Understanding Knowledge Networks Through Social Network Analysis

Ronel Davel, University of Pretoria, Pretoria, South Africa
Adeline S. A. Du Toit, University of Pretoria, Pretoria, South Africa
Martie M Mearns, University of Johannesburg, Johannesburg, South Africa

ABSTRACT

Social network analysis (SNA) is being increasingly deployed as an instrument to plot knowledge and expertise as well as to confirm the character of connections in informal networks within organisations. This study investigated how the integration of networking into KM can produce significant advantages for organisations. The aim of the research was to examine how the interactions between SNA, Communities of Practice (CoPs) and knowledge maps could potentially influence knowledge networks. The researchers endeavour to illustrate via this question that cultivating synergies between SNA, CoPs and knowledge maps will enable organisations to produce stronger knowledge networks and ultimately increase their social capital. This article intends to present a process map that can be useful when an organisation wants to positively increase its social capital by examining influencing interactions between SNA, CoPs and knowledge maps, thereby enhancing the manner in which they share and create knowledge.

KEYWORDS

Communities of Practice, Knowledge Maps, Knowledge Network Analysis, Social Network Analysis

INTRODUCTION

The constructive management of existing knowledge and the access to and development of new knowledge has become indispensable to organisations. However, given that tacit knowledge can frequently not be captured or documented, knowledge is often created and shared through social interaction within organisations. The said interaction usually occurs through informal networks, also known as knowledge networks (Helms & Buijsrogge, 2006).

These interpersonal relationships form patterns which are labelled social innovation capital or social capital (McElroy, 2002, p. 30). Effective knowledge networks have the ability to enhance an organisation’s social capital which in turn appears to be essential for organisational learning, adaptability and agility (Krebs, 2008). Relationships are thus fundamental to organisations regarding the dissemination and creation of knowledge. Seufert et al. (1999) maintain that organisations are progressively transforming from well-defined, manageable structures into interwoven network structures with blurred boundaries. As a result, it is important to recognise that the creation and transfer of knowledge is increasingly taking place within a network environment as opposed to within traditional organisational boundaries. In short, network relations and the proficiency to manage networks have developed into significant drivers of a new way of conducting business.

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Research has indicated a rising interest in SNA as a tool for mapping knowledge and capabilities as well as to record the nature of relationships within informal networks (Filieri, 2010, p. x). Of late there has been a growing awareness of social network analysis (SNA) as an instrument to plot knowledge and expertise as well as to confirm the character of connections in informal networks (Cross et al., 2004; Chan & Liebowitz, 2006; Müller-Prothmann, 2006; Murale & Raju, 2013; Cooke & Hall, 2013; D’Errico et al., 2014).

This article reports on an investigation of how the integration of networking into KM can produce significant advantages for organisations. The aim of the research was to examine a process or methodology that can have an effect on the interactions between SNA, Communities of Practice (CoPs) and knowledge maps concerning knowledge networks. This research aspires to outline a method for organisations to apply so that they can strengthen their social capital by analysing, shaping and reinforcing their knowledge networks, thereby enhancing the manner in which they share and create knowledge. Consequently, the main research problem of the study was to investigate:

How can synergies between SNA, CoPs and knowledge maps reinforce knowledge networks?

The researchers reported in other publications (reference to follow and withheld to ensure anonymity of blind peer review process) on how knowledge networks were reinforced. The focus of this article is to report on the methodology and subsequent process map that was applied to get synergies between SNA, CoPs and knowledge maps that can enable organisations to produce stronger knowledge networks and ultimately increase their social capital.

ADVANCING KM THROUGH SOCIAL CAPITAL

The importance of social capital for KM has been debated by several authors including Swan et al (1999), Lesser and Prusak (1999), Liebowitz (2005), Inkpen and Tsang (2005), McElroy et al. (2006), Smedlund (2008) and Manning (2010), to name a few. It has also been hypothesised that social capital can increase an organisation’s KM capability as it has the capacity to influence KM in various ways (Hoffman et al., 2005, p.98).

The Influence of Social Capital on KM Processes

Knowledge exists primarily in tacit form and has to be shared in order to become valuable to organisations (Nonaka, 1994). Since it is important for organisations to preserve and enhance their competitive edge regarding the knowledge they possess, they need to create opportunities to facilitate the creation of knowledge in order for members to learn something new (Järvenpää & Immonen 2004, p. 6). Inkpen and Tsang (2005, p. 151) emphasise two levels of social capital that are often interconnected. Individual social capital originates from an individual’s network of relationships and constitutes a private good while organisational social capital stems from an organisation’s network of relationships and is made up of a public good.

Kogut and Zander (1993, p. 265) regard organisations as social communities who specialise in the creation and internal transfer of knowledge. They also claim that social capital can enhance the capturing, codification and transfer of knowledge. Corresponding with this argument, Daud and Yusoff (2010, p. 140) identify social capital as the most intricate component of intellectual capital as it depends on the combination of knowledge and experience of various parties to create new knowledge. A vast amount of knowledge thus exists in social interactions. However, one can hardly compel people to participate in knowledge creation and knowledge sharing processes. Since knowledge is often considered a source of competitive advantage, to motivate individuals to share their knowledge it would require “… a platform, culture and certain amount of trust between individuals of a collective…” (Aslam et al., 2013, p. 30).

The level of social capital increases as relationships become more established (Daud & Yusoff, 2010, pp. 149-150). Apart from facilitating the development of collective intellectual capital, social
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