

# MANAGING KNOWLEDGE WORKERS IN THE E-WORLD

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## ABSTRACT

*Knowledge Management is a recent development in business, allowing for an organization to increase its competitive advantage. Managing the knowledge worker of today is much different from managing the rank and file employees of the past. It is important to understand the knowledge workers, their traits and personalities, before learning how to best manage them. This paper discusses these issues to help managers better utilize KM tools for employee productivity and business effectiveness.*

**Keywords:** Knowledge Management, knowledge worker, organizational learning, collaboration

## INTRODUCTION

Knowledge Management is a recent development in business, allowing for an organization to increase its competitive advantage. It leverages the expertise of its employees through creating, collecting, and disseminating knowledge throughout the organization. It relies heavily on its expert employees and extracts tacit knowledge from them. KM is also relying on pulling explicit knowledge out of business processes, manuals, and databases. Knowledge Management succeeds when it can rely on employees to share their knowledge for the betterment of the business, even if it pulls away from the power base of the employee. In order for the employees to feel safe in sharing their expertise, the company needs to have the right culture and the right employees focus. Thus, managing the knowledge worker of today is much different from managing the rank and file employees of the past. It is important to understand the knowledge workers, their traits and personalities, before learning how to best manage them.

## WHAT IS A KNOWLEDGE WORKER?

Drucker (1969) coined the terms “knowledge work” and “knowledge worker” to suggest that the U.S. economy has shifted from production economy to knowledge economy. He later defined the knowledge worker as “*Individuals who add to a company’s products and services by applying their knowledge are knowledge workers*” (Drucker, 2000). To be qualified as knowledge workers, the workers need to ‘apply’ their knowledge. It implies that their adding to the products and services generates value. One could argue that manufacturing line worker add value to the car on the production line because their knowledge is in tightening the same bolt in the same place on every car that passes in front of them. This repetition work is not “knowledge” per se. It is application of repetition of what has been taught to them. The workers did not study

the entire process of building a car and decide that they needed to tighten this bolt. They are shown by a supervisor or more experienced workers that this was their task. Drucker's definition of knowledge worker implies the applying of knowledge is a thought process that the workers employ to add to the product or service, not just carry out a pre-determined task. Hence, the product and service can be improved continuously by knowledge workers.

Another definition given by Kappes and Thomas (1993) is "A *knowledge worker is one who gathers data/information from any source; adds value to the information; and distributes value-added products to others.*" This definition is important to understand what a knowledge worker is in today's information era. A knowledge worker often receives the data from others and takes it from there. A knowledge worker does not have to be involved in the gathering process. But most knowledge workers are information processors. They add value to what they have gathered or have been given. The distribution of the value-added product is in essential to the organization. If the value does not go beyond the employee, it would not benefit the organization.

### **WHAT A KNOWLEDGE WORKER LOOKS FOR AN EMPLOYER**

There are attributes that the company holds that will either attract or disinterest a knowledge worker. Miller (2002) points out the following attributes that differentiate an employer for a knowledge worker:

- Vision – exciting, big and engaging ideas
- Direction – a sense that you're going somewhere
- Impact – the chance to make a difference
- Challenge – going beyond current capabilities
- Listening – knowing that they'll be heard
- Validation – recognition and appreciation of skills and contribution
- Learning – knowing that they'll acquire new skills
- Autonomy – the power to act
- Values – fit with their own

Miller states that there are two things that a company can do to attract these types of workers. The company needs to align business strategy with corporate culture. Strategy deals with the "what" while the culture deals with "how" the company works. Further, he points out that people need to own them (i.e., strategy and culture) and be personally involved in generating them and living them" (Miller, 2002).

### ***STRATEGY***

From the attributes list, a knowledge worker "has a clear understating of the business in which he or she is a part" (Awad & Ghaziri, 2004). Organizations should allow the knowledge workers to develop their interest in the business as a whole, rather than just their area of expertise. It is important to involve the knowledge worker in the business strategy. Davenport states that "knowledge workers have a much higher need than other employees to feel that they're contributing to a larger whole and that their organization is doing meaningful work." As he writes in *Thinking for a Living*, these workers "need to know the broader context in which they

work: the industry direction, the company's positioning within the industry, key corporate initiatives, specific performance goals, and how the individual's performance relates to those factors" (Johnson, 2006).

Miller (2002) indicates that one way to accomplish this goal is through Strategy Workshops. Through this strategy workshop process, Miller lists eight key points that help in managing the business and also the knowledge workers:

- They had actively participated in setting the strategic goals and plans of the business. Their voices were heard.
- A high level of ownership of the targets existed.
- Conflicts were openly discussed and resolved. Action programs weren't dumped onto teams without agreement.
- Everyone knew where the business was trying to go and why. Even if they didn't agree, they knew how decisions were made.
- The argument for each goal and program was clear and didn't require guesswork.
- Difficult decisions were easier to deal with, because the context was clear. A decision to cancel a research project, delete a product or transfer resources to another program did not come out of the blue. There was always a context and justification.
- Decision making could be pushed down the organization because everyone was operating from the same strategy, giving knowledge workers more autonomy.
- The organization could respond more flexibly to changes in the marketplace because understanding of the strategy was shared.

These points tie into the attributes of knowledge workers. Getting knowledge worker engaged in the whole of the business will enable them to feel more involved and therefore increase their knowledge contributions. Hence, it increases the corporate effectiveness.

### ***CULTURE AND KM PROGRAM***

Companies that successfully implement knowledge management do not try to change their culture to fit their knowledge management approach. One way that companies can be successful without changing their culture is to integrate sharing knowledge into a pre-existing core value. Following one of the knowledge worker traits -- "has a clear understating of the business in which he or she is a part", Smith suggests that KM program should "link sharing knowledge to solving practical business problems" (Smith, 2005).

Much of what Smith focused on is the social networks of an organization. He argues that the more developed the social network of an organization, the better chance it would have a successfully implemented knowledge management program. Intrinsically, an organization with a well developed social network most likely already has a good deal of knowledge sharing occurring already. A good organizational social network is closely related to a personal network. In private life, our process for buying something as simple as a book, or as complex as a car, typically involves turning to people we trust in our personal networks for help, advice, and dialog. Also, the organizations that have good social networks usually tie these pre-existing networks into the knowledge management program. Therefore, using these pre-existing networks as enablers of KM programs to produce more value for the organization is a natural approach.

## ***COLLABORATION***

As the first trait of a knowledge worker shows, collaboration is a key aspect of knowledge management. Collaboration is much more than working in teams or mere cooperation with fellow workers. As stated by Bob Buckman of Buckman Laboratories, “Cooperation means to pleasantly work together; collaboration means to emphatically work together, and between the two things there is a lot of difference” (Laycock, 2005). In order to allow for collaboration, an organization must structure its values and cultures to stimulate it. Individual rewards and recognition do not foster a team environment of free sharing. The culture of the business must be geared toward the goal of the team, department, and company, instead of the individual or of the local unit. The organization should be open and encourage knowledge sharing. The sharing and collaboration of the department or departments must be a vital goal and vision. Without collaboration, the organization cannot institute a knowledge management vision and program.

When collaboration is part of the inherent culture, the organization stands a better chance of leveraging its knowledge management program. Organizations with more open and supportive value orientations are predisposed toward constructive knowledge behaviors such as firm members sharing insights with others (Alavi, Kayworth & Leidner, 2005/6).

## ***MOTIVATION***

A study by Osterloh and Frey (2000) looks at the motivation, both intrinsic and extrinsic, in relation to managing knowledge. Their study found that there are four organizational forms that best enable the transfer of explicit or tacit knowledge with respect to the required extrinsic or intrinsic motivation. These findings are in line with the findings from the collaboration section. When the transfer of tacit knowledge within or between teams is crucial, transfer prices as well as commands are unsuitable for motivation. Instead, organizational forms that emphasize participation and personal relationship, such as linking pins or overlapping teams, are needed. Therefore, for an organization with a knowledge management vision and program, they must rely on the intrinsic motivation of their knowledge employees and use the knowledge transfer and generation for their organization of either tacit or explicit knowledge in determining the department forms of KM.

When extrinsic motivation is involved, such as bonuses for a profit center or department based upon performance results, there is no value in sharing knowledge for the members of those areas. In fact, in profit centers, the organization could stack rank the units and therefore they see value in not sharing, which is worse than not seeing the value in sharing. The knowledge organization that wishes to embrace the culture of sharing must be cognizant of the structure and motivational practices that make up the culture.

The same can hold true when the extrinsic motivation is brought down to the individual level. Osterloh and Frey (2000) found that it is often very hard to determine an individual’s tacit contribution to a project or paper. They use the example of “physically lifting cargo into a truck” to show that it is easy to determine individual production in physical activities, however in tacit knowledge transfer or creation it isn’t. For example, if this paper was done by a group collectively, it would be difficult to track and determine the true value of each team member’s

share of the final product. Covey looks at motivation from a different, yet relevant angle (Strempl, 2006).

Strempl (2006) further sums up the motivational aspect of managing knowledge workers:

“It appears that the traditional strategies in bureaucratic and scientific management styles of controlling information and power, seeking to direct workers might be counterproductive in relation to knowledge workers, and that a “post modern” management style which is less hierarchical and more flexible might be more appropriate.”

## ***CREATIVITY***

One way to foster creativity is to keep the organization flat and less hierarchical, as pointed out by Osterloh and Frey (2000) and Strempl (2006). Strempl cites Brown, who studied some US e-commerce consultant agencies. They fared best when the organization was flat. Brown also noted a model for harnessing the creativity of knowledge workers, labeled “hot groups” which have “an intense, sharply focused style of working and a task obsessed, impassioned group state of mind.” These hot groups rely on a flexible organizational structure.

Push the organization to think “group” more and think “individual” less. Organizations hire, promote, evaluate, and reward individuals. That causes trouble, generating intra-group conflict and stress. Hot groups provide refuge from individualism – the bland anomie of “normal” organizational life devoid of challenge and opportunity. Every working human being deserves a chance to reach for a star.

Firms that are extensive users of information technology tend to adopt a complementary set of organizational practices that include: decentralization of decision authority, emphasis on subjective incentives, and a greater reliance on skills and human capital.

## ***SELF-MANAGEMENT***

According to Drucker (2000), “Managing knowledge means managing oneself.” Essential to the knowledge workers is understanding our strengths, articulating our values, and knowing where we belong. The historic shift to self-management offers organizations four ways to best develop and motivate knowledge workers:

- Know people’s strengths
- Place them where they can make the greatest contributions
- Treat them as associates
- Expose them to challenges

He sees that organizations that treat knowledge workers in these ways will be the most competitive in the next 25 years. “Knowledge workers don’t believe they are paid to work 9 to 5; they believe they’re paid to be effective” (Drucker, 2000). An organization allows and teaches a knowledge worker to manage oneself; it will encourage them to learn how to maximize their contributions (Brigham, 2006).

## **MANAGING KNOWLEDGE WORKERS IN THE E-WORLD**

### ***FROM BOSS TO PLAYER AND COACH***

As time moves on, most managers will come from the ranks of knowledge workers and perform works similar to those whom they manage. Similar to what we've seen under the Motivation and Creativity sections, we have seen organizations as flattening in the past decades. With the new managers coming from the knowledge worker ranks, we see these new managers organizing communities rather than hierarchies. They assume the role as a team player or a coach rather than traditional boss.

The new player/coach will feel constant tension, as they will find it difficult to strike just the right balance between overseeing knowledge workers and performing knowledge work. Davenport acknowledges that this new type of knowledge-work boss, the so-called player/coach, feels constant tension. Focusing too much on your traditional managerial responsibilities, such as budgeting and planning, may mean losing touch with client's and customer's real concerns. On the other hand, tipping the scale too far toward performing knowledge work may cause managerial responsibilities to suffer (Johnson, 2006).

How do you relieve the tension? Many professional services firms, universities, and research organizations have long mastered the problem and offer models to emulate. For example, people at the executive level in a university keep their hand in knowledge work by continuing to teach, conduct research, and publish. But whatever the approach, it needs to be developed at the organizational level. Hence, they can be innovative in their professions through continuous learning and improvement. Organizational learning plays a major role to keep the player/coach role alive and empowered.

### ***IMPORTANCE OF OPINION LEADERS***

As mentioned earlier, social networks are important for knowledge workers and they rely on their networks to understand their knowledge and compare themselves and their abilities to others in the company or even outside their organization. New managers act as player/coach to build community in the organization. The social network naturally becomes the building block of the community in the organization. It is not just 'What you know' or even 'Who you know' that ensures a successful outcome. It is 'Who you know well enough to trust for advice, or have confidence in to get things done efficiently and effectively (Smith, 2005). This is the concept of social capital.

Within the social networks arise some natural leaders or those that achieve particularly elevated prestige or influence with their peers. Opinion leaders hold the knowledge sharing process called diffusion, which is the transfer of the idea or knowledge. It is important to understand the innovation diffusion process to ensure that knowledge transfer is taking place appropriately and acceptably.

The five stages of the innovation diffusion process as defined by Rogers are listed as follows (Smith, 2005):

1. *Knowledge* is the stage where a potential adopter learns about the existence of an innovation and gains some understanding of it.
2. *Persuasion* is the stage where a favorable or unfavorable attitude towards an innovation is formed.
3. *Decision* is the stage where activities are undertaken which lead to the adoption or rejection of an innovation.
4. *Implementation* is the stage where an innovation is actually put to use.
5. *Confirmation* is the stage of reinforcement for an adoption decision which has already been taken.

To successfully manage the transfer of knowledge, the social networks within the organization must be identified. Combining the innovation diffusion process with the five categories of innovativeness, managers should be able to easily identify various types of social networks. The notion of networks as a dominant organizing principle is to explain how organization work is attracting significant interdisciplinary interest. Farsighted managers are in the vanguard of those who are turning to network visualization and analysis for usable insights into the network dynamics that shapes both threats and opportunities in their organizations.

### ***MEASURING KNOWLEDGE WORKERS***

People try to improve processes to gain business efficiency. It is an extrapolation of the same logic in other work that processes can be improved. A viable repository of corporate knowledge is vital to knowledge workers. A study at IDC found that 1,000 knowledge workers can lose as much as \$6 million a year just searching for non-existent data, or researching work that has already been done (Alter, 2006). According to the interview by Economist (2007), Davenport stated that finding ways to improve the productivity of knowledge workers is one of the most important economic issues of our time.

Measuring knowledge workers could be the biggest task in managing knowledge workers. The biggest challenge is devising for providing evaluation and feedback. Knowledge work is difficult to measure objectively, and, because it is often part of a long process. It is hard to gauge its effectiveness until a project is concluded. Using Gantt chart method, dividing jobs into manageable assignments that can be tracked and measured could a way to measure knowledge workers.

Davenport suggests some more concrete examples of setting up measurements by judging them on their outputs—their results—not their inputs, such as the number of hours they are working or where they are doing their work (Kappes & Thomas, 1993). Create quality measures. Even if these measures are subjective, they can be effective if they are broad enough. For example, at a professional services firm, the head of press and analyst relations might use “number of media mentions” and “favorable ratings in analyst’s reports” as performance metrics.

Then experiment with changes designed to improve performance on the metrics you have defined. Managers should not just make interventions in an effort to get more out of knowledge workers. We also need to learn from how we intervene. Too many companies initiate changes such as moving knowledge workers from closed offices into cubes in an attempt to generate

more open communication – without evaluating the change’s impact on performance. We are experimenting, but we are not learning from our experiments.

Davenport also notes that Tayloristic controls and top-down reengineering will fail if they are applied to knowledge workers. Knowledge workers will also resist using completely thought-out expert systems or following scripts. These workers prefer to connect the dots themselves in unique and collaborative ways (Dulebohn, 2005).

### ***WORK-BASED LEARNING AND IMPLICATIONS***

Raelin (1997) developed a model for work-based learning on both an individual basis and collectively as a team or an organization. The model explores how individuals learn in different settings. He tackles ideas similar to those expressed in knowledge management such as tacit and implicit knowledge transfer. The results indicate that the work-based learning and its implications for knowledge management are correlated.

One of the implications for managing knowledge workers in this model is that individuals are predisposed to a learning type. All four learning types should be used to engender the most learning in the shortest amount of time. Hence, effectiveness of work-based learning results from the comprehensiveness of facets to which the learner is exposed.

It is not sufficient to learn only through theoretical exposition nor is it sufficient to engage in tacit practices without making one’s mental models accessible. Meanwhile, efficiency of work-based learning results from selective attention to each of the four learning types. For example, experience solidifies the learning made tacit in experimentation but may lead to mastery more quickly when subjected to reflection. As we move from reflection back into conceptualization, we hope to achieve criticalness, defined as the ability and dedication to question our underlying assumptions within the learning process. The purpose of the four learning types contributes to a solid foundation for work-based learning on the part of individuals.

Raelin (1997) further proposes a model of work-based learning at the collective level, which has implications for knowledge management at the organizational level. Four different types are displayed at the collective level resulting from a matrix of the same dimensions of learning modes and knowledge forms. The model of work-based learning requires each in order to produce effective, efficient, and critical learning. In practice, Raelin completes the picture of how his models affect knowledge management in today’s organization.

The dominant method of developing employees in North America is through training. In the case of management training, billions of dollars are spent annually in the U.S. mostly on classroom instruction. The focus of this effort is on the delivery of a broad range of conceptual knowledge and skills in the various fields and functional disciplines of management. Besides classroom instruction, the other predominant mode of developing managers is through experience. In particular, it is thought that mastery of an interdisciplinary, inter-functional field like management is best achieved by exposure to diverse challenges in corporate life normally through the judicious mapping of assignments. Unfortunately, classroom and real-world development experiences are typically provided independently as if there were no need to merge



theory with practice. As we have seen, work-based learning deliberately merges theory with practice and acknowledges the intersection of explicit and tacit forms of knowing.

Understanding the complexities behind work-based learning has a tremendous impact upon knowledge management. The theories behind this learning are far beyond the scope of this paper, however the basics can be used to understand that the learning involved in the transfer of knowledge in an organization are different for each person and the type of knowledge that is to be transferred.

## CONCLUSION

Much can be said for the management of knowledge workers. Though knowledge management remains an emerging discipline, it is not a new term for management. Drucker (1969) coined the term more than 35 years ago. We are well moved from the industrial era into the information era. A majority of the work force are knowledge workers. However, management and administration have not fully adopted new ways to manage knowledge workers. The general consensus is that managing a knowledge worker is much different from ordinary employees.

This paper points out the importance of managing knowledge workers by identifying the attributes of knowledge workers. The knowledge workers expect more from their organization and will also give more when they receive it. The knowledge workers attributes indicate the fact that they need to understand the whole of the business, not just their particular area of expertise. Managers should combine the business strategy with the corporate culture to get these knowledge workers involved in knowledge transfer. Social networks and community within organization can be applied to enhance the innovation diffusion process.

Raelin's work-based learning model provides managers a two-tier view of managing knowledge workers (Raelin, 1997). Knowledge workers have the need to feel as a part of the overall organization. They stress value and add value back to the organization through creating and distributing knowledge. Though there is a paradigm shift in management theory, there is little change in management style and management practice. The type of worker involved in knowledge management has been around for years. This paper reviews the basics of understanding knowledge workers and what they are looking for from an employer. When their needs are met in their organization and they see their added value in the products and services, they will continue to be productive, even if the measurement of that productivity is hard to see by their superiors.

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