Sunil Kumar Rana (srana@iitk.ac.in)
Sr. Library Information Asstt.
P.K.Kelkar Library
Indian Institute of Technology Kanpur
Kanpur(U.P.)-208016

India

Mob- 91-09450135247

Knowledge Management: A Paradigm Shift

Abstract

Now on days, KM is emerging as a hot topic among information fraternity. Traditional concept of the knowledge workers and information professionals are changing from time to time. Due to exploration of ICTs and rapid developments of multidiscipline, enormous demand for information, unexpected geometrical growth of information explosions, wide demand of qualified human recourses and explorations of tacit knowledge , all these way the pave to the concept of Knowledge management. In this paper author explores the emerging need of KM, recent developments and practical applications.

Introduction: Productivity and innovation are the factors that generate the value. Both of them are applications of knowledge at work. Knowledge means a supreme good for use, knowledge is the means that leads to success of economic result. (Drucker, 1996).

As knowledge and information lead to power, performance of organizations in fact it's a use of communication towers. Institutions and organizations must need and required to generate the environment to create competitive advantage. But knowledge sharing allows organizations and institutions to access the same basic knowledge, which produces competition. This is in turn changes the way that organizations must operate, and the mechanisms for governing transactions in the new economy (Carayannis, 2000).

The KM is long regarded for information professionals. Librarians and information professionals are formally trained in identifying.

Defining Knowledge: What is knowledge for one person may be information for the other.

Therefore, valuation of knowledge is risky, because productivity gain form 'untired' knowledge cannot be a liability if it does not provide the expected results. (see Nonkana and Takeuchi, 1995; Rrahalad and hamel, 1990.) Despite the difficulties in defining knowledge is an organized combination of ideas, rules, and information find its life and become knowledge.

Knowledge management is thus a process of facilitating knowledge related activities, such as creation, capture, transformation, and use of knowledge (Bhatt, 2000.)

Knowledge management: As knowledge increasingly becomes the key strategic resources of the future, our need to develop a understanding of knowledge processes for the creation, transfer and deployment of this unique is becoming critical. (Shariq, 1997.)

Librarians have developed and applied many KM principles in the provision of academic library services. However, librarians have done little to use organizational information to create knowledge that can be used to create knowledge and to improve the functionality in higher education processes. (Hirshon, 1999.)

KM is one way to develop and apply the organgational knowledge needed to improve library operations and, ultimately, library effectiveness. (Townley, 2001.)

The Core Library of KM: Hesing has outlined the following four key process involved in Km.

1. Create new knowledge: Measures and instruments that promote the creation of knowledge are, for eg. The acquisition of external knowledge (mergers, consultants etc).
2. Store Knowledge: The stored knowledge in manuals, databases, case studies, reports eyc.
3. Distribute Knowledge: Provision of right knowledge to the right person at the right time is the main aim of the core task .
4. Apply Knowledge: Appropriate applications of knowledge for the benefit of the organization is the fundamental aim of the KM.

Why Knowledge products: Demands

As knowledge is considered one of the major recourse for development, most of companies and institutions are thinking to manage their knowledge for easy access, preservation of human skills and to compete with their counterpart. so we can see a tremendous demand for knowledge products and process. Every country has to be revised their policies and programs with a vision of knowledge economy.

Due to the wide demand of KM , the role of knowledge workers are identified. They have work technically and logically as a team for the enrichment of the company . so almost all major companies and organizations has unanimously identified the emerging need of the KM workers. They have to work and think in the increasing complexity of the nature of the organizations.

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Increasing complexity

The increase in complexity resulted in a growing need for specialization. Yet what many had predicted had not actually happened: we haven't yet seen the emergence of the individual; instead we are seeing that individual professionalism is becoming more team-directed than ever before. It is integrated into the total workforce and fully focused at the target in hand.

And this trend will only increase. Simply because the knowledge sectors is where the jobs are. US figures show that between 1980 and 2005 over 85% of all new jobs will be in knowledge services, creating 29 millions jobs, and by 2005, the sector will employ close to 48% of the total workforce. As a result the workforce will consist largely of people in knowledge services-

in sectors such as finance, insurance, real estate, and business services and community services. These are the growth sectors.

This is where the majority of employment opportunities are will continue to emerge.

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The water, this rising tide of data can be viewed as an abundant, vital and necessary resource. With enough preparation, we should be able to tap into that reservoir -- and ride the wave -- by utilizing new ways to channel raw data into meaningful information. That information, in turn, can then become the knowledge that leads to wisdom. Les Alberthal

Before attempting to address the question of knowledge management, it's probably appropriate to develop some perspective regarding this stuff called knowledge, which there seems to be such a desire to manage, really is. Consider this observation made by Neil Fleming

as a basis for thought relating to the following diagram.

- A collection of data is not information.
- A collection of information is not knowledge.
- A collection of knowledge is not wisdom.
- A collection of wisdom is not truth.

We begin with data, which is just a meaningless point in space and time, without reference to either space or time. It is like an event out of context, a letter out of context, a word out of context. The key concept here being "out of

context." And, since it is out of context, it is without a meaningful relation to anything else. When we encounter a piece of data, if it gets our attention at all, our first action is usually to attempt to find a way to attribute meaning to it. We do this by associating it with other things. If I see the number 5, I can immediately associate it with cardinal numbers and relate it to being greater than 4 and less than 6, whether this was implied by this particular instance or not. If I see a single word, such as "time," there is a tendency to immediately form associations with previous contexts within which I have found "time" to be meaningful. This might be, "being on time," "a stitch in time saves nine," "time never stops," etc. The implication here is that when there is no context, there is little or no meaning. So, we create context but, more often than not, that context is somewhat akin to conjecture, yet it fabricates meaning.

That a collection of data is not information, as Neil indicated, implies that a collection of data for which there is no relation between the pieces of data is not information. The pieces of data may represent information, yet whether or not it is information depends on the understanding of the one perceiving the data. I would also tend to say that it depends on the knowledge of the interpreter, but I'm probably getting ahead of myself, since I haven't defined knowledge. What I will say at this point is that the extent of my understanding of the collection of data is dependent on the associations I am able to discern within the collection. And, the associations I am able to discern are dependent on all the associations I have ever been able to realize in the past. Information is quite simply an understanding of the relationships between pieces of data, or between pieces of data and other information.

While information entails an understanding of the relations between data, it generally does not provide a foundation for why the data is what it is, nor an indication as to how the data is likely to change over time. Information has a tendency to be relatively static in time and linear in nature. Information is a relationship between data and, quite simply, is what it is, with great dependence on context for its meaning and with little implication for the future.

Beyond relation there is pattern where pattern is more than simply a relation of relations. Pattern embodies both a consistency and completeness of relations which, to an extent, creates its own context. Pattern also serves as an Archetype with both an implied repeatability and predictability.

When a pattern relation exists amidst the data and information, the pattern has the *potential* to represent knowledge. It only becomes knowledge, however, when one is able to realize and understand the patterns and their implications. The patterns representing knowledge have a tendency to be more self-contextualizing. That is, the pattern tends, to a great extent, to create its own context rather than being context dependent to the same extent that information is. A pattern which represents knowledge also provides, when the

pattern is understood, a high level of reliability or predictability as to how the pattern will evolve over time, for patterns are seldom static. Patterns which represent knowledge have a completeness to them that information simply does not contain.

Wisdom arises when one understands the foundational principles responsible for the patterns representing knowledge being what they are. And wisdom, even more so than knowledge, tends to create its own context. I have a preference for referring to these foundational principles as eternal truths, yet I find people have a tendency to be somewhat uncomfortable with this labeling. These foundational principles are universal and completely context independent. Of course, this last statement is sort of a redundant word game, for if the principle was context dependent, then it couldn't be universally true now could it?

So, in summary the following associations can reasonably be made:

- Information relates to description, definition, or perspective (what, who, when, where).
- Knowledge comprises strategy, practice, method, or approach (how).
- Wisdom embodies principle, insight, moral, or archetype (why).

Now that I have categories I can get hold of, maybe I can figure out what can be managed.

Wisdom: Getting wisdom out of this is a bit tricky, and is, in fact, founded in systems principles. The principle is that any action which produces a result which encourages more of the same action produces an emergent characteristic called growth. And, nothing grows forever for sooner or later growth runs into limits.

Concept understanding:

We learn by connecting new information to patterns that we already understand. In doing so, we extend the patterns. So, in my effort to make sense of this continuum, I searched for something to connect it to that already made sense. And, I related it to Csikszentmihalyi's interpretation of complexity.

Csikszentmihalyi’s provides a definition of complexity based on the degree to which something is simultaneously differentiated and integrated. His point is that complexity evolves along a corridor and he provides some very

interesting examples as to why complexity evolves. While high levels of differentiation without integration promote the complicated, that which is highly integrated, without differentiation, produces mundane. And, it should be rather obvious from personal experience that we tend to avoid the complicated and are uninterested in the mundane. The complexity that exists between these two alternatives is the path we generally find most attractive.

When I first became interested in knowledge as a concept, and then knowledge management, it was because of the connections I made between my system studies and the data, information, knowledge, and wisdom descriptions already stated. Saying that I became interested is a bit of an understatement as I'm generally either not interested or obsessed, and seldom anywhere in between. Then, after a couple months I managed to catch myself, with the help of Mike Davidson as to the indirection I was pursuing.

I managed to survive the Formula Fifties, the Sensitive Sixties, the Strategic Seventies, and the Excellent Eighties to exist in the Nanosecond Nineties, and for a time I thought I was headed for the Learning Organizational Oh's of the next decade. The misdirection I was caught up in was a focus on Knowledge Management not as a means, but as an end in itself. Yes, knowledge management is important, and I'll address reasons why shortly. But knowledge management should simply be one of many cooperating means to an end, not the end in itself, unless your job turns out to be corporate knowledge management director or chief knowledge officer. I'm quite sure it will come to this, for in some ways we are predictably consistent.

I associate the cause of my indirection with the many companies I have been associated with in the past. These companies had pursued TQM or reengineering, not in support of what they were trying to accomplish, but as ends in themselves because they simply didn't know what they were really trying to accomplish. And, since they didn't know what they were really trying to accomplish, the misdirection was actually a relief, and pursued with a passion&SHY;&SHY;it just didn't get them anywhere in particular.

According to Mike Davidson and I agree with him, what's really important is:

- Mission: What are we trying to accomplish?
- Competition: How do we gain a competitive edge?
- Performance: How do we deliver the results?
- Change: How do we cope with change?

As such, knowledge management, and everything else for that matter, is important only to the extent that it enhances an organization's ability and capacity to deal with, and develop in, these four dimensions.

The Value of Knowledge Management

In an organizational context, data represents facts or values of results, and relations between data and other relations have the capacity to represent information. Patterns of relations of data and information and other patterns have the capacity to represent knowledge. For the representation to be of any utility it must be understood, and when understood the representation is information or knowledge to the one that understands. Yet, what is the real value of information and knowledge, and what does it mean to manage it?

Without associations we have little chance of understanding anything. We understand things based on the associations we are able to discern. If someone says that sales started at $100,000 per quarter and have been rising 20% per quarter for the last four quarters, I am somewhat confident that sales are now about $207,000 per quarter. I am confident because I know what "rising 20% per quarter" means and I can do the math.

Yet, if someone asks what sales are apt to be next quarter, I would have to say, "It depends!" I would have to say this because although I have data and information, I have no knowledge. This is a trap that many fall into, because they don't understand that data doesn't predict trends of data. What predicts trends of data is the activity that is responsible for the data. To be able to estimate the sales for next quarter, I would need information about the competition, market size, extent of market saturation, current backlog, customer satisfaction levels associated with current product delivery, current production capacity, the extent of capacity utilization, and a whole host of other things. When I was able to amass sufficient data and information to form a complete pattern that I understood, I would have knowledge, and would then be somewhat comfortable estimating the sales for next quarter. Anything less would be just fantasy!

In this example what needs to be managed to create value is the data that defines past results, the data and information associated with the organization, it's market, it's customers, and it's competition, and the patterns which relate all these items to enable a reliable level of predictability of the future.What I would refer to as knowledge management would be the capture, retention, and reuse of the foundation for imparting an understanding of how all these pieces fit together and how to convey them meaningfully to some other person.

Conclusion

In short KM is directly related with organization success to deal today's situations and create effective future by using managed knowledge. Some organizations are using their own tools and policies for managing the knowledge. They have developed their own software's for this purpose. We can use some software's which are available openly. We can develop a successful KM system in any organizations by designed software, skilled human resources, ongoing training program, creating awareness about value of knowledge and changing policies and attitude of the organization to implement the system in the organization.

References

Douglas, "The Hitchhiker's guide to Galaxy," harmony Books, 1979

Albrecht, K., "The Northbound Train," Amacom, 1994

Alberthal, Les. Remarks to the Financial Executives Institute, October 23, 1995, Dallas, TX

Bateson, Gregory. Mind and Nature: A Necessary Unity, Bantam, 1988

Csikszentmihalyi, Miahly. The Evolving-Self: A Psychology for the Third Millennium, Harperperennial Library, 1994.

- Davidson, Mike. The Transformation of Management, Butterworth-Heinemann, 1996.

- Fleming, Neil. Coping with a Revolution: Will the Internet Change Learning?, Lincoln University, Canterbury, New Zealand

Senge, Peter. The Fifth Discipline: The Art & Practice of the Learning Organization, Doubleday-Currency, 1990.