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Current Issue on Knowledge Management System for future research: a Systematic Literature Review

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Abstract

Nowadays, the number of papers on the topic of Knowledge Management and Knowledge Management System is still widely discussed. The study of Knowledge Management System (KMS) issues are based on Systematic Literature Review (SLR). It aims to analyze the state of the art, identify current popular issues on KMS, and offer directions for future research agenda. The methodology used in this paper is based on the systematic literature review to collect, synthesize and analyze numerous papers on a variety of topics that are closely related to knowledge management system issues that published in the last two decades. Based on fifty-four papers reviewed from six electronic databases, the result of this paper obtained fourteen current issues on knowledge management system. Moreover, the top three popular issues consist of the development of capabilities and features of KMS, Big Data issues on KMS, and adoption to new technology issue for KMS respectively. The conclusion of this study emphasized the big data phenomenon as the most contemporary topic for the future research area besides the growing of required KMS capabilities and features development.

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1. Introduction

In recent years, many papers related to the knowledge management (KM) and knowledge management system (KMS) are still growing [1–3]. Although knowledge management (KM) science has long been introduced by Nonaka since 1994 through his paper [4], the discussion related to this area is still intensively discussed. The phenomenon of dynamics research related to this often occurs along with the development of technology, culture, needs and conditions of implementation [3,5,6]. Nevertheless, there has been no work to review these studies systematically in order to enable them advantageous for researchers and practitioners. Hence, there is a need to synthesize the evidence regarding to the current issues of related KMS.

The implementation of KM consists of three pillars *i.e.* people, technology, and processes [7,8]. KMS focuses on the technology pillars. These three pillars are equally important and complementary. Several objectives can be obtained by utilizing KMS for KM implementation within an organization [9–11]. The various issues discussed in the KMS projects should be identified to define future research areas.

The importance of this study is to regain for new research areas related to knowledge management system that is previously dominated by the lucrative KMS implementation topics [11,12], KMS usage topics [13,14], KMS security [15,16], KMS performance [17,18] and the use of new technology to apply KMS in an organization [8,13]. Whereas, the numerous new topics arise recently which are related to knowledge management system, such as the process of handling big data phenomena [19–21], the implementation of KMS in social media and complex environment [22,23], and gathering information effectively [24].

The main objective of this paper is to congregate, elaborate, and synthesize an exhaustive systematic literature review (SLR) of current issues related to the area of KMS and research trends. Based on the nature of descriptive and inductive literature review, the authors addressed to identify the big challenge issues that is still intense to discuss in KMS area. Thus, the research questions for this SLR are:

RQ1: what are the current issues related to knowledge management system (KMS) research topic?

RQ2: what are the top ranking for future research topic in knowledge management system (KMS) area?

Additionally, this SLR contributes to the scientific knowledge on computer science and information system management by: (i) studying in detail the current issues related to KMS; (ii) identifying some of the research trends in the existing literature; (iii) suggesting directions for future research.

The structure of the paper is divided into five sections *i.e.* the introduction part, the background of theoretical foundation, the methodology of the systematics review process, the SLR result findings, and conclusion and suggestion.

2. Theoretical Background Foundations

2.1 Knowledge Management

The knowledge management (KM) terminology was first coined by Wiig in 1986 [25]. According to Wiig, KM is a systematic, explicit and deliberate building, renewal, and application of knowledge to maximize an organization's knowledge-related effectiveness and return from its knowledge assets [26]. According to O'Leary, knowledge management has two concepts *i.e.* content management and collaboration process [5].

The concept of knowledge management was initiated from the difficulty of dealing with complexities, increasing competition with competitor by technology and growing sophistication of customer's needs [3]. According to Nonaka, knowledge asset in organization is divided into two categories *i.e.* tacit knowledge and implicit knowledge [4]. In knowledge creation process, it involves the creation of new content or the replacement of existing content within the tacit and explicit knowledge [27]. According to Nanoka, knowledge is created, shared, amplified, enlarged, and justified in organizational settings through social, collaborative, and individual's cognitive processes [4].

Nanoka contended that the organizational knowledge creation involve a continual interaction between the tacit and explicit knowledge. It spirally flows as the knowledge that moves through individual, group, and organizational levels [4]. The renowned model of four modes of knowledge creation consisted of socialization, externalization, internalization, and combination. Knowledge management process in its implementation is supported by the pillars of information technology in various ways. Most organizations apply technologies such as Knowledge Management System (KMS) to capture, collect, distribute, and share the knowledge [27].