What You Don't Know You Know Can Hurt You: Considerations in Using IT to Transmit Tacit Knowledge in Organizations

James Bloodgood  
Mississippi State University

David Salisbury  
Mississippi State University

Follow this and additional works at: http://aisel.aisnet.org/amcis1998

Recommended Citation
http://aisel.aisnet.org/amcis1998/18

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 1998 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.
What You Don’t Know You Know Can Hurt You: Considerations in Using IT to Transmit Tacit Knowledge in Organizations

James M. Bloodgood
Wm. David Salisbury
Mississippi State University, Starkville

Abstract

Organizations often have shared understandings about the world that may be described as tacit knowledge. While not readily communicable, tacit knowledge may be leveraged for competitive advantage. Specifically, the transfer of knowledge throughout an organization through the use of IT offers an opportunity for organizations to leverage their knowledge assets more completely. More rapid dissemination of knowledge hastens the organizational learning by enabling new behaviors to evolve and existing behaviors to become routinized where appropriate. However, this advantage stemming from the application of IT poses potential danger to unsuspecting or careless organizations. Taking knowledge that possesses a tacit character and explicating it tends to reduce the inimitability of that knowledge, and therefore makes it more prone to copying by competitors. Faster imitation by competitors results in more rapid erosion of competitive advantages stemming from that knowledge. We investigate means by which information technology may be used for socialization efforts in an organization. Previous research suggests that tacit knowledge transmitted by socialization may be somewhat more easily protected than explicit knowledge transmitted by externalization.

Introduction

The creation, transfer, and protection of knowledge within the organization are activities critical to gaining and sustaining competitive advantage (Von Krogh and Roos, 1996). There are two general classifications of knowledge with which firms must cope. These are explicit knowledge and tacit knowledge. Explicit knowledge is knowledge that is easily expressed; it can be written down or passed verbally to others. Because of its ease in expression, explicit knowledge is more easily transferred and imitated. On the other hand, tacit knowledge is knowledge that is difficult to articulate and express to others. This nature of tacit knowledge is often discerned in the form of generally accepted background understandings (Garfinkel, 1964) about reality held by members of a culture or organization (cf. Berger and Luckmann, 1967, Goffman, 1974, Deal and Kennedy, 1982, Collins, 1992). Such knowledge emerges over time, and is learned by immersion rather than rote (Polanyi, 1967). Many times the possessor of the knowledge is unaware of its existence, due to its implicit nature. The management of this type of knowledge is a difficult process given that the knowledge is difficult to express. The knowledge may be expressed in terms of a restricted code (Bernstein, 1965) that, while obvious to organizational members may not at all be so to non-members. Indeed, members may not be consciously aware of the existence of the knowledge, and hence may be unable to communicate it to non-members.

Knowledge Management Processes

Organizations can gain and maintain a competitive advantage through the use of three specific knowledge management strategies. These are knowledge creation, knowledge transfer, and knowledge protection. Speaking in broad terms, organizations that use a strategy of knowledge creation focus on creativity and experimentation to construct new knowledge that can be used to develop new products and services. Organizations that use a strategy of knowledge transfer focus on moving knowledge through their organization in an effort to utilize it to its fullest extent as quickly as possible. Organizations that use a strategy of knowledge protection focus on keeping knowledge from being transferred to other organizations.

Each of the three knowledge management strategies has advantages and disadvantages. Although useful for new product development, a knowledge creation strategy means that attention may be turned away from transfer and protection thereby allowing the knowledge to drift uncontrollably—at times into the hands of competitors. Competitive advantage derived from knowledge creation may not end up being used to its fullest potential, and it may not provide a lasting advantage. Knowledge transfer may lead to advantage due to a speedier deployment of the knowledge to portions of the organization that can benefit most by it. However, some products or services can only be created and provided by organizations that possess certain knowledge comprehensively, throughout the organization. In this case, competitive advantage may not be entirely unique from other firms, and it may not provide a lasting advantage. Knowledge protection can lead to products and services that are difficult to imitate, because competitors cannot figure out how to compete in an equivalent manner (Hall, 1992). However, this strategy at times keeps knowledge under tight wraps, which unknowingly prevents its transfer to areas of the organization that could...
benefit by it. Also, in fast changing industries existing knowledge may lose its value through the use of improved knowledge that pushes competitors past the organization.

As can be seen in the description of knowledge strategies, activities involved in knowledge management can be in opposition to one another much of the time. For example, making knowledge more transferable within an organization also tends to make it more transferable outside the organization, thereby making it difficult to protect (von Krogh & Roos, 1996). On the other hand, protecting knowledge can reduce the transferability of that knowledge within the firm. It is therefore important to prioritize the knowledge management objectives of the organization and to consider the type of knowledge being managed and its role in an organization’s competitive advantage.

Explicit and Tacit Knowledge Influences on Knowledge Management Strategy

Although organizations are not limited to only one type of knowledge management activity, they cannot typically maximize their attention on all three simultaneously. It is important for them to prioritize their efforts. One of the most important factors that organizations need to consider when they plan their knowledge management activities may be the degree of tacitness of the knowledge that is the basis of their competitive advantage.

Nonaka and Takeuchi (1995) identify the processes of socialization and externalization as means of transferring tacit knowledge. Socialization keeps the knowledge tacit during the transfer, whereas externalization changes the tacit knowledge into explicit knowledge. Socialization includes activities such as apprenticeships and on-the-job training. Externalization includes the use of metaphor and analogy to trigger dialogue among employees that is capable of spreading tacit knowledge.

The transfer of tacit knowledge through socialization may be used to create a particular type of organizational form. Ouchi (1980) describes three forms of organization. Put simply, these are the market (members perform because they are paid), the hierarchy (members perform because they are ordered) or the clan (members perform because they share a particular set of norms and beliefs that are consistent with the organization). The type of organization most closely associated with socialization due to tacit knowledge transfer would be the clan, as socialization is the means by which norms and values are transmitted to organization members, while keeping tacit the knowledge that these norms and values represent (Nonaka and Takeuchi, 1995).

IT Capabilities and Knowledge Management Strategy

Because of its ease of transfer, explicit knowledge is more easily handled by IT. In knowledge transfer strategies, IT can be used to make the knowledge even more explicit and disseminate the knowledge throughout the organization quickly. This approach leverages the knowledge assets of the organization as soon as possible, thereby enabling the organization to gain an advantage over competitors who transfer their knowledge more slowly. The speedier transfer creates little additional transfer to competitors because explicit knowledge is likely available to most competitors anyway. It is in explicit knowledge transfer that IT is most advantageous to the organization.

Tacit knowledge, on the other hand, presents an entirely different set of issues. Efforts at using IT to transfer tacit knowledge within the firm can be costly and ineffective because of the difficulties of making tacit knowledge more explicit in preparation for its transfer. In addition, the very act of making tacit knowledge more explicit to facilitate transfer makes it more readily imitated by external entities (cf. Nonaka & Takeuchi, 1995). One of the primary benefits of tacit knowledge is its inability to be imitated by competitors, or its inimitability. Inimitability is the extent to which a given competence cannot be copied (Barney, 1986; 1991), and is analogous to the concept of structural differences (Clemons and Row, 1988), at least to the extent to which it may enhance competitive advantage. IT transfer strategies that succeed in making tacit knowledge more explicit make it possible for easier imitation by competitors, thus negating an advantage gained by the more rapid dissemination of the information (Mansfield, 1985).

Given the potential negative outcomes from explicating tacit knowledge, it is important to identify which knowledge transfer strategies are most appropriate. First, organizations should evaluate the degree of tacitness of the knowledge to be transferred. Knowledge that is fairly explicit is highly imitable and hence no real benefit is gained from protecting it. Hence, steps taken to transfer explicit knowledge should focus on the speed of transfer rather than inimitability. Tacit knowledge, however, is typically inimitable and managers must determine if the knowledge is a source of competitive advantage, and thus subject to imitation attempts by competitors. For this type of knowledge, organizations should only use transfer options, such as Nonaka and Takeuchi’s (1995) socialization activities, that keep the degree of tacitness intact. Although keeping the tacitness intact may slow down the internal transfer of the knowledge, it will prevent much of the external transfer. Tacit knowledge that is not the source of competitive advantage is less valuable to competitors and less likely to be subject to their imitation attempts. Attempts can be made to make this type of knowledge more explicit for faster transfer without the risk of competitive advantage being eroded away. Activities included in Nonaka and Takeuchi’s (1995) externalization category would be appropriate in this situation. Of course, the costs and uncertainty involved in making tacit knowledge more explicit should be taken into account before the attempt is made.

How can IT be used to transfer tacit knowledge without making it explicit? Let us return to the issue of socialization. So-called advanced information technologies, or AIT (cf. DeSanctis and Poole, 1994). These technologies are by their nature and design intended to facilitate higher degrees of communication and coordination between organizational members, which may lead to more rapid socialization.
Given their design intent, AIT have potential for socialization efforts—to create a clan type of organization. To socialize an individual is to inculcate them into a shared pattern of common attitudes, values, goals, and practices that characterize a company, or “how we do things around here” (Deal and Kennedy, 1982). Information technology has an institutional character that may help enforce or change an existing culture (George, 1992). AIT can be used to facilitate communication within the organization in a variety of formats, which can be key in any socialization effort (Collins, 1992). Specifically, internet-based communication and collaboration technologies such as Web Pages, Push Servers, E-mail provide a means by which socialization may be accomplished.

Deal and Kennedy (1982) describe a variety of elements of strong organizational culture. These include the business environment, shared experience, values, heroes, and rites/rituals. While not all of these can easily be built into a member’s organizational experience with information technology, some of them may be transmittable by IT. It would appear that three key aspects of socialization that can be built into IT are:

- Communication
- Standardization
- Collaboration

Communication can be accomplished by a variety of ready-to-hand information technologies. E-mail is a means by which a variety of messages can be sent to members across the organization. The interaction that takes place between individuals using video conferencing is another means by which socialization may occur. It is possible that since these media are less rich than face to face interaction the opportunities for socialization are not as great, however, Lee’s findings (1994) would suggest that meaning can be created even in rather lean media settings.

Another example of communication is found in web pages and push technology. Many organizations have standards and procedures for what kinds of things can be put on their sites. These sites, by the way they are designed, are a strong message to both insiders and outsiders about the kinds of things that are acceptable in the organization. Push servers offer another possibility for the organization to get its message to its members. It is not at all difficult for organizations to set up push servers on a corporate Intranet that may have anything from stock quotes to personal anecdotes from the CEO. Again, this would be a relatively easy medium for transmitting a set of values and norms to organizational members.

Standardization is another means by which socialization can take place. Procedures that are culture-bound can be embedded into information systems so that the systems themselves become examples of “how we do things around here”. One classic example of this possibility for IT is the case of Mrs. Fields Cookies. In this firm, the norms and beliefs held by the head of the company were transmitted to organizational members through systems designed to assist in every decision from hiring personnel to when to put free samples out on the table (Ostrofsky, 1993).

Collaboration is another means by which IT may be able to assist in socialization. With the advent of Internet based collaborative tools such as NetMeeting™, relatively easy video conferencing is available to anyone with little or no limitation. Daily meetings with mentors several thousand miles away are not that difficult to envision.

Conclusion

We have explored the influence of knowledge transfer using IT on the competitive advantage of organizations derived from tacit knowledge. We identified the degree of tacitness and the link to competitive advantage as important characteristics of knowledge to consider when planning IT activities regarding knowledge transfer, describing potential pitfalls in the transfer of knowledge within the firm. Finally, we have described how technologies may be used to facilitate socialization of members into a particular pattern of norms and attitudes that a given organization may be able to leverage for competitive advantage.

References

References are available from the first author.