Social factors' influences on corporate wiki acceptance and use☆

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ABSTRACT

This study investigates how social factors affect the use of corporate wikis to share knowledge in organizations. Adopting a holistic approach, the study fills the gap in research on social factors' influence on collaborative knowledge sharing. The study thereby identifies relevant factors for successful knowledge sharing using Web 2.0 tools. Building on research into knowledge sharing, technology adoption, and social theories, this study explores the following social factors: social influence (i.e., subjective norm, social identity, and group norm), social anxiety, and perceived critical mass. The research model explains how these variables affect two knowledge sharing behaviors: knowledge acquisition and knowledge creation/diffusion. Results show that social influence—mainly subjective norm—and attitude toward collaborative knowledge sharing predict intention to use corporate wikis, and that perceived critical mass affects both knowledge sharing behaviors but social anxiety does not. Perceived critical mass is the most important predictor of knowledge sharing behaviors.

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1. Introduction

Knowledge is a valuable strategic resource for organizations and a source of sustainable competitive advantage (Kimble & Bourdon, 2008). Knowledge management studies focus on factors that influence knowledge sharing among organizations. These factors generally fall into one of three groups: technological, social, and personal (Riege, 2005). According to Davenport and Prusak (2000), organizations usually consider technological factors (i.e., technology infrastructure) as the most important element for effective knowledge sharing. Nevertheless, users share knowledge in a social context through a social process. Hence, implementing knowledge management technologies without considering social factors may cause failure in system implementation during the deployment phase (Davenport & Prusak, 2000).

Web 2.0 (O'Reilly, 2005) (i.e., the social web) features rich internet applications, web-oriented architectures, and social interaction. Web 2.0 introduces new concepts that enable massive-scale interaction. Blogs, wikis, and instant messaging are Web 2.0 tools that provide new and more effective ways to interact in social contexts and communities (Razmerita, Kirchner, & Sudzina, 2009). In organizations, wikis prove effective in creating, sharing, integrating, and using knowledge (Ashton, 2011).

Few studies explore how organizations adopt and use Web 2.0 tools, especially wikis. Most of the studies that do explore this topic, however, neglect social factors, despite the complex social nature of knowledge diffusion in organizations and Web 2.0 tools' strong social component. Therefore, the present study's holistic approach covering the complex social mechanisms of adoption of Web 2.0 collaborative tools contributes to this research area. This approach must answer the following research questions: Which social factors influence the acceptance and use of corporate Web 2.0 tools for collaboration? How do social factors influence knowledge creation/diffusion and acquisition?

This study responds to these questions for a particular Web 2.0 tool: the wiki. Section 2 builds the theoretical framework, research model, and hypotheses. Section 3 explains the research methods and presents results from the empirical study. Finally, Section 4 discusses main findings and implications for theory and practice.

2. Theoretical framework and hypotheses development

A wiki is a set of linked pages that collaborating users create through incremental development (Leuf & Cunningham, 2001). Wikis are an example of groupware technologies that support collaborative work (Gupta & Sharma, 2004), and they enable groups to jointly create, find, and consume knowledge through collaboration (Wagner, 2004). Wikis are easy to use, and they are a suitable tool for collaborative knowledge management (Hester, 2010; Kille, 2006). Despite the lack of scholarly research about wikis in corporate settings, overall use of wikis as collaborative knowledge management tools is increasing. Employees state that wikis are an effective tool for knowledge sharing and knowledge reuse (Majchrzak, Wagner, & Yates, 2006). According to Kane and Fichman (2009), several features make wikis attractive

knowledge management tools. With wikis, anyone can easily edit content, and administrators can retain and trace all content edits and versions and can choose different privacy settings for different users. Furthermore, in wikis, editors can group web pages with different content types into categories. Wikis also allow the embedding of links, which may be internal—between wiki pages—or external—with Intranet or other web resources.

2.1. Theory of reasoned action

The theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) proposes that behavioral intention is the best predictor of subsequent performance of a behavior. Under the TRA, attitudes—an individual's feelings about performing the behavior—and subjective norm—the individual's perception of whether people important to him or her think that he or she should behave in a certain way—determine the intention to perform the behavior (Fishbein & Ajzen, 1975). In this study, intention refers to the degree to which employees believe that they will use corporate wikis for collaborative purposes (Liu, 2010). According to the TRA, subjective norm and attitude toward collaborative knowledge sharing positively predict intention to use corporate wikis for knowledge sharing.

Knowledge sharing covers two different but related behaviors: knowledge acquisition and knowledge creation/diffusion. These behaviors have different natures. In addition, factors influence these behaviors differently (De Vries, Van den Hooff, & de Ridder, 2006). Because behavioral intention is an important predictor of behavior (Fishbein & Ajzen, 1975; Venkatesh & Davis, 2000), intention to use corporate wikis as a collaborative tool for knowledge sharing positively predicts knowledge acquisition behavior and knowledge creation/diffusion behavior (albeit differently for each knowledge sharing behavior).

2.2. Social influence theory

Social influence (Kelman, 1958) represents the social pressure significant others exert on someone to perform a certain action or behavior (Bagozzi & Dholakia, 2002). Previous studies find that social influence affects individuals' intentions toward a certain behavior (Hsu & Lu, 2004; Rivis & Sheeran, 2003). Social influence theory identifies three elements of social influence.

First, compliance refers to the normative influence of significant others' opinions on a user's behavior. Social influence's compliance component is subjective norm (Fishbein & Ajzen, 1975), which comprises peers' and superiors' influence (Taylor & Todd, 1995). TRA establishes a positive relationship between subjective norm and behavioral intention.

Second, identification occurs when an individual accepts social influence because that influence is congruent with his or her value system (Shen, Cheung, Lee, & Chen, 2010). This aspect corresponds to social identity, a concept with roots in social identity theory (Tajfel & Turner, 1979). Identification with the community may affect the amount of knowledge shared (Chiu, Hsu, & Wang, 2006). Previous studies find empirical evidence that social identity influences intention to use technology to support virtual community activities (Dholakia, Bagozzi, & Pearo, 2004; Shen et al., 2010; Song & Kim, 2006). Therefore, social identity most likely positively predicts an individual's intention to use corporate wikis for knowledge sharing.

Third, internalization happens when an individual accepts an influence because he or she wants to establish or maintain a satisfying, self-defining relationship with another person or group. For Bagozzi and Dholakia (2002), the concept of group norm—a shared agreement among participants about their shared goals and expectations (Turner, 1991)—relates directly to internalization. When group members share their values and goals with the team, those members are more likely to share their resources (Chiu et al., 2006). This attitude suggests a strong relationship between group norm and knowledge contribution (Kankanhalli, Tan, & Wei, 2005).

From the previous discussion, social influence—as a multidimensional factor comprising subjective norm, social identity, and group norm—positively predicts the intention to use corporate wikis for knowledge sharing.

2.3. Critical mass theory

Critical mass is another type of social influence (Chen, Lu, Wang, Zhao, & Li, 2013). Critical mass theory postulates that a minimum number of participants or actions are necessary for a social movement to "explode" (Oliver, Marwell, & Teixeira, 1985). Critical mass develops through interaction with others and strengthens as more people participate (Chen et al., 2013). Estimating the exact critical mass for a specific collaborative technology may prove difficult (Markus, 1990), and users may perceive that the number of active users reaches the critical mass only through indirect means such as interaction with other group members. Perceived critical mass (Lou, Luo, & Strong, 2000) represents subjective evaluation of this critical mass. Upon reaching critical mass, users are more willing to use the system, even if a positive affective response toward that use is lacking (Van Slyke, Johnson, Hightower, & Elgarah, 2008). Therefore, perceived critical mass positively predicts knowledge acquisition and knowledge creation/diffusion behaviors.

2.4. Self-presentation and social anxiety

Self-presentation refers to how an individual conveys his or her personal image to others (Leary & Kowalski, 1990). When people try to present themselves through social media tools and experience doubts about the results, they may experience social anxiety (Leary & Kowalski, 1995; Schlenker & Leary, 1982). Leary defines social anxiety as "a state of anxiety resulting from prospect or presence of interpersonal evaluation in real or imagined social settings" (Leary, 1983, p. 67).

Knowledge sharing exposes the individual to the community, and individuals may experience social anxiety when the consequences of knowledge sharing are unclear. Therefore, if an individual believes that this process will damage his or her self-image, the likelihood that he or she will share knowledge will decrease. Previous research finds that people experience anxiety when posting content (Liu & Larose, 2008), and thus social anxiety will negatively predict knowledge creation/diffusion behaviors. However, knowledge acquisition does not involve self-presentation elements; consequently, social anxiety and knowledge acquisition behavior should not relate significantly.

H1. Attitude toward collaborative knowledge sharing positively predicts intention to use corporate wikis.

H2. Social influence positively predicts intention to use corporate wikis.

H3. Intention to use corporate wikis positively predicts knowledge creation/diffusion (H3a) and acquisition (H3b) behaviors.

H4. Perceived critical mass positively predicts knowledge creation/diffusion (H4a) and acquisition (H4b) behaviors.

H5. Social anxiety negatively predicts knowledge creation/diffusion behaviors (H5a) but not knowledge acquisition behaviors (H5b).

Fig. 1 illustrates the complete research model.

3. Method and results

The study sample consisted of full-time employees from the Information Systems department of a large multinational industrial company based in Spain. All participants responded to an online questionnaire, which provided the data. Following Westaby and Braithwaite (2003), the online questionnaire tool randomly ordered