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Cahier 11-2007.

How does knowledge integration occur during Information Systems projects. An empirical investigation of the influence of social capital.

Date de mise en ligne: jeudi 14 juin 2007

- Publications / Projets de recherche -

Description :

gestion de projet - gestion de la connaissance - capital social - étude de cas.

Les projets concernant les systèmes d'information sont caractérisés par leur forte dimension organisationnelle. Ils doivent intégrer les connaissances spécifiques possédées par les membres de l'organisation pour réussir. Cela implique de nombreux échanges avec des personnes du groupe de projet, mais aussi hors de ce groupe. L'intégration des connaissances, c'est-à-dire le partage et la création de nouvelles connaissances, fait partie de chaque projet. Cette intégration suit différentes phases, qui sont souvent longues et complexes, dépendant des acteurs impliqués. Par conséquent, la l'intégration des connaissances peut être affectée par le capital social des membres du projet. Une étude empirique sur deux PME françaises cherchant à transformer leur système d'information montre que les trois dimensions du capital social (structurelle, relationnelle et cognitive) influencent le processus de capitalisation, même si nous n'observons pas d'effet différencié dans les différentes phases du processus. La distinction de trois phases dans l'intégration, mobilisant différents niveaux de connaissance, est confirmé, proposant un cadre de compréhension prometteur des mécanismes de création de la connaissance dans le contexte des projets de système d'information.

Mots clefs : gestion de projet - gestion de la connaissance - capital social - étude de cas.

ABSTRACT.

IS Projects are characterized by their organizational scope. They need to integrate the specific knowledge held by an organization's members to succeed. To do so, broad exchanges between people inside and outside the project team are required. Knowledge integration, i.e. sharing and creation of new knowledge, is part of any project. Knowledge integration follows several phases that are often long and complex, depending on the actors involved. As a consequence, knowledge integration can be affected by the social capital of the project members. An empirical investigation in two French SMEs aiming to improve their information systems shows that the three dimensions of social capital (structural, relational and cognitive) influence the knowledge integration process, even if no differentiated effect is observed through the different phases of the process. The distinction of three phases in integration, mobilizing different levels of knowledge, is confirmed, offering a promising understanding of the knowledge creation mechanisms in context of IS projects.

Keywords : project management - knowledge management - social capital - case study

Introduction.

The growing interest towards organizational knowledge is the reflection of the entry into a knowledge economy. Interest in the field of knowledge management has been shown by both practitioners and academics for several years. On a practical level, the recurring concern of companies has been to link their knowledge management practices to their performance improvement ; while, academic researchers have been improving their understanding of the organization as a "*system of knowledge*" (Tsoukas, 1996). Much research deals with knowledge management as a whole, but now, there is a need to better investigate and understand the various steps constituting this process and to get inside the black box of knowledge management.

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In our research, we choose to focus on the notion of knowledge integration. We define knowledge integration as the process of social interactions between individuals leading to the combination of existing knowledge and the creation of new shared organizational knowledge. Until now, only a limited amount of research has focused on knowledge integration. However integration constitutes an important process in knowledge management, especially in project based-organizations. Thus, the empirical investigation carried out during this research analyses two information systems projects and highlights the important features of knowledge integration in this context.

In our research, we mobilize the perspective of the firm as a socially efficient community for knowledge creation and transfer (Kogut and Zander, 1992, 1996 ; Nonaka and Takeuchi, 1995 ; Spender, 1996), generating a competitive advantage. According to this perspective, knowledge integration is a current and daily activity and constitutes one of the objectives of the organization (Grant, 1996). We focus on a specific context of knowledge integration which is a project team work. Our objective is to analyse the knowledge integration process during cross-functional organizational projects.

A first question to come out of this research is : How does the knowledge integration process operate during a project ? The research of Newell, Tansley and Huang (2004) provides an initial answer : it underlines the influence of social capital in the knowledge integration process. Following this research, we adopt an original approach to the knowledge integration process. The second aspect of our research focuses on the real influence of social capital on the integration process. Hence a second question : What are the role and the influence of social capital on the knowledge integration process during a project ?

The first part of the paper presents the conceptual framework : we define the concept of knowledge integration and we propose a conceptual model to analyse this process. In the second part, we define the concept of social capital and its role in knowledge management. This literature review leads us to formulate several research propositions. In the third part, the empirical study details two case studies of information system projects and concludes our research.

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