Chapter 90
When Emotions Rule Knowledge:
A Text-Mining Study of Emotions in Knowledge Management Research

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ABSTRACT

Although emotions play an important role in human behavior and knowledge studies, knowledge management (KM) research considers them from specific angles and, to date, has lacked a comprehensive understanding of the emotions dominating KM. To offer a holistic view, this study investigates the presence of emotions in KM publications by applying a sentiment analysis. The authors present a sentiment dictionary tailored to KM, apply it to KM publications to determine where and how emotions occur, and categorize them on an emotion scale. The considerable amount of positive and negative emotions expressed in KM studies prove their relevance to and dominance in KM. There is high term diversity but also a need to consolidate terms and emotion categories in KM. This study's results provide new insights into the relevance of emotions in KM research, while practitioners can use this method to detect emotion-laden language and successfully implement KM initiatives.

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INTRODUCTION

Emotions are as much a part of human behavior as reason and play an important role in intelligence and knowledge (Martínez-Miranda & Aldea, 2005). Managing knowledge in organizations has proved to be very useful since successful knowledge management (KM) leads to significant improvements in their scientific, economic, and social aspects (Cao et al., 2012). Nonetheless, knowledge is often viewed merely as just another manageable organizational resource (Alavi & Leidner, 2001). Owing to its context-specificity and boundedness to human beings (Nonaka, 1994), however, it cannot be separated from human emotions and, thus, has to be approached differently than other organizational resources (Kuo et al., 2003). Consequently, the role played by emotions, which help to both express and understand knowledge (Davenport & Prusak, 1998), requires attention from within the information systems (IS) domain in general and from KM researchers in particular.

IS researchers have started to pay attention to the presence and role of emotions (Chau et al., 2020; Beaudry & Pinsonneault, 2010; Gregor et al., 2014). Likewise, KM studies on emotion-related topics are critical to acknowledging emotions and the role emotional concepts play in KM (Scherer & Tran, 2003; van den Hooff et al., 2012). Nonetheless, these studies also show how compartmentalized KM research on emotions is. It only focuses on single emotions and limited subtopics from emotion research while neglecting an overall and holistic perspective that would help to develop common ground in this area. For instance, concerning KM processes, the roles of emotional intelligence (Decker et al., 2009; Peng, 2013; Trong Tuan, 2013) and emotional obstacles (Lin et al., 2006; Pemberton et al., 2007) have been investigated. However, an integrated and comprehensive overview of emotions, unbiased by any particular single topic, is still lacking, and it is necessary to consolidate research on single emotions and emotional concepts (Hornung & Smolnik, 2018), and in which nexus they are displayed in KM research – with a taxonomy of emotions in KM research as the ultimate goal. To arrive at a comprehensive taxonomy of emotions in KM and close the aforementioned gap, it is crucial to understand which emotions are prevalent in and dominate KM research. Sentiment analyses, which have often been used to detect words associated with either positive or negative emotions in the context of politics, finance, and (social media) marketing (Matthies, 2016; Yassine & Hajj, 2010), are a useful instrument to gain a broader understanding of emotions. As a special type of text mining, sentiment analyses support the authors' goal of analyzing the underlying sentiment of a text that "can encompass investigating both the opinion and the emotion behind that unit" (Yadollahi et al., 2017, p. 2). Sentiment analyses also enable the exploration of vast amounts of data. They are also effective at revealing which emotions prevail in written KM publications and can, therefore, help to answer the following research questions:

RQ1: Which emotions dominate research on KM?
RQ2: How can these emotions be categorized according to emotion scales?

The sentiment analysis in this study relies on a dictionary-based approach in which KM-specific dictionaries 1) are created based on Hu and Liu (2004) and 2) applied to a comprehensive sample of 6,017 scientific KM publications to detect existing emotions. The analysis results are then 3) categorized and structured using an appropriate emotion scale.