Trends in Knowledge Management Processes and Practices

Mofarah Mohammed Al-Shahrani

Abstract

This study aimed to review the studies carried out on the subject of knowledge management. Various databases were searched for keywords such as "knowledge management". These studies were also shortlisted as per the year of publication. The review found that during recent years, knowledge management has increased in importance and relevance, even though the field has existed for over 30 years. This review has covered many of the definitions of knowledge management, the key components of knowledge management, and the processes and practices involved. The review has explored the importance of knowledge management to the existence of organizations today. This study is important at this time because is explores knowledge management from the point of view of what authors have said and due to the importance of knowledge management today.

Keywords: Knowledge Mangement, Process, Practices, Review

Introduction

Today, knowledge management has become a common buzzword today, used ubiquitously in organizations across fields and geographies. Knowledge management is essential for the achievement of organizational goals. According to Castaneda (2010), Knowledge Management is a fundamental field which adds value to organizations by facilitating the achievement of their goals (as cited in Castaneda, Manrique, & Cuellar, 2018). Hence, it becomes important to study knowledge management and review the work which has been carried out on the subject.

In this paper, we will review the studies which have been carried out on the subject of knowledge management, including various definitions, key concepts and components, as well as research.

Methodology

In this paper, we will review research studies which have been carried out on the subject of knowledge management. Towards this end, search terms such as 'knowledge management'. were used in the Google Scholar search engine. The results of these searches were shortlisted as per the year of publication. For the purpose of this paper, only studies published post 2012 were used in order to examine the concept of knowledge management.

Results and Discussion

As a field of study, knowledge management has existed for more than 30 years (Girard & Girard, 2015). The term knowledge management was first conceptualized in the 1990s, where it was enabled by the globalization of economies and markets, knowledge-intensive products and services and the rapid development of information technology (Alavi and Denford, 2001 – as cited in Castaneda, Manrique, & Cuellar, 2018). The study of knowledge management was developed by Drucker (1993) in terms of knowledge-intensive firms and the fundamental role of their knowledge workers (Drucker, 1966 – as cited in Castaneda, Manrique, & Cuellar, 2018).

Definition of Knowledge Management

According to O'Dell & Grayson (1998), Knowledge Management is "a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organizational performance" (as cited in Girard & Girard, 2015).

According to Davenport and Prusak (1998), Knowledge Management draws from existing resources that your organization may already have in place-good information systems management, organizational change management, and human resources management practices. According to Wiig (1997), knowledge management is the creation, maintenance, renewal, organization, transference and realization of knowledge (- as cited in Castaneda, Manrique, & Cuellar, 2018). According to Liebowitz (1999), knowledge management is the identification, capture, storage, sharing, application and selling of knowledge (- as cited in Castaneda, Manrique, & Cuellar, 2018);

Most knowledge management definitions are based on processes (as cited in Girard & Girard, 2015). With the advent of the new millennium, a wide variety of definitions of knowledge management have evolved. Alavi and Leidner (2001) proposed one of the most widely cited frameworks comprising four processes: creation, storage retrieval, transference and knowledge application (as cited in Castaneda, Manrique, & Cuellar, 2018). The processes that are frequently incorporated in knowledge management definitions are the creation, access, dissemination and application of knowledge (Nonaka and Takeuchi, 1995 - as cited in Castaneda, Manrique, & Cuellar, 2018); the generation, access, facilitation, integration, embedding, application, transfer and protection of knowledge (Lin, 2014 - as cited in Castaneda, Manrique, & Cuellar, 2018); and the creation, acquisition, documentation, storage, electronic transference, face-to-face sharing and use and reuse of knowledge (Castaneda, 2015 - as cited in Castaneda, Manrique, & Cuellar, 2018). According to Pearce-Moses (02005), knowledge management can be defined as the administration and oversight of an organization's intellectual capital by managing information and its use in order to maximize its value (as cited in Girard & Girard, 2015). According to Serrat (2009), knowledge management is the explicit and systematic management of processes enabling vital individual and collective knowledge resources to be identified, created, stored, shared, and used for benefit. Its practical expression is the fusion of information management and organizational learning (as cited in Girard & Girard, 2015).

Knowledge Management Research

In his 2017 study, Kör says that the knowledge management discipline is very diverse. The author says that the knowledge management discipline has been studied by 304 unique authors from 181 unique organizations in 43 different countries. Kör says that there is no single university or person generating the most research in this discipline; instead, current knowledge management publications are shaped by the cumulative contribution of a large variety of individuals from different academic and non-academic organizations. Furthermore, KM publications have also pointed out different topics, such as performance, IT, innovation, KM process, literature review and organizational learning (Kör, 2017).

According to Serenko and Dumay (2015), the knowledge management discipline is at the pre-science stage as normative research methods, which include viewpoints and literature reviews, were the most prevalent in knowledge management citation classics (as cited in Kör, 2017). However, the results of Kör's study highlighted that empirical research methods were the most

prevalent in knowledge management citation classics during the period under investigation (i.e., the conversion of the discipline's theories into practice has been increasing). Accordingly, it can be said that the knowledge management discipline has developed significantly after 2009 (Kör, 2017).

According to Serenko & Dumay (2015), the most productive countries, organizations and authors in the field of knowledge management have changed after 2009, with almost all of the top organizations in knowledge management publications being from developed countries such as the Netherlands, Denmark, Sweden, Japan, New Zealand and Switzerland (as cited in Kör, 2017). But the results of Kör's study show that most of the productive organizations were from developing countries with the most productive countries being Taiwan, Iran, India, Thailand, China and Ireland. Kör (2017) says that this difference can be explained by the time frame of selection which has an impact on rankings of countries, organizations and authors.

Key Components of Knowledge Management

The four key components of knowledge management are Knowledge, People, Processes and Technology (KP2T) (Desouza 2011 – as cited in Omotayo, 2015).

    a. Knowledge - Knowledge is described as an essential part of knowledge management. Baloh, Desouza, and Paquette (2011) say that without having knowledge to manage, there would be no knowledge management (as cited in Omotayo, 2015). Knowledge basically refers to a collection/or a body of information which may be embedded in the form of theories, processes, systems, or it could be voiced in form of opinions, theories, ideas and analysis. Although different typologies have been developed, there is consensus only on the notion that knowledge is more than just mere data and information. Wang and Noe (2010 – as cited in Omotayo, 2015) define knowledge as "information processed by individuals including ideas, facts, expertise, and judgment relevant for individual, team, and organisational performance." Davenport and Prusak (1998) define knowledge as "A fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers" (as cited in Omotayo, 2015). Knowledge can be said to be the insights, understandings, and practical know-how that people hold. It can also be said to be the fundamental resource that allows people to function intelligently. It can then be stated that "knowledge is an invisible or intangible asset, in which its acquisition involves complex cognitive processes of perception, learning, communication, association and reasoning" (Epetimehin and Ekundayo, 2011 – as cited in Omotayo, 2015). Davenport, De Long and Beers (1998) define knowledge as information combined with experience, context, interpretation, reflection, and perspective that adds a new level of insight (as cited in Omotayo, 2015). Knowledge is viewed as the key strategic resource for organizational survival, stability, growth, and improvement (Al-Ali, 2013; Sweis, Fallaq, Buqjati, & Abu-Hammad, 2011 – as cited in Abualoush, Masa'deh, & Bataineh, 2018). Allee (1997) says that knowledge becomes meaningful when it is seen in the larger context of culture, which evolves out of beliefs and philosophy. In organizations, knowledge becomes embedded not only in documents or repositories, but also in organizational routines, processes, practices, norms and cultures.

    b. People - People are the sources of knowledge. According to Omotayo (2015), "the ability of humans to think creatively and uniquely, coupled with experiences and talents, make humans valuable sources of knowledge". People both create and consume knowledge on

a daily basis and hence, knowledge management both begins and ends with people. It is therefore pertinent to consider people in KM strategy and implementation. As per Omotayo (2015), "people face emergent knowledge needs as part of daily assignment or routine. And these needs should be met through tools, processes, systems and protocols to seek integrate and apply relevant knowledge". As Drucker (1999) said, workers (people) need to be able to seek out knowledge, experiment with it, learn from it, and even teach others as they innovate so as to promote new knowledge creation (as cited in Omotayo, 2015). Having a knowledge managemetn program that enables the sense of the importance of people is a very important to organizational success.

c. Processes - Baloh et al. (2011) define processes, which is another knowledge management component, "as mechanical and logical artifacts that guide how work is conducted in organizations" (as cited in Omotayo, 2015). Processes govern work in the organization and so are critical to the functioning of the organization. Hence, it is important for a knowledge management program to recognize the importance of processes. According to Omotayo (2015), processes might be made of, and executed by, humans, machines, or a combination of the two. A critical requirement for knowledge management is to be able to understand work processes and how to map them, which would help describe the inputs, outputs, personnel, resources and work being conducted in a given process. Omotayo (2015) says that the mapping of processes helps depict what is really going on in the organization and how tasks are being accomplished. Only then, can the knowledge needed to accomplish tasks can be articulated and the requisite technology or human intervention can be deployed to meet these needs with the goal of increasing effectiveness and efficiency in the organization (Omotayo, 2015).

d. Technology - Technology is a critical enabler and foundational element of any knowledge management plan. With the advances in Information and Communication Technologies (ICTs), knowledge management can be attained through technological solutions. ICTs facilitate collaboration between geographically dispersed people and teams (Omotayo, 2019). Knowledge management activities are facilitated through ICTs by the codification of knowledge as well as rich and interactive forms of communication through the Internet. Omotayo says that that technology, it itself, is not a solution. If people want to share knowledge, technology enables the increasing of reach and scope of the exchange. The success of knowledge management initiatives involves taking account of the socio-cultural factors which inhibit people's willingness to share knowledge, such as conflict, trust, time or concerns about loss of power/status (Sun and Scott, 2005 – as cited in Omotayo, 2015).

Knowledge Management Processes

Knowledge management processes consist of discovery, capture, sharing and application. Each process is supported by a set of sub processes, such as combination, socialization, externalization, internalization, exchange, direction and routines (Fernandez & Sabherwal, 2010 – as cited in Mazhar & Akhtar, 2016). The definitions of four processes as given by Fernandez & Sabherwal, (2004), (as cited in Mazhar & Akhtar, 2016):

a. Knowledge Discovery: to develop the knowledge from data and information or from prior knowledge.

b. Knowledge Capture: to retrieve tacit or explicit knowledge that is existing in people, artifacts or organizational entities.

c. Knowledge Sharing: to communicate to other individuals about tacit or explicit knowledge. As the spread of internet technologies, knowledge sharing may occur between business partners, departments and personnel.

d. Knowledge Application: to establish effective application in making-decision and task performance depends on the better processes of knowledge discovery, capture and sharing.

Tacit vs Explicit Knowledge

Knowledge management can be differentiated into tacit and explicit knowledge (King, 2009 – as cited in Nunes, Kanwal, & Arif, 2017). People use their tacit and explicit knowledge in their own unique ways (Smith, 2001 – as cited in Nunes, Kanwal, & Arif, 2017). Tacit knowledge is internally constructed by individuals during their professional activities and experiences. This knowledge lived in their heads and normally, did not exist in explicit form (Nunes et al, 2006 – as cited in Nunes, Kanwal, & Arif, 2017). However, it has a multidimensional structure which has specific and significant role in individual effectiveness in organizational settings (Koudouovoh, 2014 – as cited in Nunes, Kanwal, & Arif, 2017). But it is difficult to access as it is often not codified and may not necessarily be easily expressed (Chugh, 2013 – as cited in Nunes, Kanwal, & Arif, 2017) and if it remains in the heads of a few individuals in an organization then it can result in knowledge loss (Chugh, Wibowo, & Grandhi, 2015 – as cited in Nunes, Kanwal, & Arif, 2017). So, the organizations need to develop strategies for the transformation of the tacit knowledge into explicit knowledge to derive maximum benefit from the organization's intellectual capital (Omotayo, 2015 – as cited in Nunes, Kanwal, & Arif, 2017). Apart from tacit knowledge, organizations usually incorporate greater proportions of explicit knowledge (Venkitachalam & Busch, 2012 – as cited in Nunes, Kanwal, & Arif, 2017) which comprised technical or academic data or information that is described in formal language (Smith, 2001 – as cited in Nunes, Kanwal, & Arif, 2017).

Knowledge Management Practices

Knowledge management practices are organizational and managerial activities that enable a firm to leverage its intellectual capital to create value (Kianto et al., 2014 – as cited in Inkinen, 2016).

Organizational Management

In recent years, the importance of knowledge management has been widely recognized as the foundations of industrialized economies have moved from natural resources to intellectual assets (Omotayo, 2015). Since 1995 there has been an explosion in the literature surrounding the developing concept of knowledge management, and hence, the importance of this discipline cannot be overemphasized as a critical tool both in the organization and the society. According to Desouza (2011), knowledge management has become a trendy buzzword (as cited in Omotayo, 2015). Omotayo (2015) says that most of the interest in knowledge management comes from the realization that organizations compete on the basis of their knowledge-based assets. Even noncompetitive organizations (e.g. governmental institutions and nonprofits organizations) succeed or fail based on their ability to leverage their knowledge-based assets (Omotayo, 2015). According to Teng and Song (2011), the importance of knowledge management isn't restricted to knowledge intensive firms in high-tech industries; instead, it extends to all sectors of the economy (as cited in Omotayo, 2015). As per Zack (2003), even companies in traditional industries, such as cement, can benefit greatly from knowledge management (Omotayo, 2015).

In essence, knowledge management is beneficial to all sectors - education, banking, telecommunications, production/manufacturing, and even public sectors.

The management of knowledge has generated substantial interest in business and management circles due to its capability to deliver to organizations, strategic results relating to profitability, competitiveness and capacity enhancement (Chua, 2009; Jeon, Kim and Koh 2011- as cited in Omotayo, 2015).

The need to align knowledge management strategy with the organization strategy was identified as critical to the success of knowledge management (Oluikpe, 2012; Gao, Li and Clarke, 2008 – as cited in Omotayo, 2015). du Plessis (2007) says that an organization's knowledge management strategy is supposed to create an understanding of the organization's knowledge management resources and where they reside; articulate the role of knowledge in value creation; and comprise a number of integrated projects or activities phased over time including quick wins as well as long term benefits (Omotayo, 2015). An organization's knowledge management strategy is not random but depends of the way the company serves its clients, the economics of its business, and the people it hires (Hansen, Nohria and Tierney, 1999 – as cited in Omotayo, 2019).

According to Aktürk & Kurt (2016), strategy formulation capabilities in any organization can be carried out more effectively if knowledge management practices are utilized. The authors say that in order to achieve superior performance in the organization, managers must take the nature of the strategy formulation capabilities into account when they develop knowledge management practices. As a result, the study says that companies investing in knowledge management practices can develop a better strategy (Aktürk & Kurt, 2016).

Supply Chain Quality Management

According to the study by Azizi, Maleki, Moradi-Moghadam, & Cruz-Machado (2016) there is a positive and significant causal relationship between knowledge management practices and supply chain quality management. The authors say that though a direct relationship between knowledge management and competitive advantage could not be confirmed, their relationship was confirmed indirectly.

Knowledge Management and Total Quality Management

According to Obeidat, Hashem, Alansari, Tarhini, & Al-Salti (2016), knowledge acquisition, knowledge storage, knowledge transfer and knowledge application were identified as the most important knowledge management uses. This study identified customer satisfaction, training and employees education, commitment of top management, team work and continuous improvement as the most important Total Quality Management practices.

Knowledge Management Infrastructure

According to the study by Abualoush, Masa'deh, & Bataineh (2018), knowledge management infrastructure has a direct impact on the knowledge management process and intellectual capital of an organization. The study also shows that knowledge management processes and intellectual capital have a direct impact on the performance of organizations. The study shows that knowledge management infrastructure had an insignificant but direct effect on organizational performance. Hence, according to Abualoush, Masa'deh, & Bataineh (2018), knowledge management and intellectual capital serve as an intermediary between knowledge management infrastructure and organization performance.

Knowledge Management Use amongst Teachers

Knowledge management practices are used in the field of education as well, with teachers being the most In their study carried out on public and private universities in Lahore, Pakistan, Mazhar & Akhtar (2016) say that there was no significant difference in knowledge management practices between public and private sector universities when it came to process, culture, technology and measurement. However, there were differences in knowledge management practices when it came to leadership, with private sector universities faring better when compared to public sector universities (Mazhar & Akhtar, 2016).

According to Mazhar & Akhtar (2016), in an educational setting, where critical and creative thinking is considered to be valuable, knowledge management entails informed leadership and participative management. This creative thinking is as an instrumental factor in knowledge management (Singh, 2008; Smith, 2000; Soo, 2002 – as cited in Mazhar & Akhtar, 2016). Creating knowledge-based universities and using model of knowledge management and information technology in universities can advance the speed, quality and utility of education services. To develop this in universities, all systematic changes, due to reconstruction, interaction and engagement of knowledge, must be encouraged and supported (Salgi, 2011; Stacey, 2000; Storey, 2000 – as cited in Mazhar & Akhtar, 2016).

Conclusion

This study aimed to review the studies carried out on the subject of knowledge management. It was found that during recent years, knowledge management has increased in importance and relevance, even though the field has existed for over 30 years. This review covered many of the definitions of knowledge management, the key components of knowledge management, and the processes and practices involved. The review explored the importance of knowledge management to the existence of today's organizations.

References

Abualoush, S., Masa'deh, R., Bataineh, K., & Alrowwad, A. (2018). The Role of Knowledge Management Process and Intellectual Capital as Intermediary Variables between Knowledge Management Infrastructure and Organization Performance. *Interdisciplinary Journal of Information, K nowledge and Management, 13*, 279-309.

Aktürk, B.K., & Kurt, M. (2016). An empirical study of the relationship between knowledge management practices and strategy formulation capabilities. *Procedia – Social and Behavioral Science, 235*, 739-745.

Azizi, R., Maleki, M., Moradi-Moghadam, M., & Cruz-Machado, V. (2016). The Impact of Knowledge Management Practices on Supply Chain Quality Management and Competitive Advantages. *Management and Production Engineering Review, 7*(1), 4-12.

Castaneda, D.I., Manrique, L.F., & Cuellar, S. (2018). Is organizational learning being absorbed by knowledge management? A systematic review. *Journal of Knowledge Management, 22*(2), 1367-3270.

Girard, J., & Girard, J. (2015). Defining knowledge management: Toward an applied compendium. *Online Journal of Applied Knowledge Management, 3*(1).

Inkinen, H. (2016). *Intellectual Capital, Knowledge Management Practices and Firm Performance* (Unpublished doctoral dissertation). Lappeenranta University of Technology, Lappeenranta, Finland.

Kör, B. (2017). Revealing Trends in Knowledge Management Research: From 2010 to 2015. *Istanbul University Journal of the School of Business, 46*, 18-30.

Mazhar, S., & Akhtar, M.S. (2016). Knowledge Management Practices: A Comparative Study of Public and Private Sector Universities at Lahore. *Journal of Quality and Technology Management, XII*(I), 81-90.

Obeidat, B.Y., Hashem, L., Alansari, I., Tarhini, A., & Al-Salti, Z. (2016). The Effect of Knowledge Management Uses on Total Quality Management Practices: A Theoretical Perspective. *Journal of Management and Strategy, 7*(4), 18-29.

Omotayo, F.O. (2015). Knowledge Management as an important tool in Organisational Management: A Review of Literature. *Library Philosophy and Practice (e-journal)*, 1238.