Chapter 4
Understanding Knowledge Networks Through Social Network Analysis

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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, 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 chapter 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.

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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). The fundamental aspect of social capital reflects the need for individuals to connect with others in order to look for resources that they do not have at their own disposal (Lesser & Prusak, 1999). The notion of social capital is that relationships matter, thus in order to possess social capital, one has to be connected to others, and it is those others, who are the actual source of one's advantage (Andriani & Christoforou, 2016:4). 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.

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 chapter 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, 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: