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Enterprise social networking: A knowledge management perspective

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ABSTRACT

Employees' sustained knowledge contributions and their engagement in the platform is needed to materialize the organizational benefits from enterprise social networking (ESN). This paper adopts a knowledge management perspective on ESN. Through a mixed methods approach we examine how employees use ESN and the value of these uses. With a qualitative content analysis we identify five uses of ESN, problem solving, ideas and work discussion, events and updates, task management, and informal talk. With a survey we further show how these uses drive value of ESN. The results demonstrate that generating and obtaining new ideas for work by participating in discussions and finding solutions for work-related problems are the key sources of value. The results further show that the socially and work-oriented ESN uses are closely intertwined. Hence, the informal discussions in ESN are a lubricant for more utilitarian uses that should not be crowded out from the platform. Finally, we theorize that a specific advantage of ESN over information repositories and discussion forums is how ESN enables users to meet their social and work-related goals simultaneously. Our study offers a granular view of ESN use and guidance for developing organizational ESN policies.

1. Introduction

Enterprise social networking (ESN) holds great promises for organizations. According to a McKinsey report (2012), effective use of social technologies can result in 20–25% improvement in knowledge worker productivity. A study by Forrester Research in an organization of 21,000 employees with 7000 Yammer users found a return on investment of 365% on an investment in an ESN platform over three years (Dodd, 2011). Given the prevalence of project work and cross-functional cooperation in today's knowledge economy, ESN promises to contribute to knowledge management (see von Krogh, 2012), increase employee performance (Kuegler, Smolnik, & Kane, 2015), and hence play a strategic role in a company's IT portfolio (Karoui, Dudezert, & Leidner, 2015). Against this backdrop, the widespread adoption of ESN by organizations is hardly surprising.

ESN are web-based platforms that allow people to (1) communicate messages with specific coworkers or broadcast messages to everyone in the organization; (2) explicitly indicate or implicitly reveal particular coworkers as communication partners; (3) post, edit, and sort text and files linked to themselves or others; and (4) view the messages, connections, text, and files communicated, posted, edited and sorted by anyone else in their organization at any time of their choosing (Leonardi, Huysman, & Steinfield, 2013).

Prior work argues that ESN can bring substantial benefits to knowledge management through increased vertical and horizontal communication (Davison, Ou, Martinsons, Zhao, & Du, 2014), enhanced knowledge transfer (Leonardi & Meyer, 2015), increased social capital (Kline & Konstanze, 2013), and the faster integration of new employees (Leidner, Koch, & Gonzalez, 2010). Since any organizational benefits will materialize only through individuals' sustained use of the platform (DeLone & McLean, 1992), it is essential to ensure that ESN is valuable for the individual user. Consequently, in order to ensure the active use and contributions of individuals to ESN as a public information good (Fulk, Heino, Flanagin, Monge, & Bar, 2004), it is important to understand how employees use ESN and what constitutes an ESN's value for its users. Consequently, we examine ESN usage forms (in short: uses) and their value for personal knowledge management (Bhatt, 2002; Razmerita, Kirchner, & Nabeth, 2014). Personal knowledge management refers to a collection of processes that an individual needs to carry out in order to gather, classify, store, search, and retrieve knowledge in his or her daily activities (Razmerita et al., 2014, p. 77).

Prior research suggests that ESN use can improve the accuracy of people's metaknowledge (knowledge of "who knows what"

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and "who knows whom") at work (Leonardi, 2015), reduce knowledge stickiness (ensure that knowledge is shared) (Leonardi & Meyer, 2015), increase individuals' social capital (Riemer, Finke, & Hovorka, 2015) and as a result improve employee performance (Kuegler et al., 2015). However, empirical studies that focus on employee use of ESN remain scant (El Ouirdi, El Ouirdi, Segers, & Henderickx, 2015). In particular, the relationship between different uses and the perceived value of the ESN platform is not well understood (Mäntymäki & Riemer, 2014).

Consequently, this study identifies and empirically investigates different uses of ESN, and examines how these contribute to the perceived value of the ESN platform for personal knowledge management. In doing so, the study contributes to the literature on employee use of ESN for knowledge management (El Ouirdi et al., 2015; Leonardi & Meyer, 2015; Razmerita et al., 2014) and more generally to research advancing the conceptualization and empirical measurement of information technology use (Benbasat & Barki, 2007; Burton-Jones & Straub, 2006).

Due to the dearth of prior research and a lack of prior theory on the value of ESN use for personal knowledge management, we adopt a mixed methods approach. We first employ a communication genre analysis of three large samples of ESN communication messages to derive initial usage scenarios. We then use the usage scenarios as the basis for developing our measurement of ESN use. Next, we validate the measurement with data collected from 233 active ESN users and derive four usage forms that focus on work-related activities, namely *problem solving*, *ideas and work discussion*, *events and updates*, and *task management*, as well as one form of use focusing on casual interaction with colleagues, *informal talk*. Finally, we use partial least squares (PLS) to examine the extent to which these forms of use contribute to the value of ESN for personal knowledge management.

Our results show that the facilitation of new idea generation and the further development of those ideas through discussions with colleagues are the key source of value of ESN for personal knowledge management. The results also imply that non-work-related interactions with colleagues have a positive effect on more utilitarian uses of ESN.

The paper proceeds as follows. We begin with a review of prior ESN research before we present the qualitative pre-study, instrument development and instrument testing. The next section contains the theoretical underpinnings of the research model and hypotheses. After that, we present the results from testing the research model, before we present and discuss the key findings of the study and outline our contributions to IS theory and practice. We conclude by discussing the limitations of the study and proposing directions for future research.

2. Background

ESN refers to a set of technologies that include the foundational features associated with social network sites but which are implemented within organizations, sanctioned by management, and have the ability to restrict membership to certain members of a specific organization (Ellison, Gibbs, & Weber, 2015).

ESN can be viewed as a subset of the Enterprise 2.0 phenomenon (McAfee, 2009), which refers to the application of social software more generally (von Krogh, 2012), such as social networking sites, blogs, wikis, microblogging or social bookmarking services (Razmerita et al., 2014), in an organizational context. Today's ESN applications, such as Yammer, Chatter, Jive or IBM Connections resemble social network sites in that they are aggregations of different tools (Smock, Ellison, Lampe, & Wohn, 2011) including wikis, instant messaging, and microblogging. Because the body of literature focusing specifically on employee use of ESN for personal knowledge management is very small, we also draw on the literature on the use of social media in the workplace more generally.

Recent research offers initial empirical evidence that ESN use is positively associated with employee performance (Riemer et al., 2015). Riemer et al. (2015) found that individuals draw social capital and associated benefits from their use of ESN in day-to-day work. Further research found that ESN can help overcome the challenges associated with organizational knowledge sharing, such as locating of expertise, motivation to share knowledge and developing and maintaining social ties with knowledge bearers (Fulk and Yuan, 2013). According to Ellison et al. (2015) ESN can improve knowledge sharing in distributed multinational organizations through increased social capital, support for relationships and interactions, content collapse, and network interactions. The transparency of other people's interactions in ESN further helps knowledge seekers to obtain interpersonal and knowledge-related material, which they use to facilitate their interaction with knowledge sources. Hence, ESN can reduce knowledge stickiness (Leonardi & Meyer, 2015). As a result, ESN among other social media applications are superior to traditional knowledge management systems in addressing these challenges as they blend the communal and the connective sharing of knowledge (Fulk & Yuan, 2013).

ESN enables knowledge management with diverse benefits depending on the level of control (individualistic/collectivistic) and the level of interaction with respect to content creation (Razmerita et al., 2014). Tools emphasizing individuals in control of content creation such as microblogs and social network sites allow people to effectively manage tasks and interactions. Tools with a collective focus, such as content communities and wikis, offer a higher level of interaction in content creation (Razmerita et al., 2014). Interactive content creation in turn can increase diversity of knowledge and thus contribute to the externalization of knowledge, learning, and knowledge creation (Nonaka & Von Krogh, 2009).

As a result, the use of ESN creates the opportunity to transform knowledge sharing in the workplace from an intermittent, centralized knowledge management process into a continuous online knowledge conversation between strangers that results in unexpected interpretations and re-uses, and dynamic emergence (Majchrzak, Faraj, Kane, & Azad, 2013).

3. Measuring ESN use

3.1. Identifying use cases with communication genre analysis

We employ a mixed methods approach that consists of a qualitative pre-study and a survey. We first classified a large sample of ESN communication messages to identify different uses of ESN. Based on the results of the qualitative content analysis, we then developed the measurement instrument to be used in the survey part of the study.

According to Venkatesh, Brown, and Bala (2013, p. 16) a mixed methods approach is used to "provide a holistic understanding of a phenomenon for which extant research is fragmented, inconclusive, and equivocal". In addition, a "mixed methods approach will be a powerful mechanism [to] interject context into a research inquiry" (Venkatesh et al., 2013, p. 16). Since prior research on the employee use and value of ESN is scant, our contextual and theoretical understanding of the ESN phenomenon remains in a nascent stage. Hence, a mixed methods approach was considered appropriate for the aim of this study.

In the first stage of the study, we employed genre analysis to classify a set of 5906 messages exchanged in three organizations that use Yammer. Yammer is Microsoft's ESN platform and a leader in the ESN market with 500,000 user organizations. Two of the organizations were from Australia, one a branch of a large inter-