Chapter X

Quality Monitor: Assessing Knowledge Credibility

Abstract

This chapter reports results of an empirical examination of the contribution of a quality monitor system (QMS) to evaluating predictive accuracy of knowledge artifacts in a simulated organizational repository. Thirty-four student subjects participated in the study on a voluntary basis. Results indicate that the tool was quite effective in enhancing user understanding of the absolute and relative predictive power of their knowledge artifacts, and led to improved decision performance. These findings have important implications for the development of effective knowledge management systems.
Introduction

Many enterprise systems acquire large volumes of knowledge artifacts from multiple and often remote sources. The complexity of interrelated knowledge artifacts stored in these systems makes it often difficult for people to comprehend and interpret their meaning. There is also a danger that some of the acquired knowledge may be of poor quality. There is strong evidence that the problems related to the quality of knowledge artifacts are becoming increasingly prevalent in practice (Shanks, 2001). It is therefore not surprising that the issue of quality is becoming an increasingly important topic in research.

Considering that knowledge workers must rely on enterprise systems for their task-related activities, it is critical that they better understand the quality of the knowledge artifacts available in these systems. With a better understanding, they can decide to reject using artifacts of poor quality and, consequently, avoid their detrimental effect on task performance (Chengular-Smith, Ballou, & Pazer, 1999). Unfortunately, most of our own empirical evidence casts serious doubts regarding human ability to effectively recognise and utilise this knowledge from artifacts (Handzic & Aurum, 2001; Handzic & Parkin, 2000).

According to Poston and Speirer (2005), shifting through myriad of content available through knowledge management systems can be overwhelming for knowledge workers when trying to find the content most relevant for completing a task. To address the problem, they proposed that systems designers should include content-rating schemes and credibility indicators to improve users’ search and evaluation of content. Knowledge ratings would indicate the quality of specific content, and credibility indicators would describe the validity of the content and/or the ratings.

The main objective of the current chapter is to examine a specific quality monitoring system (QMS) designed to assist users in their knowledge evaluation process, and to improve their performance in the context of a decision-making task. Building on previous work by Handzic and Li (2002), the current study will empirically examine the impact of a QMS based on regression and visualisation techniques in assisting user decision making to deal with similar and diverse predictive quality artifacts. To ensure effective usage, the proposed QMS was designed so that knowledge workers can readily find high-quality content without feeling overwhelmed (Alavi & Leidner, 2001) and without being misled (Resnick, Zeekhauser, Friedman, & Kuwabara, 2000).
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