’ research interests focus on sociotechnical issues surrounding the implementation of new technology in business and social environments. She has a PhD in the effects of email on communication patterns in an educational setting which grew from initial research into the effects of technology on social interaction in the workplace. She has also published articles in journals, chapters in books and presented at conferences. She has recently had to retire from her principal lecturer post at Leeds Metropolitan University due to ill health, but still pursues her research interests in the field of sociotechnology.