

# Mapping research trends in the field of knowledge management

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## ABSTRACT

*This paper aims to map the research trend in the field of knowledge management (KM) by presenting a systematic and analytical scientometrics approach based on data from the Web of Science (WoS). The method for science mapping includes the following steps: Defining the domain; identifying keywords related to KM field and its subfields; conducting searches and collecting the publication and citation data from WoS; drawing the structure of scientific productions using scientometrics tools; enriching the science maps by adding new attributes; and analyzing the results. In this study, we provide a visualization overview of the wide distribution of KM publications. The analysis of clusters of the historiographical maps, based on Local Citation Score (LCS) and Global Citation Score (GCS), indicated the most frequent thematic trends. The co-word occurrence analysis for mapping KM research topics shows that the structure of fundamental subject areas within the field of KM has changed and expanded dynamically during 2004-2010. This study could be useful for researchers and subject specialists as well as policy makers as they may view and study the history of a discipline by drawing the structure of its scientific productions, in order to do strategically plan and determine the research priorities in the discipline.*

**Keywords:** Knowledge management; Research trend; Science mapping; Domain discovery; Information visualization; Scientometrics.

## INTRODUCTION

In bibliometrics and scientometrics research, much attention has been paid to the analysis of networks of documents, keywords, authors, or journals. Mapping and clustering techniques are frequently used to study such networks. The techniques are used to address questions such as what are the main topics or the main research fields within a certain scientific domain and how do these topics or fields relate to each other (Waltman, Jan van Eck and Noyons 2010). Science mapping analyses the networks of links between articles (citations, co-authorship), patents, or other information entities to understand the structure of science (Borner, Chen and Bonyak 2003), and can be used as a tool for science strategy and evaluation. A variety of methods have been used in science mapping, such as journal citation analysis, co-citation analysis, bibliometrics coupling, and co-word analysis. In recent years visualization tools have been improved to make the maps more informative and easier to understand (Besselaar and Heimeriks 2006).