Memory and Knowledge in Organizations

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Abstract

This paper seeks to better understand means of knowledge sharing in organizations. Sharing tacit knowledge – knowledge which cannot be codified, but which is paramount to the mastery of a particular skill – presents unique challenges in an organizational setting. Through Communities or Practice, mentorships, and storytelling, members can begin to overcome these challenges and foster rich sites of tacit knowledge exchange and the creation of organizational memory.

Introduction

Organizational memory is knowledge and information from an organization’s past, which can be accessed and used for present and future organizational activities. My starting point for discussing organizational memory is that an organization’s ability to collect, store, and use knowledge it has generated through experience has real implications for its performance and strategic direction (Olivera, 2000). Decisions are likely to be more effective when considered in terms of the organization’s history, than when made in a historical vacuum (Walsh and Ungson, 1991). However, according to Busch and Richards (2004), 90% of an organization’s knowledge resides in the minds, actions and relationships of organizational members. As organizations continue to focus on formal knowledge – databases, reports and plans – for critical decision making, it seems there is rich potential for the study of organizational memory beyond the realm of explicit, codified knowledge.
The aim of this paper is to focus on the concept of knowledge creation in organizations, as a means to illustrate the role of knowledge and memory in improved organizational performance. Specifically, I will review the concept of tacit knowledge sharing as a means to establishing a better understanding of knowledge seeking and use by members in an organizational setting. This paper will first establish the three kinds of knowledge recognized in the literature – explicit knowledge, tacit knowledge, and cultural knowledge – before focusing more specifically on tacit knowledge sharing practices and their effective application in organizations. To define the potential of tacit knowledge sharing, three key organizational practices will be examined: Communities of Practice, mentorships, and storytelling. In reviewing the existing literature on these concepts, there is rich discussion of the challenges, organizational benefits, and outcomes to implementing tacit knowledge sharing practices in an organization, and the practical solutions that exist to improve knowledge use in organizations. It is this exercise of knowledge creation that gradually becomes the foundation for a valuable site of organizational memory, as it resides in the relationships, stories, and experiences of an organization.

Broadly speaking, knowledge can be defined as, “a fluid mix of experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information” (Prusak and Davenport 1998, 5). Knowledge sharing can take place between individuals, groups, and organizations, and can result in tangible improvements for a company. When practiced effectively, knowledge sharing can foster new knowledge and innovation that leads to increased performance or efficiency among its members (Prusak and Davenport, 1998).

Scholars have identified three types of knowledge: explicit, tacit, and cultural knowledge. Explicit knowledge is expressed through some codified norm such as a language or a formula, and is most commonly associated with the application of knowledge management systems within an organization. Collaborative applications such as e-mail, wikis, shared folders and threaded discussions further promote knowledge sharing by reducing the amount of time people would otherwise have to invest in relaying explicit knowledge regarding a particular task or process (Nonaka and Takeuchi, 1995).

Tacit knowledge is knowledge that cannot be codified, but is paramount to the mastery of a particular skill. It is difficult to formally transfer because of its malleable, indefinable nature. We use tacit knowledge in many facets of our professional and personal lives, from driving a vehicle, to enjoying a piece of art (Choo, 2006). The place of tacit knowledge in an organizational setting is exemplified by Nonaka and Takeuchi in their discussion regarding Japanese automakers’ approach to knowledge in a company:
Japanese companies... recognize that the knowledge expressed in words and numbers represents only the tip of the iceberg. They view knowledge as being primarily “tacit” – something not easily visible and expressible. Tacit knowledge is highly personal and hard to formalize, making it difficult to communicate or to share with others. Subjective insights, intuitions, and hunches fall into this category of knowledge. Furthermore, tacit knowledge is deeply rooted in an individual’s action and experience, as well as in ideals, values or emotions he or she embraces (1995, 8).

Although the literature has traditionally focused on explicit and tacit knowledge, Choo asserts that cultural knowledge is an important classification as well. Cultural knowledge consists of the shared assumptions and norms that create a framework in which members understand the content and aim of their work, identify and solve problems, and assess the value of new knowledge. It “consists of the beliefs an organization holds to be true and justifiably so, about its environment and itself” (Choo 2006, 143-4). Organizational members must be able to identify and question assumptions around cultural practices, to ensure that cultural knowledge is situated to best facilitate knowledge sharing (Choo, 2006).

Where tacit knowledge is concerned, there are significant challenges for organizations to “know what they know,” and to effectively transfer this knowledge among the various members of the organization (Hinds and Pferrer, 2003). Tacit knowledge exchange is identified by Nonaka and Takeuchi as socialization, the process of sharing experiences and thereby “creating tacit knowledge such as shared mental models and technical skills” (1998, 62). Unlike explicit knowledge sharing, tacit knowledge exchange is often associated with informal processes of sharing rather than formal processes of transfer or recombination (Swap et al., 2001). Codification cannot capture the experiences and contexts in which tacit knowledge exists; as Heysman and de Wit assert, “[knowledge management] systems are supposed to store experiences in a database, but that doesn’t work; you cannot learn experiences from others as such; knowledge sharing happens through face-to-face communication.” (2003, p. 48). Dixon also asserts that knowledge management technology cannot replace face-to-face encounters, but that there must be a change in behaviours – a cultural shift towards learning, sharing and exchange – if organizations are to transfer tacit knowledge effectively (2000).

How can an organization facilitate these face-to-face encounters? What mechanisms of socialization help organizations gain value from the tacit memories that reside within organizations? The following sections will look in detail at three practices that facilitate tacit knowledge sharing in organizations. Communities of Practice, mentorship, and storytelling will be discussed as ways to better understand how organizations can improve their knowledge sharing capacities through practical means. This discussion will focus on the challenges and organizational benefits of these means, and will illustrate how organiza-
tions can be designed and developed to better support knowledge sharing among their members.

**Communities of Practice**

Communities of Practice (CoP) are an important vehicle for tacit knowledge sharing in organizations. A CoP is a group of members defined by their domain of skills and techniques, rather than their functional place within an organization. They are bound by a common professional practice, but may be dispersed among the different structural divisions imposed by the organization. A CoP allows for the brief subversion of these structures, to facilitate increased sharing among people who may do very similar work in separate areas of the organization (Lesser and Storck, 2004; Cox, 2005).

Among the first to identify the concept were Lave and Wenger, who defined CoPs as “participation in an activity system about which participants share understandings concerning what they are doing and what that means for their lives and for their communities” (1991, 98). A focus on informal, situational learning fostered the reproduction of existing knowledge among community members, and studied how newcomers were socialized into the community (Cox, 2005). In a later work, Wenger, McDermott and Snyder describe CoPs as “groups of people who share a common concern, a set of problems or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (1998, 4). Through discussion and interaction, they share information, insight and advice to help one another in solving common problems. If organizational members are given the opportunity to develop these informal networks of relationships, they are able to foster innovation and problem-solving that results in improved organizational success (Wenger et al., 1998).

There are several cases cited in the literature that illustrate effective implementation of these groups by organizations. One notable example, discussed by Wenger, is the CoP that developed in a medical claims processing centre operated by an insurance agency in the U.S. Although these claims processors appear to work individually following set procedures, the organization’s explicit policies simply did not reflect the reality of the work; through a CoP, these workers were able to invent and maintain ways of reconciling institutional requirements with the actual challenges presented by their work. The claims processors created a community that resolved contradictions between explicit, documented knowledge and personal insights, supported the creation of a communal memory so that individuals could do their work without having to know everything; and helped integrate newcomers into the team (Wenger, 1998).

There are tangible organizational benefits to CoPs, which improve an organization’s performance and efficiency. CoPs allow newcomers to be assimilated into the team quickly and become a productive team member within a shorter period of time. New employees can identify a number of people with the same task responsibilities who can
answer questions they may have regarding their assigned work (Less and Sorck, 2004). Lesser and Storck also noted reduced incidences of “reinventing the wheel”: members of a CoP are able to more easily reuse existing knowledge assets by locating, accessing, and applying existing knowledge to new situations. This significant cost-saving measure allows CoP members to work more efficiently, resolve problems with greater ease, and reduce the amount of resources invested in a particular project (2004). Lessons are learned and trial-and-error processes are reduced. Mistakes occur less often and managers are relieved from the burden of perpetually reinventing processes and tools that may already (Eskerod and Skriver, 2007).

CoPs ensure increased innovations that lead to new products or services: Nahapiet and Ghoshal define innovation as the product of existing knowledge from previously separated domains that are combined and exchanged in new ways (1998). Innovation-creation relies on the use of existing knowledge in an organization, and members’ abilities to allow this knowledge to be “connected in new and meaningful ways” (Hildreth and Kimble 2004, 81). CoPs are a rich site for the development of innovation, providing a forum in which individuals are able to share perspectives around a common problem (Lesser and Storck 2004).

By allowing members to subvert the silos created by structural organization, companies can ensure that those within a CoP are able to speak directly to those in their own professional communities – those with the same specialized knowledge – to facilitate higher levels of exchange and innovation. This high-level exchange among a group that shares common expertise, professional language, and professional practices become a place for the creation of what Austin (2003) describes as transactive memory systems: the combination of individual knowledge, and the interpersonal awareness of others’ knowledge. Communities of Practice allow for individuals to develop even greater expertise, while retaining insights about the expertise of others. This “transactive memory” fosters higher-level innovation, efficiencies and learning.

In discussing the benefits of CoPs in organizations, we see evidence of improved knowledge sharing and memory creation: CoP members are more aware of where to look to find the knowledge they seek. They are able to use this knowledge more creatively and efficiently, and can find new applications for existing knowledge. The next section continues the discussion of knowledge sharing and memory creation through organizational relationships through a discussion of mentorships.

**Mentorships**

Davenport and Prusak note that tacit knowledge sharing requires extensive personal contact. This "transfer relationship" can take the form of a workplace mentorship, where the face-to-face contact between an experienced member and a
newcomer facilitates knowledge exchange that might not be contained in the company’s documents or databases. They point out that many firms fail to identify older and more experienced workers as significant organizational memory repositories themselves, because they have no way of evaluating or efficiently capturing exactly what the worker knows (1998). The intangible nature of tacit knowledge makes it a difficult asset to recognize, measure, and track. Nonetheless, there is significant value in this highly specialized knowledge, which harbours significant potential for an organization if it is properly shared and transmitted among other members of the team.

Traditional literature in this area has focused on mentors teaching newcomers important lessons related to organizational routines and managerial systems. However Swap et al. found that much of the knowledge sharing taking place between these pairs took the form of cultural knowledge transfer about office politics, power perspectives and the subtleties of the organization: “mentors teach norms of behaviour and convey knowledge about the values of an organization” (2001, 100, emphasis in original). While policies can be codified for review by new employees, mentorships relay the contextual, nuanced cultural knowledge that allow organizational members to do their work effectively. These memories cannot necessarily be written down, but are paramount to a new employee’s success in the organization. This phenomenon is illustrated through Wenger’s example of the claims processors in a medical claims processing centre. In this case, the gap between policies and practice was rectified through relationships, which ensured a commonly held “way of doing things,” regardless of documentation that might suggest otherwise (Wenger, 1998).

There are significant benefits to mentoring in organizations, both for the individuals involved in the relationship, and for the organization as a whole. In particular, there is a need within organizations to more efficiently integrate newcomers into functional and cultural practices. As was discussed with regard to Communities of Practice, organizations must ensure that new employees become productive team members in a shorter period of time to sustain efficiency, innovation and competitive advantage; mentorship is another means of achieving this goal (Swap et al., 2001; Prusak and Davenport, 1998). Mentoring encourages continued learning because the parties are aware of the cognitive processes involved with teaching and learning. This facilitates greater openness to new knowledge and an awareness of how existing knowledge is being used by experts in the organization. “Metacognition” – self-aware thinking about one’s own mental processes – affords individuals the opportunity to consider what knowledge they have, and what knowledge they need to seek out in order to fulfill a particular task (Swap et al., 2001).

A final organizational benefit of mentorships is a greater awareness of memory inventories, as they exist in the tacit and cultural processes of organizational members. As noted above, firms
often ignore the expertise of older workers; this cultural and tacit knowledge is difficult to evaluate or capture, so it is not regarded as an asset to the organization (Prusak and Davenport, 1998). However, the act of teaching requires mentors to begin the process of articulating their tacit memory to others; the socialization of this knowledge allows organizations to have a greater appreciation for the rich inventory of understanding and insights that exist within their seasoned employees, bringing to light their real value as knowledge workers (Swap et al., 2001).

We see that, like Communities of Practices, mentorships create systems of knowledge socialization by fostering settings in which organizational members can share their tacit and culture knowledge. These practices ensure that the nuances and context associated with these types of knowledge are acknowledged by bringing together those with common professional expertise and work tasks, and by giving them face-to-face meetings in which memory and knowledge can effectively be relayed.

Having reviewed the kinds of knowledge sharing relationships organizational members can forge, I will now turn to a particular information structure that captures and transfers tacit and cultural knowledge in a way that cannot necessarily be achieved through documentation, policies and procedures. Storytelling, as a vehicle for tacit memories and knowledge sharing, will be reviewed to better understand its potential in an organizational setting.

**Storytelling**

Swap et al. define an organizational story as “a detailed narrative of past management action, employee interactions, or other intra- or extra-organizational events that communicates information within the organization” (2001, 103). These narratives normally include a plot and major characters, and seek to illustrate a lesson or moral, and develop a lore that expresses an organizational norm, value, or cultural practice (Swat et al., 2001). They are heavily entrenched in the context of the organization and its members, and there is an intrinsic connection between these stories and the culture of the organization. We can perhaps assert that, where knowledge sharing is concerned, storytelling provides an opportunity to relay cultural knowledge – stories are, as Choo describes, an illustration of the shared assumptions and beliefs about an organization’s identity, including its goals, capabilities, customers, and competitors (2006).

There are key organizational benefits to this form of tacit knowledge sharing. The value of storytelling among members (over, for example, a review of an organization’s explicit documentation), is that memorable information is more likely to entice action than information that remains unconscious and difficult to retrieve from memory. Vivid stories and dramatic narratives that personalize experiences make knowledge within the
stories more note-worthy and thus, are more likely to direct members’ behaviours (Swap et al, 2001). Davenport and Prusak discuss Weick’s observation that “people think narratively rather than argumentatively or paradigmatically” (Weick in Davenport and Prusak 1998, 81). They further argue that rhetorical narratives are a rich means of teaching and sharing knowledge (1998). Joung et al. note that in times of critical decision-making, members tend to base their choices on intuition, mental stimulation, metaphor, and storytelling. Experts store their memories and knowledge of difficult situations in the form of complex dynamic physical images or narratives. Storytelling can build rich mental models or schemata and increase the number of memories organizational members are able to recall (Joung et al, 2006).

Choo illustrates the value of storytelling in his account of Xerox service technicians – those responsible for fixing the photocopy machines on site – who, rather than depending on extensive documentation produced by the company to fix a problem with the machines, preferred to “use their two-way radios to call on a buddy for ideas, or to the experts (former technicians now serving as field engineers) as part of the escalation process” (2006, 145). When technicians solved a tough problem, they would tell stories to one another about their accomplishments in the cafe, the parts depot, or during a work group meeting. Their stories revealed the pride these technicians took in their work, especially in solving problems that had proved challenging to others. They enjoyed talking about solutions to hard problems, and gaining the recognition of their peers (Choo, 2006).

**Conclusion**

Capturing, transferring, and measuring tacit knowledge and memory will always present difficulties in organizational settings. Focusing on this intangible, context-specific knowledge asset is hard to justify in a resource-constrained environment. Regardless of these challenges, the practice of tacit knowledge sharing has real benefits to an organization’s ability to perform its competencies effectively and efficiently. As Davenport and Prusak attest:

> Spontaneous, unstructured knowledge transfer is a key component of effective knowledge management and, ultimately, of a knowledge-based organization’s success. Organizations must learn to harness this knowledge transfer effectively, to leverage the strategic benefits that emerge from this knowledge (1998, 89).

Through Communities of Practice, mentorships, and storytelling, information and knowledge organizations can ensure effective management of their knowledge assets. These practices afford organizations the opportunity to know what they know; by creating strong networks of knowledge socialization, organizations can reap the significant advantages of being a learning organization that sees new opportunities and recognizes emerging potential for innovation and creativity.
References


