

COLLABORATIVE KNOWLEDGE MANAGEMENT: IDENTIFYING AND SHARING KNOWLEDGE IN TEAMS

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ABSTRACT

Knowledge is an important source of competitive advantage. Consequently, knowledge management (KM) has received much attention in the information systems community. Much of this research takes a dyadic view of KM, where organizational knowledge is created through the knowledge and expertise of individual workers. However, teams are playing a more prominent role in organizational tasks and functions. Therefore, through my research, I seek to inform our understanding of KM at the team level by providing insight into Collaborative Knowledge Management (CKM) -- the process by which members of a team work together to evaluate given information; and through that evaluation, determine whether or not the information is actionable. My research is structured around two case studies, from which I will generate a framework of CKM. This research is expected to (1) bridge the gap between individual knowledge and organizational KM; and (2) inform practice through empirical evaluation of existing collaborative and knowledge-sharing information systems.

1. INTRODUCTION

In order to gain and sustain a competitive advantage in the global economy, an organization must harness knowledge. Consequently, the information systems (IS) community has focused on knowledge management (KM). Much of this research takes a dyadic view of KM where *organizational knowledge* is created through the *individual workers*. However, in response to a complex and global environment, teams are playing a more prominent role in organizational tasks and functions. Therefore, it is important to examine and support KM at the team level as well as the individual and organizational levels.

My research focuses on how teams collaboratively create and share knowledge as they resolve problems and answer questions. I have been studying this phenomenon in teams of information technology (IT) professionals of large healthcare organizations. IT teams are an interesting site to study

team level KM for a variety of reasons. First, IT team members work in information-rich environments where they must collaborate to carry out their work activities. Second, these IT teams are composed of IT professionals of different disciplines, each bringing his own expertise, experience and perspective to the team. Finally, healthcare IT teams play an important role in the organization because of the growing importance of IT to patient care and other healthcare related activities. Therefore, IT teams play a large role in ensuring the safety of patients because their work in supporting these systems has a direct impact on patient care.

2. PROBLEM STATEMENT

In order to be successful, IT teams must supplement their knowledge by acquiring information from a variety of sources [12]. To achieve this goal, IT team members must learn effective coordination and collaboration practices; however there are few team-based KM perspectives [1, 2, 6, 7]. Alternatively, researchers have been studying collaborative information behavior (CIB), the totality of how people work together to identify a common information need, gather and share information with each other, and then utilize the found information [9]. However, these studies of CIB have focused more on information seeking, retrieval and sharing, rather than on the creation of knowledge as a result of these information activities.

Simply, there is currently little research and understanding of team level KM in organizational settings. Consequently, our conceptual and technical approaches to team level KM are relatively underdeveloped. Yet, before we can design team level policies, procedures and KM systems (KMS), we must first understand the contexts and settings in which teams work together to create and manage knowledge.

3. RESEARCH OBJECTIVE

Through my research, I seek to inform our understanding of KM at the team level by focusing on issues of computerization and collaboration at the intersection of KM and CIB. Through empirical analysis and a description of the work processes, I will provide insight into Collaborative Knowledge Management (CKM) -- the process by which members of a team work together, in a dynamic organizational setting, to

evaluate given information and through that evaluation, determine whether or not the information is actionable. If the information is found to be useful, it becomes *team level knowledge* as knowledge is actionable information. Two questions motivate my research.

RQ1: What are the KM *practices* of organizational teams? More specifically:

RQ1a. Why do team members collaboratively evaluate information?

RQ1b. How is information collaboratively evaluated?

RQ1c. What affects the collaborative evaluation of information?

RQ2: What functions and aspects of organizational KMS best support team level KM practices?

4. BACKGROUND

KM research, with its dyadic view of KM, tends to focus on two distinct levels of interaction in the work place – an abstracted level of organizational interaction which looks at mechanisms that support knowledge sharing and exchange [3] and at the level of the individual worker focusing attention on psychological and environmental factors that support learning and knowledge sharing [4]. Yet, KM includes not only how an individual learns or the management of intellectual capital; it is also about people creating, sharing and communicating that knowledge via interactions with each other during the course of completing a task or set of work activities.

Nearly all KM studies connect individual knowledge to organizational KM in some form [8, 10] using a simplification of teams or groups as a pass-through of knowledge. However, although still limited, there is a growing body of literature examining KM at the team level of interaction [1, 2, 6, 7]. From this prior research, we begin to understand the context and important concepts involving team level KM (i.e., team member support, characteristics of team members that support knowledge, the importance of common ground, how boundary objects play a role as information tools). However, we still need to further explore how team members *interact* and the nature of tasks on which people collaborate when creating and managing knowledge.

Closely related to team level KM is the study of CIB. As people in organizations conduct much of their work in collaborative settings, information gathering and sharing has also become a collaborative

activity. CIB can be seen as an iterative process that is triggered by an information need and includes collaboratively seeking, retrieving and sharing information [9]. However, it can be argued that there is an additional step in the process – evaluation of the information. This evaluation step is CKM. Viewed from this perspective, CKM is another step in the CIB process. But more importantly, CKM is the step that connects CIB to KM, as it transitions a team from information gathered to knowledge that is ready to be put to use.

5. RESEARCH DESIGN

I created a research approach using the research questions as a foundation. Because CKM is nascent and poorly understood, qualitative methods can be used to explore the phenomena [5]. Further, the descriptive case study method has been identified as appropriate when a detailed description is sought [13] and when the phenomenon is not easily separated from its context. Therefore, I identified ethnographic methods (artifact collection, interviews and observation) and case study method as the appropriate methodologies around which to structure my research design and Grounded Theory (GT) [11] as the analysis approach. Further, the proposed research design is centered on two detail-rich case studies. The unit of analysis is the multidisciplinary work team.

6. EXPECTED CONTRIBUTIONS

It is expected that this research will make two main contributions to the IS community. First, by providing empirical evidence of team level information use, evaluation and knowledge creation, this research will bridge the gap between individual knowledge and organizational KM. Second, this research will contribute to practice through detailed empirical evaluation of existing collaborative and knowledge-sharing information systems. Building this empirical record and providing lessons learned from practice is critical if CKM system development practice is to avoid falling into the old pattern of ad hoc development, isolation, and poor support.

7. REFERENCES

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