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DISCUSSION

Managing Knowledge Workers

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ABSTRACT

Knowledge workers are actually those workers in an organization who are sensitive to change. They constantly respond to the changes in the environment by gathering information and then arranging their work accordingly. With the accelerated pace of change, we should not hesitate in accepting the reality that all knowledge workers have significant place in the organization. The importance of their role to any organization that wants to survive in this dynamic epoch cannot be underestimated.

Knowledge workers are indispensable for the organizations. They like to have complete autonomy in the work they perform. Their creativity and inquiry-driven learning may be difficult to achieve within traditional command-and-control paradigm. Too much stringency can be destructive to their creativeness and can have adverse effect on their performance. On the other hand too much leniency means giving them an absolutely freehand. Managers are faced with the dilemma of how to strike a balance between the two extremes. Proper management can best harness their potential and can further enhance their capabilities and get the most from these workers. Improving knowledge worker productivity is the most important task of the century. Yet we have few measures or management interventions to make such improvement possible. Although we can not cent percent identify the pattern which should be followed by knowledge workers because systems and processes in an organization are often regarded as a kiss of death to encouraging creativity, but this need not be the case. Without a system, the generation of ideas and application can be lost for ever. Therefore it is a challenge for the management as how to manage knowledge workers due to their importance and the unique role they play in the organization. The paper simply throws some light on how the interventions can act as tools for proper management of knowledge workers and for enhancing their performance.

INTRODUCTION

The study focuses on the importance of knowledge workers to any organization that wants to survive in the dynamic era and how to get the most out of them. Some of the interventions that can act as tools for proper management of knowledge workers are also discussed in the paper.

Problem Definition

Knowledge workers use their creativity and inquiry driven learning in the work and demand more autonomy and authority as compared to the traditional workers. This has created a dilemma for the managers as how to strike a balance between the two extremes so as to best harness their potential and enhances their capabilities to get more from these workers.

SCHEME OF THE RESEARCH

The research is virtually divided into two main parts.

In the first part the importance of knowledge workers to the organization has been explained and in the second part some interventions have been given to the management as how to properly manage Knowledge workers in a proper manner so as to increase productivity.

METHODOLOGY

This study which is basically a library based research reviews the existing material regarding management of knowledge workers, as primary resource material.

Sources of secondary data are the following:

Journals

Digital Library

Research Papers

Internet sites

Books

IMPORTANCE OF KNOWLEDGE WORKERS

Change is constant and inevitable. Organizations have to adopt and adapt to the changes in the external environment. Without these twin strategies organization will soon become outdated and unable to compete in the market. Learning through incorporating changes gives them the necessary edge over their competitors. Knowledge workers are actually those workers in an organization who are sensitive to change. They constantly respond to the changes by gathering information and then arranging their work accordingly. With the accelerated pace of change in the environment, we should not hesitate in accepting the reality that all knowledge workers have significant place in the organization. The importance of their role to any organization that wants to survive in this dynamic era cannot be underestimated.

“The human sensors that are interacting continuously on the front lines with the external environment have a rich understanding of the complexity of the phenomena and the changes that are occurring therein. Such sensors can help the organization synchronize its programmed routines ('best practices', etc.) with the external reality of the business environment.”

Knowledge workers are indispensable for the organizations. They like to have complete autonomy in the work they perform. Because of the nature of their work it is very difficult to monitor and evaluate such workers. Too much stringency can be destructive to their creativeness and can have adverse affect on their performance. On the other hand too much leniency means giving them an absolutely freehand. Managers are faced with the dilemma of how to strike a balance between the two extremes. Proper management can best harness their potential and can further enhance their capabilities and get the most from these workers.

“Given the human aspect of knowledge management, the dynamic and potential tension between individual and organizational learning is an important consideration. What ideally is required is an approach that links the individual and the organization with learning process, systems and technology which will benefit both in a reciprocal partnership”

The nature of work has changed dramatically over the last one hundred years and especially over the last thirty, which has caused many time management practices that worked well for previous generations to become obsolete.

In the beginning of this century most the work in organizations was done by traditional workers. They had to repeat the same work over and over again to keep the organizations running. Their work was confined to desk jobs done in the early part of the century Traditional type of management was suitable for these conventional workers management. The management was well aware of how to work from such employees and how to manage them. Knowledge work presents different get management challenges than other types of work because the nature of the work itself is different. Knowledge workers make up a significant portion of the workforce in advanced economies.

*“Fast forward a hundred years and it is clear that our lives have changed. For many the nature of work itself has changed. We are now in the age of what is commonly called **knowledge work**.”*

“Experts estimate that the number of knowledge workers surpassed the number of manual workers in the 1950’s and now represent well over two thirds of the work force”

“To make knowledge-work productive will be the great management task of this century, just as to make manual work productive was the great management task of the last century”.

“Their expertise determines the success of countless organizations around the world, but still we have limited insight on the management of such workers.”

WHY SHOULD THE MANAGEMENT WORRY ABOUT THEM?

“Knowledge workers could perform much better if we only knew how to manage them, says Thomas Davenport. His suggestion: Don't treat them the all same, and measure them tactfully.”

Knowledge workers have an aversion to taking orders from anyone. They don't like to be told what to do. They enjoy more autonomy than other workers. They possess skills which other workers do not have; therefore they are hard to be replaced. Much of their work is invisible as it is of cognitive nature. It is hard to measure because it goes on inside their heads or outside the office.

“They're knowledge workers, and they are performing well below their potential because companies still don't know how to manage them, says Thomas Davenport, professor of information technology and management at Babson College, in Wellesley, Mass., and director of research for Babson's executive education program.

“Knowledge workers are going to be the primary force determining which economies are successful and which aren't,” he says. “They are the key source of growth in most organizations. New products and services, new approaches to marketing, new business models—all these come from knowledge workers. So if you want your economy to grow, your knowledge workers had better be doing a good job.”

Yet after studying more than 100 companies and 600 individual knowledge workers, Davenport has come to the conclusion that the old dictum of hiring smart people and leaving them alone isn't the best way to get the most out of knowledge workers. As he writes in his latest book, “Thinking for a Living: How to Get Better Performance and Results from Knowledge Workers” (Harvard Business School Press, July 2005), although Knowledge workers “can't be managed in the traditional sense of the word, you can intervene, but you can't do it in a heavy-handed, hierarchical way.”

Studies prove that knowledge workers make up 25-50% of the workforces of advanced economies. Their expertise and experience fuels the success of countless organizations around the world-and their value is reflected in their compensation. But how much do managers really “know” about the knowledge workers whether they are performing up to the mark and whether or not they have exhausted their potential?

Often a company's knowledge workers are dispersed across the organization, and increasingly across the globe. They are extremely mobile, their work is inherently emergent and unstructured, and much of what they do is invisible. After all, how can

you tell whether your employees are working when their job is to think? How can you judge their performance when you rarely see them in person?

Peter Drucker has argued often that improving knowledge worker productivity is the most important task of the century. Yet we have few measures or management interventions to make such improvement possible. Most organizations simply hire smart people, and leave them alone.

We all know the importance of knowledge worker and learning organization but the importance of their role has created a new dimension in management of such knowledge workers. Although we can not cent percent identify the pattern which should be followed by knowledge workers, without a system, the generation of ideas and application can be lost for ever.

The following interventions can act as tools for proper management of knowledge workers and for enhancing their performance.

1. Job Design (team work)
2. Increased Authority or Autonomy at Work Place
3. Loyalty Towards the Organization.
4. Training & Development
5. Motivation (competitive compensation/ reward packages and other incentives)
6. Communication Channels
7. Monitoring and Evaluation
8. Work Life Balance

1. Job design (team work)

To design the job of knowledge workers is not an easy task for the management. Jobs are designed for pre determined pattern of work but in the case of knowledge workers they lack any such predetermined pattern of activities. Their activities and roles are like chameleon. They have to mould their roles with the requisite of the task at a given point of time. The management has to come up with a technique to design their jobs without any pre set activities.

“Knowledge workers are also expected to work on multiple projects simultaneously. It is not uncommon to have several pending large projects with overlapping timelines and an assortment of smaller tasks that all need to get done.

It is just not practical to assume that you can simply pick one thing, work exclusively on it until completed, and then move on to the next thing. This is especially true for managers that need to supervise the work of their staff while still getting their own work done.”

Part of the challenge is that knowledge work can vary a great deal from one moment to the next. Some tasks like making a call or writing an email can be relatively simple and completed quickly.

Other tasks like writing a proposal, preparing a client presentation, writing a software module, or doing research can be large and complex multi-step projects that require days or even weeks to complete.

Even the same task of writing an email can vary from very small and simple to large and complex depending on the issues involved and the intended audience.

The challenge is to keep the large projects moving along while at the same time dealing effectively with all the small stuff that regularly shows up.

*Having to deal simultaneously with **big projects** and **small tasks** is a new challenge for knowledge workers.*

“Best practice calls for emphasis on relationships, collaboration, and professionalism, and for de- emphasis of formal performance measures. “

The cost structure that drives physical work toward linear, sequential work processes is not inherent in knowledge work. "Retooling" in intellectual domains is often (although not always) much less costly than it is in physical work, and there are fewer "scrap costs." Knowledge work is therefore less constrained than traditional physical work by the need to get it right the first time and can instead be more interactive and more oriented toward exploring, experiencing, trying, and trying again. In knowledge work, rapid experimentation can substitute for detailed planning.

Successful knowledge work processes often iterate frequently (e.g., daily). They are characterized by alternating periods of unstructured work by individuals and small groups and structured "pulling in the reins" by managers to integrate work. Such processes often look messy, even when healthy and productive. Team size needs to be controlled, because the complexity of the "reining in" process can become overwhelming if there are too many people involved. When the process is working well, each iteration introduces new ideas into work processes.

“One of the problems is we treat all knowledge workers alike. Obviously it's more convenient and efficient to impose the same solution on everybody. Certainly in IT, broadly speaking, we try to. It's troublesome if everyone wants different software and computing environments, so we create common environments. But people work in different ways.

And politically, we don't want to admit that some knowledge workers are better than others, and that some might deserve different office environments and technologies. We don't mind treating the C-suite differently—why not our most productive knowledge workers? These are the people determining the future of your company.

“Designing these knowledge environments for knowledge workers is expensive and hard to do. But if we're serious about making knowledge workers more productive, we're going to have to focus on particular jobs and sometimes even particular individuals.”

For knowledge workers jobs must be designed that reflect more of behavioral element rather than organizational element. Behavioral elements also known as the “core job dimensions” which brings in efficiency in a persons job as opposed to organizational element which aims at efficiency in a job. Their jobs should be based on the core job dimensions i.e., skill variety, autonomy, task identity, task significance and feedback. Jobs should have more of these elements and less of organizational elements in order to make the work of knowledge workers more interesting.

“The design of a job reflects organizational, environmental, and behavioral demands placed on it. Job design takes these elements into consideration and tries to create jobs that are more productive and satisfying. Organizational elements of job design are concerned with efficiency.—job designers draw heavily on behavioral research to provide a work environment that helps satisfy individuals.”

A number of core job dimensions can be used to characterize any job(1) Skill variety, (2) task identity,(3) task significance,(4) autonomy, and (5) feedback.

“---these dimensions affect the degree to which employees find their work meaningful, feel responsibility for the outcomes of their job, and understand the result of their work activities.”

2. INCREASED AUTONOMY AND AUTHORITY

Another challenge in the management of knowledge workers is that due to a non existent job description such as the work itself may not always be well defined they have freedom of how to do their work. Knowledge workers have autonomy and discretion over how to perform work tasks; they are frequently given a desired outcome or result and asked to decide for themselves how to make it happen. Autonomy is important to maintain creativity in their work but total autonomy means total freedom. No one in the organization understands their work so no one has the authority to question them regarding their job.

Part of the job is to figure out what work needs to be done and how to go about doing it. Because of this, there is often no clear-cut way to declare when something is really done.

When is the task of writing a marketing report or doing research for a project completed? How good, polished, or thorough does it need to be before it can be considered 'done'?

The real answer is that it depends on many factors: who is going to read it, why it's being prepared, how it is going to be used, etc. It takes judgment and experience to determine when you've reached the point of diminishing returns where additional work will not add enough value to justify the added cost and effort.

Of course, such creativity and inquiry-driven learning may be difficult to achieve within traditional command-and-control paradigm. As mentioned earlier, use of the information and control systems and compliance with pre-defined goals, objectives and best practices may not necessarily achieve organizational competence.

Knowledge workers have a lot of power, and they don't want things to be imposed on them. They don't like to be told what to do. This power of knowledge makes it difficult to bring knowledge workers under the control of management. They may put up with it for a while, but eventually they'll look for a job that gives them the autonomy they think they deserve.

Besides, managers can't easily enforce an order when work takes place in people's heads. You have to make it easy for knowledge workers to do what you want them to do.

Given the need for autonomy in learning and decision making, such knowledge workers would also need to be comfortable with self-control and self-learning. In other words, they would need to act in an intrapreneurial mode that involves a higher degree of responsibility and authority as well as capability and intelligence for handling both."

3. LOYALTY TOWARDS THE ORGANIZATION

Another area for management consideration in managing knowledge workers is how to earn their loyalty for the origination. Loyalty translates itself into commitment at work. Commitment is the key to success. The best way to gain their loyalties is to have full trust in these workers which will in turn boost their morale and result in better performance.

"You have to make sure that your workers are indeed committed to their work before relying on that commitment in collaboration."

“Good research managers understand this implicitly: that relationships based on professionalism and mutual respect work far better than scales of accountability and incentive schemes in most knowledge-work settings.”

4. MOTIVATION

Motivation and commitment goes hand in hand. If Knowledge workers are motivated only then they can give their best shot. In order to motivate knowledge workers they have to be given challenging tasks. They should be involved in the development of mission statement so that they feel a part of the organization.

“What motivates workers – especially knowledge workers – is what motivates volunteers. Volunteers, we know, have to get more satisfaction from their work than paid employees precisely because they do not get a pay check. They need, above all, challenge. They need to know the organization's mission and to believe in it. They need continuous training. They need to see results. Implicit in this is that employees have to be managed as associates, partners – and not in name only. The definition of a partnership is that all partners are equal.”

5. EXTENSIVE TRAINING AND DEVELOPMENT

"The productivity of the knowledge worker is still abysmally low. It has probably not improved in the past 100 or even 200 years – for the simple reason that nobody has worked at improving the productivity. All our work on productivity has been on the productivity of the manual worker...The way one maximizes their performance is by capitalizing on their strengths and their knowledge rather than trying to force them into molds."

“-- a good learning program for knowledge workers would combine classroom learning and learning at their workstations.”

What most organizations do is hire smart people and leave them alone. A lot of effort goes into recruiting knowledge workers and assessing how capable they might be before they are being hired. But once they're hired they are left alone and nothing is done in objective terms to improve their performance. Even if they are performing satisfactorily there is still room for more. Process improvement has mostly been for other workers: transactional workers, manufacturing workers, and people in call centers. All the serious approaches to improving work have largely escaped knowledge work.

“We let knowledge workers get away with saying there's no process to their work, that every day is different. We don't measure much of anything about knowledge work.”

People improve processes all the time; they just haven't done it with knowledge-work processes as much. It's an extrapolation of the same logic in other work, that processes can be improved. It is absolutely wrong to say that nothing can be done in case of improvement of process of knowledge workers

“Here is one number that indicates performance and productivity can be improved: IDC found that 1,000 knowledge workers can lose as much as \$6 million a year just searching for nonexistent data, or repeating work that has already been done. Is it possible every knowledge worker is working to his or her potential? It's possible, but unlikely. We can get a lot better at improving their performance.”

Huge amount of money and time is spent on bringing in new technology to their company. Most organizations have no training or education on how to use these tools effectively in their work. For example the institute in which I am currently employed has a digital library, which is store house of information and knowledge. But unfortunately, except for a few employees, hardly anyone has the know how to get to this information and utilize it to their benefit or the benefit of the Institute. There are several cases else where.

“Even when people are trained on knowledge-oriented applications, such as Excel, PowerPoint, CAD or CRM, the training focuses on how the software package works, not on how it fits into the context of the job. The vast majority of organizations that implemented CRM didn't really help their salespeople figure out how to use the system effectively to help them sell better. It's one of the reasons CRM has had the problems it has had. People were not comfortable using it with the customer around. And there weren't any good examples of how salespeople did their work, so a lot of CRM systems were not effective at all.”

6. MONITORING AND EVALUATION

Monitoring and evaluation is the biggest challenge for the management in case of knowledge workers. Basically these workers do not like to be constantly monitored by their supervisors during their work or at their work place. Similarly the work of knowledge workers is of novel and creative nature for which there are no set standards. Due to lack of benchmarks their performance cannot be measured through ordinary monitoring and evaluation machinery. Their work is highly cognitive that requires special system in order to prove whether they are positively contributing something to the organization or not. Their work is result oriented not process oriented.

“The difficulties in observing knowledge work are more profound. Not only can't a supervisor observe effort directly in knowledge work, sometimes the supervisor can't understand what the worker is doing and may not be qualified to judge results.

“Because knowledge work occurs in intellectual domains, it is also more difficult to see causality and to attribute results to particular worker actions. Results measures often don't faithfully capture the results you really care about.”

The productivity of knowledge work, in contrast, often has to do with how effort is allocated across multiple dimensions. By definition, knowledge work is more about how smart you work and less about how hard you work. Incentive schemes intended to extract more effort from knowledge workers often distort their effort allocations, forcing them to apply effort in the wrong places.”

“The vice president of marketing may have come up the sales route and know a great deal about selling. But he knows little about market research, pricing, packaging, service, sales forecasting. The marketing vice president therefore cannot possibly tell the experts in the marketing department what they should be doing. In that sense, they are associates, not subordinates. The same is true for the hospital administrator or the hospital's medical director with respect to the trained knowledge workers in the clinical laboratory or in physical therapy.”

7. COMMUNICATION CHANNELS

Knowledge work also requires more collaboration and communication with coworkers. The complexity and knowledge required to complete their tasks often makes it impossible for any one person to know or be able to accomplish everything single handedly that needs collaboration of teamwork.

While this collaboration is absolutely essential, it can also cause problems of its own if not managed properly since productive knowledge workers require large amounts of uninterrupted time to think and get into flow.

“---measuring performance is always difficult, and in knowledge work it is especially difficult. If you have no real chance of observing, understanding, or attributing the results of employee work, you become much more dependent on employees' willingness to openly communicate the meaning of their work. Fortunately, knowledge workers often have a commitment to the work itself that makes them inclined toward information sharing.”

Knowledge sharing is crucial because it helps organizations promote best practices and reduce redundant learning efforts or 'reinventing the wheel' (Hansen, 2002; McDermott and O'Dell, 2001).

In knowledge-intensive industries, firms cannot compete if their employees guard their insights as personal secrets (Teece, 1998). To succeed in a knowledge economy, organizations need to develop systematic processes to create and leverage

knowledge. However, the failure of firms in their effort to promote knowledge sharing has been documented in many cases because employees are reluctant to share their knowledge with others even when knowledge sharing is actively promoted (e.g., Davenport, De Long, and Beers, 1998). A number of reasons have been given for these failures, such as the influence of organizational culture (Davenport, De Long, and Beers, 1998) or personal concerns of power and self-interest (Jarvenpaa and Staples, 2001). However, these arguments have not been empirically verified, and a coherent account of the factors hindering knowledge sharing is still lacking.

In this age, virtually all types of work have some aspects of knowledge work in one form or another. Even work that previously may have discouraged autonomy, discretion, and creative thinking is becoming more knowledge oriented as companies realize that they need help from all their employees if they want to remain competitive.

“Knowledge-intensive firms need to share knowledge held by employees if they are to gain the most from their intellectual capital and compete effectively in the marketplace.”

8. WORK LIFE BALANCE

The separation between personal and work life is getting more and more blurred, the two have mingled to the extent that it is difficult if not impossible to draw a line. The idea that you can compartmentalize your time into work and personal life just isn't practical anymore.

The job of knowledge workers is such that they have to be very active and work for long hours. Work pressure has disturbed their work life balance. Knowledge workers have to pay a heavy price by sacrificing their personal and family time in line of their duty. Their job is of demanding nature – demanding more and more time for accomplishing their tasks. In this era of competition no body want to be second to best. For best there is a price to pay. That price is paid by these knowledge workers.

“Many of today dynamic organizations appear to be at the forefront of the trend towards workaholic cultures. Theses organizations are increasingly expecting people to work from 60 to 70 hours a week.”

“People are increasingly finding that work is squeezing out personal lives, and many are questioning this lifestyle. Balancing work life and personal life is likely to become one of the most important upcoming issues for HRM”.

“Each affects and influences the other, which is why more and more people are realizing that managing their work and personal life as a whole not only makes

sense, but is a better way to manage their time and increase their overall productivity.

One of the reasons why managing time at the tactical level has become more difficult in the last one hundred years is that the number of ways you can spend your time has increased dramatically, while the number of hours in a day remains the same.

“Another aspect of knowledge work that traditional time management practices have not dealt with effectively is the rapid inflow of new work, ideas, and information that knowledge workers have to deal with.

There are a number of ways that others can communicate with you: email, telephone, fax, drop in visitors, meetings, memos, and regular mail. Each represents an opportunity for additional work to get added to your plate.

A question from a co-worker, an email from your boss, an action item from a meeting, a memo from marketing, not to mention your own ideas and insights that come up while doing your work.

All these different sources of input can easily overwhelm you if they are not managed properly. Since none of these communications carry an explicit ‘there is some work in here for you’ label, each has to be filtered and reviewed to determine if there is work involved and what that work actually is.

For many people, the image of drowning in a sea of information, emails and paperwork is not too far from reality.”

CONCLUSION

After thorough analysis of the definition of knowledge workers, their role in the organizations, and issues in their management we can now conclude that no matter what the nature of their job is and what level of autonomy and authority they hold it is utmost essential that the management should find ways and means how to get the maximum out of them. Their management is not all that simple like routine workers of the organization. They have to be treated more tactfully and in a way which is slightly different from the traditional orthodox management. They should be considered as partners or supplement to the management and not as subordinates.

Knowledge workers could perform much better if we only knew how to manage them, says Thomas Davenport. His suggestion: Don't treat them all same the and measure them tactfully.

It is the job of HRM to understand their needs and then act accordingly. A slight mistake in handling them could be very costly to the organization. Knowledge

workers no doubt are an asset to any organization but this asset can further be enhanced through proper management. Knowledge workers can bring a positive change to the assets of the organization. All they need is proper handling.

“HRM and HRD professionals therefore need to take account of the dynamics of the employment relationship or psychological contract in considering enabling intervention and strategy to ensure knowledge creation, transfer and retention.”

“We have a choice here. We can get more productive with our knowledge work or we can lose our jobs. There are other parts of the world where people are very serious about being more productive, and are doing it for a lot less money than we charge. People should realize that unless they do knowledge work better, they're not going to be doing it at all.”

HRD can properly train these workers. Knowledge workers possess knowledge but this knowledge has to transfer within the organization at three different levels, as mentioned above. Training knowledge workers on how to utilize knowledge to get optimal results and then transferring knowledge through training and guidance from these who are knowledgeable in the brains of those who don't can be best achieved through HRM and HRD interventions.

The knowledge workers should have an understanding of the overall business of their organization and how their work contexts fit within it. Such understanding is necessary for their active involvement in the organizational unlearning and relearning processes. They must be aware of what sort of change will affect their organization and how they will bring about that change. Only if they understand the implications of changes in their work contexts for the business enterprise, they can be influential in harmonizing the organizational 'best practices' with the external reality of the business environment.

The main objective is to achieve synergy of the data and information that has been gathered and of the creativity of these knowledge workers. Therefore knowledge workers should apply their knowledge to the organization processes in such a way so as to add overall value to the process and technologies of the organization that will facilitate the organization achieve its overall objective. More importantly, they should have the capability of judging if the organization's 'best practices' are aligned with the dynamics of the business environment. Such knowledge workers are the significant elements of the double loop learning and unlearning cycle that should be designed within the organizational business processes.

Thus the interventions given in the paper will help managers better manage their knowledge workers and enhance their productivity but it is also the duty of the knowledge workers to manage their work properly.

REFERENCES

Knowledge Management, Knowledge Organizations & Knowledge Workers: A View from the Front Lines (Published in Maeil Business Newspaper of February 19, 1998)

John P. Wilson and Alan Cattell, Knowledge Management, page 115

Time Management for Knowledge Workers: Tactical Time Management
Peter Drucker, 1969, p.290) Management of Knowledge Workers Hans K. Hvide
and Eirik G. Kristiansen†June 13, 2006

Roberts (2004), or Need (1999) for evidence on the importance of knowledge workers, January 2006 survey of the Economist.

Allan E. Alter August 5, 2005 Knowledge Workers Need Better Management

Knowledge Workers Need Better Management by Allan E. Alter, 2005

TOM DAVENPORT on *Maximizing Knowledge Worker Productivity; the Next Generation of Management* November 8, 2006 Linkage, Inc_ - Distance Learning - Tony Schwartz.htm LPCUBE Aware - Personal Knowledge Management (PKM).htm

KW\What is a knowledge worker - Knowledge Management - NeLH Specialist Library.htm

Interview of *Dr. Yogesh Malhotra*, Founding Chairman and CKO of *BRINT Institute*, by the Knowledge Management editor of the largest Korean business newspaper Maeil Business Newspaper Knowledge Workers Need Better Management.htm

William B. Werther, JR. Keith Davis, Human Resource and Personnel Management, 5th Edition, page 140-41.

Pamela S. Lewis, Stephen H. Goodman, Patricia M. Fandt, 4th Edition, page 248, Management Challenges for Tomorrow's Leaders,

Knowledge Management, Knowledge Organizations & Knowledge Workers: A View from the Front Lines (Published in Maeil Business Newspaper of February 19, 1998) Knowledge

Knowledge Workers Need Better Management.htm Interview of *Dr. Yogesh Malhotra*, Founding Chairman and CKO of *BRINT Institute*, by the Knowledge Management editor of the largest Korean business newspaper *Maeil Business Newspaper*

ibid.

KW\What is a knowledge worker - Knowledge Management - NeLH Specialist Library.htm

Drucker, Peter. **Management's new paradigms**, Forbes, 1998, 5 October

Interview of *Dr. Yogesh Malhotra*, Founding Chairman and CKO of *BRINT Institute*, by the Knowledge Management editor of the largest Korean business Knowledge Workers Need Better Management.htm

Interview of *Dr. Yogesh Malhotra*, Founding Chairman and CKO of *BRINT Institute*, by the Knowledge Management editor of the largest Korean business newspaper *Maeil Business Newspaper* Knowledge Workers Need Better Management.htm

ibid.

ibid.

Knowledge Management, John P. Wilson and Alan Cattell, page 115

Science Careers_org Managing Knowledge Workers Austin 21 July 2006.htm

Interview of *Dr. Yogesh Malhotra*, Founding Chairman and CKO of *BRINT Institute*, by the Knowledge Management editor of the largest Korean business newspaper *Maeil Business Newspaper* Knowledge Workers Need Better Management.htm

MKW\from blackwell.htm Management and Organizational Review

Juani Swart and Nicholas Kinnie, University of Bath ,Sharing knowledge in knowledge-intensive firms

Human Resource Management Journal, Vol 13 No 2, 2003, pages 60-75

David A. DeCenzo, Stephen P. Robins, Human Resource Management, 7th Edition, page 12 mgt of knowledge worker\management of knowledge worker 3.htm,Time Management for Knowledge Workers: Tactical Time Management

Knowledge Management, John P Wilson and Allan Cattell, page 127

Interview of *Dr. Yogesh Malhotra*, Founding Chairman and CKO of *BRINT Institute*, by the Knowledge Management editor of the largest Korean business newspaper *Maeil Business Newspaper* Knowledge Workers Need Better Management.htm