

December 2002

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Alexandra Durcikova
University of Pittsburgh

Andrea Everard
University of Pittsburgh

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Recommended Citation

Durcikova, Alexandra and Everard, Andrea, "AN EMPLOYEE TYPOLOGY: A KNOWLEDGE MANAGEMENT PERSPECTIVE" (2002). *AMCIS 2002 Proceedings*. 280.
<http://aisel.aisnet.org/amcis2002/280>

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AN EMPLOYEE TYPOLOGY: A KNOWLEDGE MANAGEMENT PERSPECTIVE

Alexandra Durcikova and Andrea Everard
University of Pittsburgh
durcikova@katz.pitt.edu aeverard@katz.pitt.edu

Abstract

This research-in-progress paper presents a 2x2 model of employee typology, which is based on the two dimensions of knowledge and knowledge sharing. There is a vast amount of literature that has acknowledged that the management of knowledge is an important strategic and tactical approach to improve organizational performance. Knowledge sharing between employees has also been recognized as a sound strategy to increase the value of the knowledge within a firm. The 2x2 presented in this paper proposes a typology of employees that contributes to the literature both from an academic as well as a practitioner perspective; it extends the literature on knowledge management, with particular focus on people while providing managers with guidance on how to classify their employees to facilitate employee management. The conceptualization of this model is the first step in our research on the importance of employee typology in KM. The next step is to develop measurement instruments to explore both dimensions in order to test the model.

Keywords: Knowledge, knowledge management, knowledge sharing, employee classification

Introduction

Knowledge is a firm's most valuable resource (Grover and Davenport, 2001; Kogut and Zander, 1992; Nonaka, 1994). This resource is created, rather than given or discovered (Tsoukas, 1996). Grover and Davenport (2001) argue that knowledge in an organizational context stems from people. The concept of organizational knowledge is a metaphor as it is not the organization but the people in the organization who create knowledge (Bhatt, 2000). The role of management is to coordinate purposeful individuals who can apply their knowledge in a specific situation. Therefore, we argue in this paper that it is the people who are important and, in an organizational context, it is the employees on whom we should focus. This paper presents a 2x2 that focuses on employees and two important dimensions: employee knowledge and knowledge sharing.

The motivation for this study stems from the understanding that the main focus of KM is on individuals and that KM is used to induce organizational change. People have been recognized as being the most important factor in KM; it is, however not only the level or amount of a person's knowledge that is important but also whether s/he is willing to share the knowledge. By retaining knowledge, and not sharing it, organizational change cannot take place. This study therefore proposes to look at two dimensions of KM at the individual level, namely individual knowledge and knowledge sharing. The intent of this research is to be able to categorize employees based on the proposed typology, in order to then be able to link the organizing principles (internal environment) (Kogut and Zander, 1992) to the distribution of employees in the four categories created by the Employee Typology. This research will contribute to the scientific research community as well as to practitioners. First, this study will supplement the literature on KM, with an emphasis on employees' knowledge sharing behavior. Second, practitioners will be able to benefit from this study as it will enable them to classify their employees into the categories of the proposed typology, which will then facilitate employee management.

What is important in knowledge creation is not individual motivation but rather the organizing principles of the firm. These principles are responsible for the differences in firm performance and growth. In describing the four cells created by this 2x2 typology, some organizing principles that support certain behaviors that place employees in the various cells are described. By

being aware of these organizing principles, managers can apply the appropriate principles to foster the desired behavior of employees. In this way, this 2x2 typology is useful to managers who want to improve the performance of their organization. The conceptualization of this model is the first part of this research; what remains to be done is to develop measurement instruments to explore both dimensions in order to test the model. It will then be possible to compare and contrast the different classification of employees using this typology across firms.

Prior Research

Knowledge

Nonaka et al (1998) define knowledge as justified true beliefs. Since knowledge is not stable over time and space, we cannot apply technical procedures to control its development and sharing (Von Krogh et al., 1997). If knowledge is not used at a certain time and place it has no value. Knowledge can be described as dynamic, partly tacit, and partly explicit. It can be tied to individuals as well as groups of people. Only explicit historical knowledge can be controlled although this kind of knowledge does not increase a firm's competitive advantage, since it is publicly available (Nonaka et al., 1998). It is therefore tacit knowledge sharing that is important for a company to sustain its competitive advantage.

Knowledge Management

Although there are many different definitions of knowledge management (KM) (for e.g., Alavi and Leidner, 1999; King, 1999), what they have in common is their focus on organizations and the people who make up the organizations. These definitions emphasize that the organization plays a critical role in the knowledge management process (Shin et al., 2001); however, the knowledge itself is developed by individuals, and although many people know pieces of information, no one knows it all (Stauffer, 1999). What accelerates the creation of ideas are the interactions between individuals, and these interactions occur in an organization whose role is to support creative individuals and create an environment that would articulate and amplify that knowledge (Nonaka, 1994). Knowledge creation, that takes place through knowledge sharing, is critical for a company because through this process creative ideas can be translated into innovative technologies and processes (Grant, 1996; Sumner, 1999).

KM is increasingly recognized as an important strategic and tactical approach to improve organizational performance (Wiig, 1999). Information can be generated by computers and technology; knowledge is created by people (Coleman, 1998). The emphasis in KM is on people, not technology (King, 1999; Remez, 1999). For KM to be successful, organizations need to create a corporate culture that promotes and encourages collaboration and rewards employees who contribute and share their knowledge (Costa, 1999).

Knowledge Sharing

Traditionally, knowledge is something that exists in the minds of employees; given the choice they would prefer to keep it that way and not share it. However, the value of knowledge is increased when it is shared; thus, cooperation between parties is a sound strategy for all parties concerned (Halal, 1999). While the rallying cry of information professionals used to be that knowledge is power, Ojala (1999) argues that knowledge sharing (KS) is power. To gain a competitive advantage, organizations need to pool their knowledge, set up a central knowledge base, and reward employees for sharing knowledge. Evans (1999) argues that the biggest barrier to sharing knowledge in an organization is the behavior modification that is required from employees. Therefore changing the organizational culture (behavior, rewards, shared objective, priorities, teamwork) is critical to making KM work in practice. Because of its importance, knowledge sharing is the second dimension in the 2x2 typology.

Encouraging Knowledge Sharing

Several techniques of how to "make" employees share their knowledge have been reported. Marks (2001) discusses the influence of managerial control and organizational support on KS. Ellis (2001) provides various illustrations; for example, putting people together under extreme pressure makes them naturally trust each other and therefore share knowledge. There have also been some attempts to reward KS; however, as soon as the rewards were eliminated the sharing stopped (Ellis, 2001). What seems to help people share their knowledge is the reciprocity of KS. Employees want to make sure that they not only give knowledge but that

they also receive knowledge. Moreover, knowledge “receivers”, when searching for help must admit that they need help and have to expose their weaknesses to others (Stauffer, 1999). This constitutes an additional potential obstacle to beginning the search process. Another way of promoting KS is the opportunity to be elected a subject matter expert among peers (Earl, 2001; Ellis, 2001). Recognition as an expert in a specific matter is a driving force for sharing knowledge.

The Employee Typology (ET)

The first dimension represented in the Employee Typology (ET) is knowledge. Knowledge is operationalized as competence as in Bassellier, et al. (2001), Covey (2000) and Sandberg (2000). Individuals can be categorized into one of two groups, those with high competence and those with low competence. These are represented in the matrix in Fig.1 as “high knowledge” and “low knowledge,” respectively.

Much of an individual’s experience, intelligence and overall competence resides in his or her head; as a result when an employee leaves a company, these attributes are lost. For this reason, the transfer of the employee’s knowledge to other employees is vital to the continuing successful performance of a firm. In order to ensure that knowledge is not lost, before an employee leaves, his or her knowledge needs to have been shared with at least one other employee.

With respect to the second dimension, an employee can be categorized as either “high knowledge sharing” or “low knowledge sharing.” Individuals are classified as sharing knowledge if they provide knowledge to others in the organization. As a knowledge provider, employees can fall into one of two groups: (1) sharing with prompting, and (2) sharing without prompting. Sharing with prompting includes serving as a source of knowledge (ability to make explicit his/her knowledge to others) and serving as a pointer of knowledge (informed as to where knowledge is available). Sharing without prompting refers to an employee’s willingness to offer help, advice, and suggestions without it being asked of them. Individuals classified as “low knowledge sharing” do not fall into the above categories. Although an employee who is not a knowledge provider but rather a knowledge seeker (someone who seeks help, advice, and suggestions from others) can be considered as supportive of KS as s/he encourages others to share knowledge, s/he will be classified as part of the “low knowledge sharing” group since that employee is not providing any knowledge to others. The four cells, which make up the 2x2 matrix, will now be looked at in more depth.

Employees can be grouped according to these dimensions into one of the four cells of the 2x2 matrix represented in Fig.1.

		Knowledge	
		High	Low
Knowledge Sharing	High	Seeing eye dogs	Peacocks
	Low	Foxes	Ants

Figure 1. The Employee Typology (ET)

Seeing Eye Dogs

Employees in the upper left hand cell have knowledge and share it, and are identified as seeing eye dogs. Employees who fall in this cell are of the greatest importance for an organization. They are, in essence, the pillars of the organization, which in turn gives the organization its knowledge-based advantage. An organization that is made up mostly of employees who fall in this cell is likely to be a firm with a culture that emphasizes learning and teaching and that has knowledge-based advantages, which are not easily replicated by competitors.

There are several examples of this type of employee, or groups of employees, in both the academic and practitioner literature. For example, Stewart (2000) describes a technique launched at Viant, a consulting company. Top consultants from this firm are called off their work and for several months are placed in a position of “agitator.” The agitator’s or “project-catalyst’s” responsibility is to approach employees who are working on specific projects and to give them advice, show examples of possible solutions, and so forth. The seeing eye dog analogy can also be found at Buckman Laboratories and the World Bank. The ‘seeing

eye dogs' are those employees who use storytelling, analogies, and metaphors to share their tacit knowledge. This technique allows the context of important information that was gained by an individual through his/her expertise to be established (Wah, 1999). Further, we can find the concept of seeing eye dogs at BP Amoco. Kent Greenes, head of knowledge management, says: "knowledge guardians constantly probe the unknown and bounce it off project teams to get them thinking about new ideas" (p.27) (Wah, 1999). Similarly, at Ericsson seeing eye dogs are referred to as "knowledge brokers" and are responsible for tracking which problems are being dealt with in various offices and bringing together the people who are able to solve them (Baladi, 1999). Von Krogh, et al. (1997) introduce the notion of a knowledge activist as a knowledge sharer. They identify a knowledge activist as some individual, or some group or department, who takes on the particular responsibility of energizing and coordinating knowledge creation efforts throughout the corporation. The authors identify people in organizations who can act as knowledge activists, for example, employees from R&D centers, strategists, or employees from knowledge and technology transfer units. While these individuals are in positions that allow them to be easily identified as knowledge activists, according to Von Krogh et al. (1997) the most efficient and effective knowledge activists are those based on assignments to that role. Such an assigned position is in line with Stewart's (2000) description of an "agitator." It is important that those in the seeing eye dog position are rotated from time to time; this position entails a significant amount of mental exertion and thus requires new employees to come in and renew the batch of ideas.

As can be seen from the above discussion seeing eye dogs play a critical role in the performance of a company; therefore firms that wish to be successful require this type of employee.

Foxes

The cell in the lower left hand side of the matrix represents employees who have knowledge but who do not share it with others. Such employees hoard their knowledge; this, however, does not preclude them from seeking knowledge from others. This behavior is analogous to the behavior of foxes – sly and crafty. Organizations need to be aware of employees who fall into this cell as they represent a weak link and can lead to a knowledge breakdown in the organization.

Even if self-determined and demand-driven mutual learning increases employees' competence and flexibility (Hoffmann et al., 1999) individuals are often resistant to share their knowledge. Goodman and Darr (1999) and Peters (1995) argue that one of the reasons why people do not want to share their knowledge is because unique knowledge can be a source of power. According to Cook (1999) KM will suffer if knowledge is equated with power. Often, individuals choose to keep knowledge to themselves, to not share it; they keep it in store. One problem with this is that knowledge that is not used loses its value. This can be detrimental to an organization's source of value, since the knowledge in the organization is not used and therefore loses its timeliness value (Nonaka, 1994). In an organization, leadership is closely related to the distribution of formal power; informal power is often obscured in a firm's culture and only emerges through the firm's values. According to Cook (1999), in order for KM to succeed, both formal and informal power sources must be aligned and both must be in favor of sharing knowledge, skills and experience. Moreover, because of the increasing number of mergers and acquisitions that are taking place, employees are often wary and cautious about their potential career advancement and are thus prone to guard their knowledge, taking precautions not to share it. Another reason that employees do not share their knowledge or contribute to management systems is that they feel that "they are just dropping their knowledge into a black hole" (Ellis, 2001).

Because much of a firm's intellectual capital is shared through informal networks, also known as the 'grapevine,' individuals who do not partake in such informal structures and relationships do not have access to the knowledge. In fact, an organization's grapevine is a conduit through which skills and experience are easily and efficiently transferred and shared (Cook, 1999).

Peacocks

Employees who fall in the upper right hand cell have low knowledge yet are willing to share. This is best represented by peacocks, which use their tail to inflate their size so as to appear larger and more powerful to would-be predators. In a similar manner, in some instances employees who are less competent are willing to share whatever they do know in order to appear more competent than they actually are. Often this behavior backfires as the true level of competence of the employee is then exposed.

Employees need to feel that their knowledge is there for other employees and that somebody else actually makes use of it. When KS is viewed from the "receiver's" point of view, s/he needs to trust that the knowledge that s/he receives is accurate. Wah (1999) describes how in the chemical industry the accuracy and validity of the information is of prime importance since an inexact

solution mixture may have grave consequences. Moreover, in the chemical industry, high levels of safety and environmental standards must be maintained.

It is important for firms to recognize the ‘peacocks’ among them. In some cases, the firm must even take precautions so as not to create peacocks, which can be done by not implementing reward systems based on the number of contributions of an employee. When employees are rewarded based on the quantity of contributions as opposed to the quality of contributions, employees may tend to contribute for the sake of contributing. This behavior however, does not lead to an increase in an organization’s knowledge base.

Ants

Finally, employees who have low knowledge and are not willing to share fall into the lower right hand cell of the matrix. Such employees are able to use the explicit knowledge of other employees but their competence is unconscious (Covey, 2000), that is, although they are able to perform certain processes or procedures, they are unable to make informed adjustments as to the performance of their tasks. Such as ants that work hard at maintaining the proper functioning of the ecosystem, these employees are essential to the organization. Without them, routine tasks would not be performed and the everyday workings of the firm would come to a standstill.

During the hiring process, firms look to fill “ant” positions, for example, calling center employees by individuals with qualifications such as basic reliability, problem-solving skills, and so forth (Jarvis, 2000). These qualifications represent the top qualifications for such positions. Timeliness and responsibility are also required of such employees for them to perform their duties properly. Schultz (1999) reports that a one percent error rate in basic business operations results in a ten percent increase in logistics’ costs. This is representative of the critical importance of ants in any organization.

Since organizations often do not recognize the value of their work, ants are frequently compensated poorly. The work of ants is, in most cases, taken for granted. For example, custodians who empty office wastepaper baskets, clean washrooms, and, generally, maintain a clean working environment are critical to an organization’s proper functioning. Ants and their work are, as stated above, taken for granted, until they fail to perform their responsibilities and tasks. It is then that the organization comes to realize ants’ importance.

From the examples presented, it is clear that ants play a significant role in the effective and efficient functioning of any firm. Therefore, in hiring ants, organizations must ensure that the individuals have the competence to adequately perform their tasks. If they fail to do so and do not pay enough attention in ensuring that employees filling ant positions are qualified to do so, the organization may suffer and the work of other employees may be negatively affected.

ET is a Dynamic Model

The ET represents a horizontal “cut” at a given time in a company. Therefore, at different points in time different employees will be in a particular cell of ET. Over time, an employee may fall into different cells. It is possible for an employee, working on several projects at the same time, to fall into different cells, depending on the project. For example, in one project the employee may be categorized as a seeing eye dog, while in a second project s/he is involved with simultaneously s/he could be seen as an ant.

From a strategic point of view, the most important cell in the ET for a company’s future success is the seeing eye dog cell. Even though seeing eye dogs are very important to a firm’s success as they are responsible for the firm’s vision, it is the followers who actually provide the necessary tools, in terms of workforce, to help fulfill this vision. Therefore it is important to recognize that a company cannot only consist of seeing eye dogs and that other employee categories have their place in everyday organizational life. Though a large number of peacocks or foxes are not desirable in a firm, what they bring to organizational life must be recognized as an essential aspect, and not necessarily as an optional and dysfunctional extra (Morgan, 1997).

Because the seeing eye dog position involves extensive responsibility, one individual cannot be expected to hold it for a long period of time. This dynamic view of ET is consistent with Nonaka’s (1994) dynamic theory of organizational knowledge creation, SECI (Socialization, Externalization, Combination, and Internalization). These building blocks, namely, the socialization,

externalization, combination, and internalization activities form the spiral of knowledge creation in time just as the ET represents static points in a dynamic model of employee structure in an organization.

Future Research

Measuring Knowledge

One challenge to studying this subject matter is the difficulty of measuring knowledge. Knowledge of employees may be ascertained by focusing on their level of competence (Covey, 2000; Sandberg, 2000). Covey (2000) differentiates between unconscious and conscious competence: individuals are said to be unconsciously competent when they are not able to identify the principles that lead to good or poor outcomes. Alternatively, individuals are consciously competent when they are able to not only identify the procedures, processes, and principles but are also able to make them explicit. Without the latter type of individuals, organizational learning cannot and will not occur. The process of making these principles explicit to other members in the organization is known as KS, which, as seen above, has been identified as a critical success factor for a firm's competitive advantage (Dyer and Nobeoka, 2000). In a like manner, Bassellier, et al. (2001) define the competence of business managers through their IT-related explicit and tacit knowledge. They extend this notion of competence by including the concept of knowing who knows what. This, in turn, enables managers to leverage the knowledge of other employees.

Conclusion

Knowledge management and knowledge sharing are of prime importance to a firm's success. Of equal importance is an employee's propensity to share the knowledge s/he possesses. The ET presented in this paper categorizes employees according to their level of knowledge, operationalized as their level of competence, and whether they share their knowledge. The conceptualization of this model is the first step in our research on the role of employee typology in KM. The next step is to develop measurement instruments to explore both dimensions in order to test the model. It will then be possible to compare and contrast the different classification of employees using this typology across firms, and link this typology to the organizing principles of the firms.

Although Despres and Chauvel (1999) state: "the domain of knowledge management is pre-pre-paradigmatic in the sense that a fragmented mosaic of views exists within the general framework of an emerging cognitive science" (p. 11), it is our hope that this paper has contributed to the literature on KM and that it will help knowledge management and knowledge sharing principles, as well as other models, to emerge.

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