



Chapter III

Sociotechnical Systems and Knowledge Management

3.1 Introduction

Sociotechnical thinking is a subset of social theory and philosophy. This way of thinking is particularly relevant in domains such as information management which are closely related to knowledge management. The wider social context is addressed in the following chapter. In this chapter we are going to look at the concepts underpinning sociotechnical thinking and how we can apply these ideas to knowledge management.

As discussed previously, knowledge management is not about managing technology alone, but is about managing how humans can share their knowledge effectively, using technical tools where appropriate. In this sense we use the phrase ‘information system’ to include technology and people, and also non-technical means of sharing information such as story telling, newsletters, and notice boards. A lecture is one of the most obvious means of sharing knowledge through the means of an information system, with the lecturer explicating understanding of the topic. Lecturers share knowledge with stu-

dents, and this knowledge may be both tacit and explicit in form; but what they receive is information that is interpreted for them in the context of the lecturer's understanding. What the students gain from it is, of course, dependent on their understanding and world view. In order to share knowledge, lecturers use technology as appropriate: sometimes when in a large theatre, a microphone and possibly a computer to project slides that contain the main points of the talk. Often lectures are supported outside the lecture theatre by websites or Virtual Learning Environments, with further information or links to this information for students to follow; often of course, lecturers just stand in front of students and narrate, or tell stories.

Telling stories is one of the best forms of knowledge sharing. It is culturally dependent and unique to the situation being discussed. So here we take as our context that the 'real' information system is built upon organisational culture and interpersonal communication. This system contains the rich and dynamic tacit knowledge, which, if it is harnessed and managed effectively, may give organisations leverage to gain competitive advantage.

When considering both the social system and the technical systems that we use in our working life, we need to think about the way humans use technology for their own purposes. We should consider the statement:

"The very nature of information technology shifts and changes, historically and contextually, conceptually and empirically. Organisational work, too, is a multi-valenced concept as well as a multi-dimensional practice. It has included and continues to cover much territory: clerical, artistic, managerial, craft, supervisory, production, professional, routine, knowledge, symbolic, emotional, informal, technical, individual, and collaborative. Animating both technology and work is the human capacity to act in the world, to construct and use information technology, to define, control, and modify work. Human agency is routine and innovative, mindless and reflective, planned and improvisational. It has both intended and unintended consequences. Most importantly, the assumptions, interests, concepts, approaches, and theories that we use, shape and refine our views of the world and of ourselves" (Orlikowki, Walsham, & Jones, 1996, p. 9).

43 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/sociotechnical-systems-knowledge-management/5550

Related Content

Competitive Advantage of Knowledge Management

Gabriel Cepeda-Carrion (2006). *Encyclopedia of Knowledge Management* (pp. 34-43).

www.irma-international.org/chapter/competitive-advantage-knowledge-management/16931

Knowledge-Intensive Evolutionary Algorithms for Solving a Healthcare Fleet Optimization Problem: An Ontological Approach

Carlos Adrian Catania, Cecilia Zanni-Merk, François de Bertrand de Beuvronand Pierre Collet (2018). *Contemporary Knowledge and Systems Science* (pp. 192-223).

www.irma-international.org/chapter/knowledge-intensive-evolutionary-algorithms-for-solving-a-healthcare-fleet-optimization-problem/199614

An Ontology-Based Extraction Framework for a Semantic Web Application

Hadrian Peterand Charles Greenidge (2011). *International Journal of Knowledge-Based Organizations* (pp. 56-71).

www.irma-international.org/article/ontology-based-extraction-framework-semantic/55601

Exploring the Effect of Knowledge Transfer Practices on User Compliance to IS Security Practices

Tonia San Nicolas-Rocca, Benjamin Schooleyand Janine L. Spears (2014). *International Journal of Knowledge Management* (pp. 62-78).

www.irma-international.org/article/exploring-the-effect-of-knowledge-transfer-practices-on-user-compliance-to-is-security-practices/117905

Knowledge Reuse

Ilan Oshri (2008). *Knowledge Management: Concepts, Methodologies, Tools, and Applications* (pp. 1430-1437).

www.irma-international.org/chapter/knowledge-reuse/25188