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## ARTICLE

# Methodological literature review of knowledge management research



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### KEYWORDS

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**Abstract** The purpose of this paper is to examine the state of KM research from the standpoint of existing methodologies. The state of KM research is assessed by examining the research design, number of hypothesis testing, research methods, data analysis techniques and level of analysis. The review of KM research is based on 344 published articles where has KM in their title, which is published in seven journals. Major findings show that qualitative research methods such as a case study and conceptual models hold greater credibility. The gaps identified in the review were (a) the research at an inter organizational level is very less, (b) hypothesis testing is being done in very less number of articles and maximum articles have done only conceptual analysis, and (c) mathematical models are used in very limited articles. This methodological review will provide a better understanding of the current state of research in the KM discipline. © 2013 Instituto Politécnico do Cávado e do Ave (IPCA). Published by Elsevier España, S.L.U. All rights reserved.

## 1. Introduction

Knowledge is recognized as an important instrument for sustaining competitive advantage and improving performance (Chan & Chau, 2006; Cheng, Yeh, & Tu, 2008; Tseng, 2009). The 21st century is the era of knowledge economy, in which most organizations possess knowledge that enables them to improve their performance. Knowledge adds value to an organization through its contribution to products, processes and people, while knowledge management (KM) transforms information, data and intellectual assets into enduring value

by identifying useful knowledge for management actions (Goh, 2006). KM consists of processes that facilitate the application and development of organizational knowledge, in order to create value and to increase and sustain competitive advantage (Kannabiran, 2009; Zhao, Pablo, & Qi, 2012). There is a strong positive relationship between KM, innovation and performance (Pawlowsky & Schmid, 2006).

As one of the contemporary management tools, KM has been increasing in popularity of the tools/techniques used by large organizations and multinational organizations to gain sustainable competitive advantage in the long run (Delen, Zaim, Kuzey, & Zaim, 2013). KM system is required to acquire, store, retrieve and use up-to-date knowledge (Moradi, Aghaie, & Hosseini, 2013). KM consists of processes that facilitate the application and development of organizational knowledge, in order to create value and to increase

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and sustain competitive advantage (Zhao et al., 2012). Organizational learning (OL) is the part of KM. OL focuses on the process, whereas KM focuses on the content, on the knowledge that an organization acquires, creates, processes and eventually uses (Easterby-Smith & Lyles, 2003).

KM is not only a practice under the guidance of science, philosophy, but also a necessary requirement of globalization and knowledge-based society. Further, it is a process, in which the staff continuously transfers personal knowledge into organizational knowledge, and then increases individual knowledge through the organizational knowledge base (Liyanage, Elhag, Ballal, & Li, 2009). According to Robinson (2005), KM relates to unlocking and leveraging different types of knowledge so that it becomes available as an organizational asset. KM was found to have an impact on completion times, innovation, project success, operational efficiency and the generation of new knowledge (Oluikpe, Sohail, & Odhiambo, 2009).

KM implementation enables an organization to learn from its corporate memory, share knowledge and identify competencies in order to become a forward thinking and learning organization. Since the business situation is likely to remain competitive, it appears that KM will remain relevant in the days to come (Boumarafi & Naceur, 2011; Zack, McKeen, & Singh, 2009). KM is one of the emerging topics of academic and professional discourse in many fields of knowledge, including cognitive sciences, sociology, management science, information science (IS), knowledge engineering, artificial intelligence and economics (Bjornson & Dingsoyr, 2012; Dalkir, 2005; Metaxiotis & Psarras, 2006; Rowley, 2007; Sinotte, 2004; Wild & Griggs, 2008).

The theory of KM has been discussed by writers in both business and academia (International Labor Organization, 2011; Leibowitz, 1999). KM is recognized as an important source of competitive advantage and hence there has been increasing academic and practitioner interest in understanding and isolating the factors that contribute to effective knowledge transfer. (He, Ghobadin, & Gallear, 2013).

Many researches dealing with the literature review of KM. But only one methodological review has done, that is also up to the year 2004. Hence the need of methodological literature review of KM arises. The primary purpose of this paper is to examine the status of KM in academic research, in terms of methodologies applied as well as to discuss the implications for future research. This paper examines the state of KM research in examining the research design, number of hypothesis testing, research methods, data analysis techniques and level of analysis in a subset of seven academic journals (344 articles).

The next section explains the earlier reviews, on KM and highlights the outcome. Preamble of literature is given in Section 3. Section 4 describes the methodology used in this review. Section 5 presents the summary of different reviews and discussions. Section 6 is the conclusions, which has three subsections presenting the gaps identified in the research, significant findings of the report, and future directions of the research.

## 2. Earlier reviews of literature on KM

It was found during the current research that nine literature reviews specifically on KM have been made in the past.

It was studied by the authors. These reviews are given in chronological order below:

- (i) Chauvel D., & Despers C. (2002). A Review of Survey research in knowledge Management: 1997–2001. *Journal of Knowledge Management*, 6(3), 207–223.
- (ii) Liao, S. (2003). Knowledge management technologies and applications – literature review from 1995 to 2002. *Expert system with applications*, 25, 155–164.
- (iii) Plessis, M. (2007). Knowledge management: what makes complex implementations successful? *Journal of Knowledge Management*, 11(2), 91–101.
- (iv) Guo Z., & Sheffield. J. (2008). A paradigmatic and methodological examination of knowledge management research: 2000 to 2004. *Decision Support Systems*, 44, 673–688.
- (v) Ma, Z., & Yu, K. H. (2010). Research paradigms of contemporary knowledge management studies: 1998–2007. *Journal Of Knowledge Management*, 14(2), 175–189.
- (vi) Serenko A., Bontis N., Booker L., Sadeddin K., & Hardie T. (2010). A scientometric analysis of knowledge management and intellectual capital academic literature (1994–2008). *Journal of Knowledge Management*, 14(1), 3–23
- (vii) Wallace, D., Fleet C., & Downs, L. (2011). The research core of the knowledge management literature. *International Journal of Information Management*, 31, 14–20.
- (viii) Dwivedi Y., Venkitachalam K., Sharif A. M., Al-Karaghoul W., & Weerakkody V. (2011). Research trends in knowledge management: Analyzing the past and predicting the future. *Information Systems Management*, 28(1), 43–56.
- (ix) Lee, M. R., & Chen, T. T. (2012). Revealing research themes and trends in knowledge management: From 1995 to 2010. *Knowledge-Based Systems*, 28, 47–58.

Findings from these reviews are shown in Table 1. Further, a comparison between the earlier attempts to review literature on KM is made using certain attributes. The attributes considered for comparisons are:

- (i) Focus and objectives: this refers to a brief coverage of the publications in terms of the content and the applicability.
- (ii) Number and type of publications covered: whether they are textbooks, journal articles, conference proceedings or periodicals.
- (iii) Review methodology: this looks at the way in which the literature has been reviewed and classified.
- (iv) Outcome of the literature review.

Apart from these distinguishing attributes, certain common parameters, namely, the name of publication, author(s), year of publication, journal of publication are also used. This comparison is shown in Table 1.

Keeping the concerns of above reviewers, only one methodological review is published on KM, and it was found necessary for this type of review. The objective of this paper is to examine the state of KM research from the standpoint of methodologies to understand the trends and determine implications for future research. It is essential that the present attempt is different from the earlier reviews and

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