Infrastructure Profiles and Knowledge Sharing

Mirian Oliveira, Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, Brazil
Antonio Carlos Gastañoa Maqueda, Federal University of Rio Grande do Sul, Porto Alegre, Brazil
Carla Curado, University of Lisbon, Lisbon, Portugal
Felipe Nodari, Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, Brazil

ABSTRACT

Information technology and top management support are considered infrastructure for knowledge sharing. This research aims to identify infrastructure profiles and their relationship with knowledge sharing. A survey method was adopted involving 231 respondents working in information technology teams in Brazil. The analysis identified four profiles, namely: focus on information technology; focus on top management support; adrift; and knowledge sharing oriented. The latter was identified as being the most effective, while no significant difference was found between the other clusters in relation to knowledge sharing. This finding is a supplement to this field of knowledge because, in addition to confirming the relevance of the two constructs, it shows that their simultaneous presence contributes to knowledge sharing. This result also helps managers by highlighting that in order to leverage knowledge sharing it is necessary to signal the importance of the process for the company, as well as provide adequate information technology.

KEYWORDS

Brazil, Information Technology, Infrastructure, Knowledge Sharing, Top Management Support

1. INTRODUCTION

In this study, knowledge is considered “information combined with experience, context, interpretation and reflection” (Davenport et al., 1998, p.43). This intangible asset is important in the achievement of sustainable competitive advantage (Wang & Noe, 2010; Tan & Wong, 2015). Knowledge management is intended to help the company achieve its business goals (Lee & Yang, 2000; Yahyapour et al., 2015). Knowledge sharing (KS) is one of the most important processes within knowledge management (Yu et al., 2010; Velmurugan et al., 2010; Guinea et al., 2012; Iskoujina & Robberts, 2015), and can be understood as the degree to which individuals donate or collect tacit or explicit knowledge within a team (Huang, 2009). Knowledge sharing is important to prevent the loss of knowledge when an employee leaves the company, as well as to increase productivity and innovation (Xue et al., 2009; Liao et al., 2007), and the innovative capacity of the company (Lin, 2007). Knowledge sharing can help enterprises “to increase knowledge, capability and competency” (Shanshan, 2014), and, mediated by intellectual capital, influences the business performance (Wang et al., 2014).

Knowledge sharing has been shown to enhance team performance through improved coordination (Srivastava et al., 2006) and decision-making (Choi et al., 2010). In addition, knowledge sharing can lead to better coordination because it helps develop transactive memory, (Liu et al., 2011). Transactive
memory corresponds to ‘who knows what’ in a team (Srivastava et al., 2006) and allows objectives to be achieved in a timely and efficient manner. Together, these arguments suggest knowledge sharing produces better team performance (Liu et al., 2011).

Chang et al. (2015) examined antecedents of knowledge sharing intention. KS intention positively affects KS behavior (Alajmi, 2012). However, according to Oliveira et al. (2015), KS intention is associated with a potential activity while KS behavior is an actual activity. Thus, this research focuses on knowledge sharing behavior.

Information technology (IT) and top management support (TMS) are antecedents of knowledge sharing (Lee et al., 2012; Chennamaneni et al., 2012), i.e. they are part of the infrastructure required for sharing knowledge to occur (Lee et al., 2012). Information Technology allows knowledge to be shared regardless of location, employees may or may not be geographically dispersed (Bourgault et al., 2010), and of time, allowing knowledge sharing to be synchronous or asynchronous (Choi et al., 2008). Information technology is used “as strategic enabler of knowledge management initiatives” (Wiewiora & Murphy, 2015). While Information Technology may be associated with the way the sharing occurs, top management support may be related to reasons individuals share. Top management influences employee behavior by signaling priorities, both by leading by example and by financing the conditions that facilitate knowledge sharing (Lin, 2007).

To date, research has highlighted the importance of Information Technology and Top Management Support for knowledge sharing. However, the relationship between the infrastructure profiles and the occurrence of knowledge sharing remains unclear. This research aims to fill this gap by analyzing the relationship between the different infrastructure profiles (IT and TMS) and knowledge sharing.

Below, this article is structured as follows: a review of the literature on information technology and top management support as infrastructure for knowledge sharing (section 2); a description of the methodological procedures adopted in this study (Section 3); the analysis and discussion of the results (section 4); the conclusions, limitations and suggestions for future studies (section 5).

2. THE KNOWLEDGE SHARING INFRASTRUCTURE

Both explicit knowledge, which can be documented, and tacit knowledge, which resides in the minds of individuals (Nonaka, 1994), should be considered in the knowledge sharing (Johannessen et al., 2001; Gallagher & Mason, 2007; Wang et al., 2014). Knowledge sharing contributes towards the stock of knowledge required so that an employee can carry out his/her activities, as well as to the retention of knowledge in the company. Knowledge sharing occurs through knowledge management mechanisms, which are “any deliberated interventions” (Oliveira et al., 2014). According to these authors, knowledge management mechanisms can be technological (e.g. e-mail, yellow pages, repository) and non-technological (e.g. face-to-face meetings, communities of practice, storytelling).

Information technology is considered a support for knowledge sharing, especially when the staff members are geographically dispersed and there is a large volume of available knowledge. According to Jasimuddin (2014, p. 48), the company “can use both face-to-face and computer-mediated mechanisms simultaneously in a balanced manner”. Information Technology allows knowledge to be shared “at any time, from anywhere, in a safe and friendly way” (Lee, 2006, p. 58). Web 2.0 solutions are remarkable for their ease of use and potential for enhancing collaboration, among others (Grace, 2009; Shang et al., 2011).

In companies, Information Technology can facilitate vertical (between different hierarchical levels) and horizontal (between equivalent hierarchical levels) knowledge sharing (Yeh, 2006), allowing the storage, access and retrieval of knowledge, as well as contact between individuals (Alavi & Leidner, 2001; Yeh et al., 2006). This means Information Technology is relevant to the sharing of both explicit and tacit knowledge (Choi et al., 2008). Collaboration technologies are associated with the personalization strategy (focused on tacit knowledge), while the repositories are related to the codification strategy (focused on explicit knowledge) (Saito et al., 2007).
Related Content

Toward an Enacted Approach to Understanding OSS Developer’s Motivations

[www.igi-global.com/article/toward-enacted-approach-understanding-oss/62661?camid=4v1a](www.igi-global.com/article/toward-enacted-approach-understanding-oss/62661?camid=4v1a)

A Practitioner-Centered Assessment of a User-Experience Framework

[www.igi-global.com/chapter/practioner-centered-assessment-user-experience/24715?camid=4v1a](www.igi-global.com/chapter/practioner-centered-assessment-user-experience/24715?camid=4v1a)
Factors Affecting E-Commerce Adoption by Small Businesses in a Developing Country: A Case Study of a Small Hotel
www.igi-global.com/article/factors-affecting-commerce-adoptionsmall/55957?camid=4v1a

Factors Influencing the Acceptance, Use, and Continued Use of the E-Learning Recommender Systems: Descriptive Statistical Analysis Data Findings
www.igi-global.com/article/factors-influencing-the-acceptance-use-and-continued-use-of-the-e-learning-recommender-systems/197881?camid=4v1a