Electronic Memory: Increasing Knowledge Availability

Abstract

Employees in modern organisations have achieved expanded access to corporate knowledge assets via electronic memory systems. Despite their popularity, there is little empirical evidence regarding the impact of these systems on users’ job performance. This chapter reports results of an empirical examination of users’ knowledge acquisition behaviour and subsequent job performance, in relation to increased amounts of knowledge artefacts provided in electronic memory systems. Results indicate a lack of substantial enhancement in performance as a result of increased amounts of seemingly helpful stored knowledge. Findings suggest this outcome is due to the fact that people tend to use simplifying knowledge acquisition strategies as the amount of stored knowledge artefacts increases.
Introduction

The revolution in the computer industry has brought about multiple ways of capturing and storing knowledge electronically. The main advantage of electronic over traditional storage media is seen in that digital content can be easily edited, repeatedly used, and distributed cheaply via networks. Some analysts predict that there will soon be virtually unlimited digital storage space available at very modest cost (Probst, Raub, & Romhardt, 2000). Thus, companies will be able to put all their knowledge contained in various text documents, graphics, tapes, and films into digital form, and create a comprehensive electronic organisational memory. At the same time, the Internet will offer growing numbers of users easy access to masses of digital materials available in these systems.

Electronic memories have been recognised as the most common type of KM technologies so far, with an objective to capture and store knowledge for later and broader access and reuse (Grover & Davenport, 2001). The Interim Australian KM standard (Standards Australia, 2003) proposes a number of technologies, including databases, textbases, data warehouses, and data marts, as useful technologies in building organisational memories.

The structured part of the organisation’s electronic memory typically consists of daily transactions recorded in business documents and notes, or in transaction records stored in structured database systems. In addition to data and text, multimedia systems organise and make available to users the unstructured part of corporate knowledge in a variety of other representational forms, including images, audio, and video formats. Furthermore, data warehouses and data marts retain historical and cross-functional perspectives of organisational knowledge. Data is extracted daily from the business transaction systems, and from any other systems deemed relevant. Compared to data warehouses, which combine databases across an entire enterprise, data marts are usually smaller, and focus on a particular subject or department (Handzic, 2004).

The assumption is that if organised and reused systematically, electronic memory systems can bring competitive advantage to companies that operate in a knowledge intensive environment. In particular, they can serve as a means by which knowledge from the past experience and events may influence present organisational activities (Stein & Zwass, 1995), help to avoid reinventing the wheel by keeping workable solutions, and facilitate change management.

While there is ample evidence to show that organisations do implement various electronic storage technologies as part of their best KM practices (A.A., 1998), there is little empirical evidence regarding the impact of these technologies on users’ performance (Alavi & Leidner, 2001). The existing KM research is mainly limited to anecdotal stories and descriptive case studies. Some researchers point out that our ability to accumulate and store knowledge artefacts in electronic memories has, by far, surpassed our ability to process them, and warn of the danger that vast institu-
A Framework for Managing the Life Cycle of Knowledge in Global Organizations
Mark Salisbury (2011). Global Aspects and Cultural Perspectives on Knowledge Management: Emerging Dimensions (pp. 64-80).
www.igi-global.com/chapter/framework-managing-life-cycle-knowledge/54082?camid=4v1a