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PG DEPARTMENT OF COMMERCE

SUBJECT NAME: KNOWLEDGE MANAGEMENT

SUBJECT CODE: KDA3B

SEMESTER: III

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Knowledge Management

Objective: To provide knowledge on understanding managing human resources in organization and to provide an exposure on the knowledge management tools.

UNIT I Knowledge Economy – Technology and Knowledge Management – Knowledge Management Matrix – Knowledge Management Strategy – Prioritizing knowledge strategies – knowledge as a strategic asset

UNIT Knowledge Attributes – Fundamentals of knowledge formation – Tacit and Explicit knowledge – Knowledge sourcing, abstraction, conversion and diffusion

UNIT III Knowledge Management and organizational learning, architecture – important considerations – collection and codification of knowledge – Repositories, structure and life cycle –

Knowledge Management infrastructure – Knowledge Management applications – Collaborative platforms

UNIT IV Developing and sustaining knowledge culture – Knowledge culture enablers – implementing knowledge culture enhancement programs – Communities of practice – Developing organizational memory

UNIT V Knowledge Management tools, techniques – Knowledge Management and measurements – Knowledge audit – Knowledge careers – Practical implementation of Knowledge management systems – Case studies

Book Reference

1. Joseph M. Firestone and Mark W. McElroy, Butterworth – Hienemann, Key issues in the New Knowledge Management, KMCI Press

2. Daryl Morey & others Knowledge Management – Classic and contemporary works (Edited) Universities Press India Limited

3. Shelda Debowski, Knowledge Management, , John Wiley & Sons

4. Sudhir Warier, Knowledge Management, Vikas Publishing House Private Limited

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UNIT I

KNOWLEDGE MANAGEMENT IN THEORY AND PRACTICE

INTROD1UCTION TO KNOWLEDGE MANAGEMENT

This chapter provides an introduction to the study of knowledge management (KM). A brief history of knowledge management concepts is outlined, noting that much of KM existed before the actual term came into popular use.

The lack of consensus over what constitutes a good definition of KM is addressed, and the concept analysis technique is described as a means of clarifying the conceptual confusion that persists over precisely what KM is. The multidisciplinary roots of KM are enumerated, together with their contributions to the discipline. The two major forms of knowledge, tacit and explicit, are compared and contrasted. The importance of KM today for individuals, for communities of practice, and for organizations are described, together with the emerging KM roles and responsibilities needed to ensure successful KM implementations.

LEARNING OBJECTIVES

1. Use a framework and a clear language for knowledge management concepts.

2. Define key knowledge management concepts such as intellectual capital, organizational learning and memory, knowledge taxonomy, and communities of practice using concept analysis.

3. Provide an overview of the history of knowledge management and identify key milestones.

4. Describe the key roles and responsibilities required for knowledge management applications.

INTRODUCTION

The ability to manage knowledge is becoming increasingly more crucial in today's knowledge economy. The creation and diffusion of knowledge have become ever more important factors in competitiveness. More and more, knowledge is being regarded as a valuable commodity that is embedded in products (especially high-technology products) and in the tacit knowledge of highly mobile employees. Although knowledge is increasingly being viewed as a commodity or an intellectual asset, it possesses some paradoxical characteristics that are radically different from those of other valuable commodities.

These knowledge characteristics include the following:

_ Use of knowledge does not consume it.

_ Transferrable of knowledge does not result in losing it.

_ Knowledge is abundant, but the ability to use it is scarce.

_ Much of an organization's valuable knowledge walks out the door at theend of the day.

The advent of the Internet and the World Wide Web has made unlimited sources of knowledge available to us all. Pundits are heralding the dawn of the Knowledge Age supplanting the Industrial Era. Forty years ago, nearly half of all workers in industrialized countries were making or helping to make *things*; today that proportion is down to 20% (Drucker, 1994; Bart, 2000). Laborintensive manufacturing with a large pool of relatively cheap, relatively homogeneous labor and hierarchical management has given way to knowledge-based organizations. There are fewer people doing more work. Organizational hierarchies are being put aside as knowledge work calls for more collaboration.

The only sustainable advance a firm has comes from what it collectively knows, how efficiently it uses what it knows, and how quickly it acquires and uses new knowledge (Davenport and Prusak, 1998). An organization in the Knowledge Age is one that learns, remembers, and acts based on the best available information, knowledge, and know-how.

All of these developments have created a strong need for a deliberate and systematic approach to cultivating and sharing a company's knowledge base— one populated with valid and valuable lessons learned and best practices. In other words, in order to be successful in today's challenging organizational environment, companies need to learn from their past errors and not reinvent the wheel again and again. Organizational knowledge is not intended to replace individual knowledge but to complement it by making it stronger, more coherent, and more

broadly applicative. Knowledge management represents a deliberate and systematic approach to ensure the full utilization of the organization's knowledge base, coupled with the potential of individual skills, competencies, thoughts, innovations, and ideas to create a more efficient and effective organization.

WHAT IS KNOWLEDGE MANAGEMENT?

An informal survey conducted by the author identified over 100 published definitions of knowledge management, and of these, at least 72 could be considered very good! Clearly, KM is a multidisciplinary field of study that covers a lot of ground. This finding should not be surprising, for applying knowledge to work is integral to most business activities. However, the field of KM does suffer from the "Three Blind Men and an Elephant" syndrome. In fact, there are likely more than three distinct perspectives on KM, and each leads to a different extrapolation and a different definition.

From the *business perspective*:

Knowledge management is a business activity with two primary aspects:

Reading the knowledge component of business activities as an explicit concern of business reflected in strategy, policy, and practice at all levels of the organization; and, making a direct connection between an organization's intellectual assets—both explicit (recorded) and tacit (personal know-how)—and positive business results. (Barclay and Murray, 1997)

Learning objectives

To understand the design and the clear concepts of knowledge management

To understand the history and evolution of knowledge management

To have a clear understanding about the knowledge, intelligence, experience, common sense and its importance

To entail basic knowledge of knowledge management

INTRODUCTION

What is knowledge?

Knowledge can be gained and accumulated as "information combined with experience, context, interpretation, reflection and is highly contextual".

It is a high-value form of information that is ready for application to decision and actions within organizations.

Knowledge is increasingly being viewed as a commodity or an intellectual asset. It possesses some contradictory characteristics that are radically different from those of other valuable commodities. In this rapid changing business environment the ability to manage knowledge is becoming more crucial in today's knowledge economy.

The power of knowledge is increasingly documented as the new strategic tool in the growing organizations. The common pupil trends to hold knowledge towards their organizations knowledge as an asset to their service.

Today, knowledge is considered as a great source to an organization. The creation and diffusion of knowledge have become ever more important factors in competitiveness.

Types of Knowledge

"We know more than we can tell Polanyi."

The term knowledge means skill or information acquired either through education or experience. The knowledge can be broadly classified into two types

1. Tacit knowledge
2. Explicit knowledge

Tacit Knowledge

The word tacit means understood and implied without being stated.

The tacit knowledge is unique and it can't explain clearly.

That is the knowledge which the people possess is difficult to express.

The cognitive skills of an employee are a classic example of tacit knowledge.

The tacit knowledge is personal and it varies depending upon the education, attitude and perception of the individual.

This is impossible to articulate because sometimes the tacit knowledge may be even sub conscious.

This tacit knowledge is also subjective in character.

This knowledge is exhibited by the individual automatically. They utilize this knowledge without even realizing it.

Explicit Knowledge

The word explicit means stated clearly and in detail without any room for confusion. The explicit knowledge is easy to articulate and they are not subjective. This is also not unique and it will not differ upon individuals. It is impersonal. The explicit knowledge is easy to share with others.

In existing situation the organizations are fundamentally dissimilar when been evaluated to the organization that survived in past decades. In the mid 1990's the researchers and practitioners acknowledged the knowledge based industries were mounting in an elevated profit.

The speedy growth of information technology produced a prospect for forming and propagates new forms of knowledge from corner to corner of the organization. Currently, knowledge has become a significant foundation of competitive advantage, knowledge has been recognized as one of the most important assets and knowledge management in any organization is to be imperative to the organization's success.

What is Knowledge Management?

Knowledge management is that the firms manage know-how their employees have about its products, services, organizational systems and intellectual property.

Specifically, knowledge management embodies the strategies and processes that a firm employs to identify, capture and leverage the knowledge contained within its corporate memory.

Knowledge Management is appropriate towards the basic activity of planning and implementing our tasks in a systematic and efficient manner.

Knowledge management is well documented that organizations with efficient communication linkages have higher "information flow, knowledge sharing, cooperation, problem-solving, creating, efficiency and productivity.

Companies built on such well develop networks to, "produce measurable business results, such as faster learning, quicker response to client needs, better problem-solving, less rework and duplication of effort, new ideas and more innovation. They enjoy higher sales, more profits, and superior market value".

What is a Knowledge Management Principle?

What do we mean by KM Principles? Well a dictionary definition of a principle is a 'fundamental truth or law as a basis of reasoning or action'.

Furthermore, principles have, at least, four distinct characteristics:

They are timeless. They will be just as relevant in 50 years' time as they are now.

They are changeless. Whereas knowledge will change over time, principles do not change ever.

They are universal. That is to say, they can be applied anywhere.

They are scale able. That is, the same principles can apply to individuals, teams, organizations, inter-organizations, and even globally.

So one can say that principles, are 'the heart of the matter', the fundamental source. In the context of knowledge management, over many years, our KM consultants are continually striving to uncover these principles and apply them, at the personal, team, organization, inter organization and global levels.

We are dedicated to principle centred knowledge leadership.

Our mission is to turn these KM principles into daily knowledge working reality. But how can you do that?

The answer is to embed them in practical KM strategies, processes, methods, systems, tools, technologies and techniques. This will bring about a natural knowledge based, and knowledge driven culture and capability across the organization.

Knowledge management principles need to be embedded in the organization and embodied in the people.

Are you, your team, your organization, your professional community, are knowledge principle driven?

But, to get started, providing you with a simple list of principles is not that effective.

Although the principles may be profound, they need to be applied in a meaningful, balanced and holistic way.

This is why we need a holistic KM Framework to act as a roadmap for the implementation of KM principles.

The KM framework, we use in all our KM consulting engagements. There are two levels.

The KM infrastructure to be built around the knowledge assets, and the knowledge networking dimensions.

For each of these elements in the KM Framework, we list below the corresponding KM principles.

Over time, we expect these KM principles to be further developed and refined, so it is a good idea to come back to this section from time to time.

History of Knowledge Management

As great attention has received in this field in recent years; however, the root of this area can be traced back many years. In fact, "the concept of knowledge management is nothing new.

Corporation have always has some process to synthesize their experience and integrate it with knowledge acquired from outside sources like inventions, purchased patents.

In modern expansion, the change in "technology speciation", explains how advances in technological development often occur in rapid "bursts of evolutionary activity" after a small improvement in a technology opens the door to a wider range of application. Technology speciation can also be used to analyze the development of the knowledge management field.

"Recent developments in information technology have an important role for the sudden emergence of knowledge management. Information technology has provided new tools to better perform the activity of building knowledge capital". Specifically, the knowledge management field witnessed substantial "evolution" after the introduction of Lotus Notes, which was one of the earliest integrated email, Database and document management applications. This software for the first time allowed users to access, share information and communicate with employees across a global organization.

Netscape's browser development and deployment of corporate intranets, which have had a substantial role for the further development of firms' knowledge management and sharing efforts, like recently, "two important areas in particular have contributed to the birth of modern knowledge management systems: communication (or network technologies) and relational database. These advanced communication technologies, which enhanced collaboration between project teams. Relational databases, which allow data from different sources to be linked together, have allowed firms to "link" data and knowledge from one area of the firm to another.

These knowledge "links" allow the firm to construct knowledge "bridges" which contribute to the firm's ability to use existing knowledge to generate new learning. Other notable technological advances which have played a substantial role in the development of knowledge management include advances in file storage, search and retrieval technologies.

Specifically, in the post-war era, the U.S. economy has undergone a dramatic structural shift from a manufacturing-based economy to that of a service-based economy, as the service sector now comprises 80% of U.S. employment and 63% of U.S. GDP. Since people are the primary asset in a service organization, firms have begun to recognize that retaining their employees'

knowledge will be increasingly important as firms grapple with how best to institutionalize the knowledge of their employees given the current high levels of employee turnover. The Bureau of labor Statistics estimates that employees change jobs so frequently that 54% of all employees have been with their current employer for less than four years.

The historical overview of the knowledge management provides the importance of information technology to the field, it is important to remember that knowledge management is a business process. Technology is the backbone of knowledge management, but it is only one such important component of an integrated knowledge management system.

EVOLUTION OF MANAGEMENT

Period Author Brief Description

1938 H.G.WELLS Coined the word

'World Brain' which depicts an intellectual organization the sum total of collective knowledge

Coined the word 'World Brain' which depicts an intellectual organization the sum total of collective knowledge

1960 PETER DRUCKER Coined the term 'knowledge worker'

1986 Dr.K.WIIG Coined KM concept at UN

1989 McGRAW&

HARRISSONBRIGGS

Described 'knowledge engineering' as involving information gathering, domain familiarization, analysis & design efforts and accumulated knowledge must be translated into code, tested and refined

1990 SENGE

Focused on the 'learning organisation' as one tha can learn from past experiences stored in corporate memory systems

1991-95 NONOKA & TAKEUCHI

Studied how knowledge is produced, used, and diffused within organizations and how much knowledge contributed to the diffusion of innovation

1994 BROWN Described what is 'Community of Practices'

1996 STEWART Introduced the concept called 'Intellectual Capital'

1997 KALPAN & NORTON Concept of Balanced Scorecard

2000-03 ACADEMIA KM Courses in Universities with KM tex

Definitions of Knowledge Management

i) “The physical toil of manufacturing is being replaced by a world where we work more with our brains than our hands” – Sewel

ii) Knowledge management refers to identifying and leveraging the collective knowledge in an organization to help the organization to compete with their competitors.

iii) “Knowledge management (KM) is an effort to increase useful knowledge within the organization. Ways to do this include encouraging communication, offering opportunities to learn, and promoting the sharing of appropriate knowledge artifacts” - McInerney, C.

Nature of Knowledge Management Knowledge management draws upon a vast number of diverse fields such as:

Organizational Science. Cognitive science, Linguistics and computational linguistics.

Information technologies such as knowledge- based systems, document and information management.

Electronic performance support systems and database technologies. Information and library science.

Technical writing and journalism. Anthropology and sociology.

Education and training.

Storytelling and communication studies.

Collaborative technologies such as computer supported

Collaborative work and groupware, as well as intranets, extranets, portals, and other web technologies.

This list is by no means exhaustive, but it serves to show the extremely varied roots that gave life to KM and continues to be its basis today. Figure illustrates some of the diverse disciplines that have contributed to KM.

The multidisciplinary nature of KM represents a double- edged sword. On the one hand, it is an advantage because almost anyone can find a familiar foundation on which to base their understanding and even practice of KM. Someone with a background in journalism, for example, can quickly adapt his or her skill set to the capture of knowledge from experts and reformulate them as organizational stories to be stored in corporate memory. Someone coming from a more

technical database background can easily extrapolate his or her skill set to design and implement knowledge repositories that will serve as a the corporate memory for that organization.

Interdisciplinary Nature of Knowledge Management

Knowledge Management Processes

This section will deal with the actual knowledge management processes. So far, I have presented an introduction to knowledge management as well as several frameworks. Now it is time to talk about the different processes and initiatives.

This section, as well as the subsequent one on knowledge management strategy, will be structured according to the layout of the integrated knowledge management model presented earlier.

Under the initiative referred to as "act", the integrated model outlines a series of knowledge management processes. They will be used as headings for the subsections presented here, and can be accessed through the menu on the left. These are:

Knowledge Discovery & Detection

Knowledge Organization & Assessment Knowledge Sharing

Knowledge Reuse

Knowledge Creation

Knowledge Acquisition

Reasons for Developing Knowledge Management

Nearly 60% of the job requirements need knowledge

Knowledge works have high demand

The knowledge workers can do the job effectively than traditional workers

The success factor in today economy is knowledge

Knowledge is power and it is very scarce

Challenges Faced by the Organization

The key challenges faced by any organization are listed below:

1. How to attract customer and service them in the world of internet and electronic commerce?

2. How to transfer the technology and use them according to the customer wants and develops the organization?

3. How to re-engineer the mindsets of employees and motivate them and develop the organization into a learning organization?

This is due to the fact that the application of knowledge and practice of knowledge management will be able to create excellent results in the organization. In current business scenario of value addition, products to customers and value creation to stake holders and technology capabilities at various levels of organization can be effectively managed with the help of knowledge management. Knowledge Society Earlier the term knowledge society was known as information society or post-industrial society.

The term knowledge society was coined by UNESCO towards the end of 90's. The general sub director of UNESCO Mr. Abdul Waheed Khan quoted as given below: "Information society is the building block for knowledge societies. Whereas I see the concept of information society as linked to the idea of technological innovation, the concept of knowledge societies includes a dimension of social, cultural, economic and political transformation and more a pluralistic and development perspective". The knowledge rhetoric is used to shape business and educational policy in the United Kingdom. Then in late 90's the academics were keenly interested in knowledge management and drafted various articles about knowledge management.

The knowledge management has been analyzed in the mid of 70's because society in 70's was knowledge and information intensive. Society can be categorized into 3 namely:

1. Pre industry society
2. Industry society
3. Post - industrial society

1. Pre Industrial Society

This society is where the mankind started its civilization. They never used machines to produce goods.

They used manual (hand) techniques to produce the goods. They were ruled by kings and military leaders.

2. Industrial Society

This is the era when the industrialization was blossoming after the world war.

The machines were invented and the manufacturing industries developed at an unprecedented rate.

The people were ruled mostly by their democratic leader.

The importance was given to process rather than information.

3. Post Industrial Society

The post - industrial society can be defined as "A society where the service sector is central and knowledge based goods or services have replaced industrial and manufactured goods as the main wealth generation".

This society is gaining momentum in the start of 20th century.

The people started giving importance to service sector rather than manufacturing sector.

In this era knowledge is power.

The most knowledge people were given respect in this society.

The main character of this society is that the knowledge is used as a main resource for wealth creation.

Conclusion

Knowledge is an intrinsic part of any activity. No activity can be conducted smoothly unless one acquires complete knowledge to perform the activity, Knowledge management forms the base for the working of the organizations. It encourages flows of ideas, opinions, views among the employees within the organization to perform better and focus on the technological development of their products. Knowledge management covers various aspects which are required for the success of any organization

Exercise

Compare the types of knowledge explained above on the basis of their characteristics and properties

UNIT II

Learning Objectives

To understand the concept of Knowledge, intelligence, experience, common sense, cognition

To understand the distinction between knowledge management and information management.

To have a clear understanding about the knowledge, intelligence, experience, common sense and its importance

To understand KM cycle and KM myths

Understanding of Knowledge, intelligence, experience, common sense, Cognition

The overall objective is to create value and to leverage, improve and refine the firm's competences and knowledge assets to meet organizational goals and targets. Implementing knowledge management thus has several dimensions including:

KM Strategy: Knowledge management strategy must be dependent oncorporate strategy.

The objective is to manage, share, and create relevant knowledge assets that will help meet tactical and strategic requirements.

Organizational Culture: The organizational culture influences the way peopleinteract, the context within which knowledge is created, the resistance they will have towards certain changes, and ultimately the way they share (or the way they do not share) knowledge.

Organizational Process: The right processes environments, and systems thatenable knowledge management to be implemented in the organization.

Management & leadership: knowledge management requires competent andexperienced leadership at all levels. There are a wide variety of Knowledge management related roles that an organization may or may not need to implement, including a Chief Knowledge Officer, knowledge managers. Knowledge brokers and so on.

Technology: The systems, tools, and technologies that fit the organization's requirements properly designed and implemented.

Politics: The long-term support to implement and sustain initiatives that involve virtually all organizational functions, which may be costly to implement (both from the perspective of time and Money), and which often do not have a directly visible return on investment.

Typically, failed initiatives have often placed an undue focus on knowledge management tools and systems while neglecting the other aspects. This issue will also be addressed throughout the site, and particularly in the knowledge management strategy section.

Understanding Knowledge, Information and Data

Data = Unorganized facts

Information = Data + Context

Knowledge = Information + Judgment

Knowledge

Know-how, understanding, experience, insight, intuition and contextualize information

Information

Contextualized, categorized, calculated and condensed data

Data

Facts and figures which relay something specific, but which are naturalized in any way

Data, Information and Knowledge

Data symbolize unorganized and unrefined facts. Typically data is stagnant in nature.

It can correspond to a set of distinct facts about events. Data is a precondition to information.

An organization from time to time has to decide on the nature and amount of data that is necessary for generating the required information.

Information

Information can be measured as a collection of data (processed data) due to which decision making becomes easier.

Information has generally got some connotation and function.

Knowledge

Knowledge indicates human understanding of a subject matter that has been attained in the course of appropriate study and familiarity.

Knowledge is usually based on learning, thinking, and proper perception of the problem area.

Knowledge is not information and information is not data.

Knowledge is resultant from information in the same way information is derivative of data.

We can view it as an understanding of information based on its perceived importance or relevance to a problem area. It can be measured as the incorporation of individual discerning processes that assist them to draw consequential conclusions.

Understanding Knowledge

Knowledge can be defined as the, "understanding obtained through the process of experience or appropriate study". Knowledge can also be an accumulation of facts, procedural rules, or heuristics; A fact is generally a statement representing truth about a subject matter or domain; A procedural rule is a rule that describes a sequence of actions; A heuristic is a rule of thumb based on years of experience.

Intelligence implies the capability to acquire and apply appropriate knowledge; memory indicates the ability to store and retrieve relevant experience according to will; Learning represents the skill of acquiring knowledge using the method of instruction/study.

Experience relates to the understanding that we develop through our pastactions.

Knowledge can develop over time through successful experience, and experience can lead to expertise.

Common sense refers to the natural and mostly unreflective opinions of humans.

Human thinking and learning provides a strong background for understanding knowledge and expertise. Here the study of interdisciplinary study of human intelligence is cognitive Psychology. This tries to identify the cognitive structures and processes that closely relates to skilled performance within an area of operation. The two major components of cognitive psychology are:

Experimental psychology: This studies the cognitive process that constitutes human intelligence.

Artificial Intelligence (AI): this studies the cognition of computer-based intelligent systems.

The process of eliciting and representing experts' knowledge usually involves a knowledge developer and some human experts (domain experts). In order to gather the knowledge from human experts, the developer usually interviews the experts and asks for information regarding a specific area of expertise. It is almost impossible for humans to provide the completely accurate reports of their mental processes. The research in the area of cognitive psychology helps to a better understanding of what constitutes knowledge, how knowledge is elicited, and how it should be represented in a corporate knowledge base. Hence, cognitive psychology contributes a great deal to the area to the area of knowledge management.

Information Management to Knowledge Management

Information Management vs Knowledge Management

This has always been a bit of a tricky subject, because knowledge and information are used interchangeably by so many people. Therefore, you will often find KM solutions even today which are essentially nothing more than information or document management systems, i.e. which handle data, information, or perhaps even explicit knowledge, but which do not touch the most essential part of KM - tacit knowledge.

Below you can find an info-graphic of the main differences, with a short explanation below. Please keep in mind that IM in many ways is a useful tool for KM, in that information can help create and refine knowledge, but as a discipline it is a different one.

As I showed in the previous sections, knowledge and information are actually quite different, as is tacit and explicit knowledge. So, while information and data management are certainly very useful, particularly as information sources are growing at exponential rates and with the new focus on big data, it is not synonymous with KM.

So what exactly is the difference?

Information and IM

Focus on data and information

Deal with unstructured and structured facts and figures.

Benefit greatly from technology, since the information being conveyed is already codified and in an easily transferrable form.

Focus on organizing, analyzing, and retrieving - again due to the codified nature of the information.

Is largely about know-what, i.e. it offers a fact that you can then use to help create useful knowledge, but in itself that fact does not convey a course of action (e.g. sales of product x are up 25% last quarter).

Is easy to copy - due to its codified and easily transferrable nature.

The Knowledge Economy is the next booming economy in a world of recession

In a world that is facing economic recession many are starting to ask 'What is going to be the next booming economy, what are its characteristics and, how will it help us to grow out of recession?'

At knowledge-management-online.com we strongly suggest that the next booming economy is already here! It's the rapidly growing global knowledge economy! More individuals, teams, organizations and inter-organizational networks will be restructuring and renewing themselves with the primary purpose of profitably trading their knowledge to add even higher value, predominantly on the World Wide Web.

Already we see more enlightened organizations developing and applying the knowledge they have about their industry, customers, partners and stakeholders, as their prime strategic asset, and at the highest point in the value chain. And many are becoming less involved, and more open to profitably outsourcing the other business operations.

Around the world we hear automobile companies talking far more about their critical and key knowledge areas of design, knowledge of manufacturing , knowledge of distribution, knowledge of service and support etc as their ‘crown jewels’ or ‘master recipe’.

Based on applying this key knowledge they then outsource the other business components. We hear the same from the aerospace industry, the oil and gas industry, the information technology industry, the food and agricultural industry, the healthcare industry, in fact most, if not all, industries.

Our knowledge mantra is 'know and apply what you know the best, and link to the best of the rest'

Knowledge has become the key strategic asset for the 21st Century and for every organization that values knowledge it must invest in developing the best strategy for identifying, developing and applying the knowledge assets it needs to succeed.

Every organization needs to invest in creating and implementing the best knowledge networks, processes, methods, tools and technologies. This will enable them to learn, create new knowledge, and apply the best knowledge much faster.

Every individual who wishes to successfully participate in the rapidly growing global knowledge economy must now consider the development of their personal knowledge management competencies as an ‘essential life skill’ for the 21st Century.

It has been said many times, ‘knowledge will radically and fundamentally transform economies’.

One thing is absolutely certain in this rapidly changing world. The best knowledge will always be in demand. In, say, fifty years’ time you can be certain of one thing. Leaders of economies, industries and organizations will always be very interested in finding new and better ways to create and apply knowledge.

Effective Knowledge Management is a timeless and changeless principle.

The strategies, methods and tools of knowledge management will undoubtedly change, but the timeless principles will, of course, remain unchanged.

And to survive and succeed in the new global knowledge economy, we must become far more effective and more productive. We must always strive for the best relations and highest quality.

To do that, the successful organizations and individuals will not allow themselves to keep ‘re-inventing the wheel’ or ‘repeating the same mistakes. This is so costly and, we suggest that good leaders will simply not tolerate, nor be able to afford, such cost inefficiencies caused by

knowledge gaps and bad knowledge flows. Would the global financial crisis have been prevented or minimized with far more effective global knowledge management?

Finally, those individuals and organizations that can best sense, become quickly alerted to, find, organize, and apply knowledge, with a much faster response time, will simply leave the competition far behind.

All of this can only be achieved through good knowledge leadership that understands the unchanging timeless principles for knowledge that transforms individuals and organizations to become far more responsive and effective players in a growing knowledge economy.

Knowledge Management is for everyone.

Global and/or Planetary Knowledge Management is becoming a reality today. It is our belief that the knowledge economy is rapidly becoming the largest and most successful and sustainable economy in the world.

Why need to choose knowledge management?

Today, some see knowledge management as a choice. Today, those that work with knowledge very well are considered extraordinary. Those that fail to understand knowledge management will consider it as 'extra effort' to our main work, or consider it a passing fad. They will risk 'throwing the baby out with the bathwater'.

We predict that effective and extraordinary knowledge management, at all levels, for the individual, team, organization and global community will naturally become mainstream and ordinary, as the only way to successfully develop and grow for the future.

More articles and reports on the importance of knowledge development to the national economies, and knowledge management to organizations and individuals, can be found

2.5 KM Myths

Knowledge management is all about people's intelligence based on information technology application in this modern technology global. Even knowledge management can exist within the individual and among the individuals, technology merely enables knowledge to be capture, recorded, and retrieved more efficiently. Example lecture Hall of any topic.

Misconceptions about what it is and isn't having a very clear clarity about are process.

Knowledge management is a continuous, cycle process, by hiring intellectual people. It is applied for both production and service oriented organization. Technology certainly plays a key

role, especially in distributing it, though the technology alone won't improve the organizations knowledge management or make more competitive.

It is true that knowledge management is like "Grandma's attic" approach to saving any information that might possibly be useful someday. But these aren't the organizations accumulate

a value knowledge. Knowledge yields value when people know where it is, know how to get at it, know it will help them and join in keeping it current, practical and useful. Knowledge management means certain huge, unwieldy databases.

The creation, distribution and application of knowledge drive the value of an organization's goods and services and determine its market value. Recognizing and cultivating the right knowledge is the hear t of the business. Right knowledge management is obsessed by a good chief knowledge officer of chief learning officer.

KM Cycle

The knowledge management cycle consists of four fundamental steps that involve the storage, processing and communication of information. We begin the discussion of this cycle as it applies to the individual and move on to discussing the cycle as it applies to small and then large organizations. In each case the methods of storing, processing and communication information are described and followed by a description of the progression through the four steps of the knowledge management cycle.

The human uses his own memory as well as notes and paper files for storing information.

The Human's brain processes the information with possibly the aid of a calculator or a small computer. Communication of information is primarily internal from a knowledge management perspective. As a human being, we pride ourselves on our ability to learn from our triumphs and defeats through the effective consolidation of knowledge.

The figure depicts, knowledge consolidated at the end of one iteration through the knowledge management cycle provides new information that can be used in iteration.

CONCLUSION

There is a steady relation between information management and knowledge management.

They are interrelated to each other in many ways. There is further more scope to be discussed and evaluated further.

2.7 EXERCISE

Are information management and knowledge management interrelated? Justify your answer.

Explain the relation between data, information and knowledge Evaluate drawbacks of artificial intelligence

UNIT III

Learning objectives

To understand the concept of Knowledge- Expert Knowledge, Human Thinking and Learning

To understand the types of knowledge

To understand the relation of knowledge economy and industrial economy to have a brief overview of the knowledge economy

Types of Knowledge- Expert Knowledge, Human Thinking and Learning

Knowledge management deals with two types of knowledge,

Explicit

Tacit

In effect, these two types of knowledge are like two sides of a coin, are equally applicable for the overall knowledge of an organization.

Explicit knowledge

It is referred as formal knowledge that can be packed as information. This can be found in the organization in the form of reports, articles, manuals, patents, pictures, images, video, sound, software etc., which have been created with the goal of communicating with another person.

Explicit knowledge defines the identity, the competencies and the intellectual assets of an organization independently of its employees; thus, it is generational knowledge par excellence, but it can grow and sustain itself only through an affluent background of tacit knowledge.

Explicit knowledge, on the other hand, “is more precisely and formally articulated, although removed from the original context of creation or use”. Explicit knowledge includes, for example, the content of spreadsheets, management reports, procedural and training manuals”.

This knowledge is hard to codify and store.

Tacit knowledge

It is referred as informal knowledge embedded in individual experience and is shared and exchanged through direct, eye-to-eye contact. Tacit knowledge is knowledge the "knower" is not aware of. Individuals may not know what tacit knowledge they have and also might not be able or willing to externalize it. Tacit knowledge is much more difficult.

Tacit knowledge can be defined as knowledge that " is subconsciously understood and applied, difficult to articulate, development from direct experience and action and usually shared through highly interactive conversation, storytelling and shared experience". Example is "best practice" performed in an organization, management skills, technologies, customer, competitor intelligence and market". Tacit knowledge is, by definition, hard to codify and store.

Embedded Knowledge

Embedded knowledge refers to the knowledge that is locked in processes, products, culture, routines, artifacts, or structures (Horvath 200, Gamble & Blackwell 2001). Knowledge is embedded either formally, such as through a management initiative to formalize a certain beneficial routine, or informally as the organization uses and applies the other two knowledge types. The challenges in managing embedded knowledge vary considerably and will often differ from embodied tacit knowledge. Culture and routines can be both difficult to understand and hard to change. Formalized routines on the other hand may be easier to implement learned directly into procedures, routines and products. This embedded knowledge is found in rules, processes, manuals, organizational culture, codes of conduct, ethics, product, etc. It is important to note, that while embedded knowledge can exist in explicit source (i.e. a rule can be written in a manual), the knowledge itself is not explicit, i.e. it is not immediately apparent why doing something this method is beneficial to the organization.

Expert knowledge

It is the information woven inside the mind of an expert for accurately and quickly solving complex problems.

Knowledge chunking

Knowledge is usually stored in expert's long-rangememory as chunks. Knowledge chunking helps experts to optimize their memory capacity and enables them to process the information quickly. Chunks are groups of ideas that are stored and recalled together as a unit.

Basic structure of Organization's Knowledge management

Create knowledge repositories

a. External knowledge (competitive intelligence, market data, surveys, etc.)

b. Structured internal knowledge (reports, marketing materials, etc.)

c. Informational internal knowledge (discussion databases of 'know-how')

d. Technical expert referral

e. Expert networks used for staffing based on individual competencies.

f. Turnkey video conferencing to foster easy access to distributed experts Enhance the knowledge management.

g. Change organizational norms and values related to knowledge in order to encourage knowledge use and knowledge sharing

h. Customer's rating of organization's expertise Manage knowledge as an asset.

i. Attempt to measure the contribution of knowledge to bottom line success

3.3 Industrial Economy to Knowledge Economy

The key concepts of the knowledge economy is that knowledge and education otherwise referred as human capital, can be treated as, A business product, as educational and innovation intellectual products and services can be exported for a high value return and a productive asset.

The most important factor determining the standard of living, in today's advanced technological life style is knowledge based. For countries and the world the knowledge-based economy is the front line for any operations. For the last two hundred years, neo-classical has recognized only two factors of production: labour and capital. Knowledge, productivity, education and intellectual capital were all regarded as exogenous factors that are, falling outside the system.

Production and services based on knowledge-intensive activities that contribute to an accelerated pace of technical and scientific advance. The key component of knowledge economy is a greater dependence on intellectual capabilities than on physical inputs or natural resources.

New Growth theory is based on work by Stanford economist Paul Romer and others who have attempted to deal with the causes of long-term growth, something that traditional economic models have had difficulty with. The changes by few economists like, Joseph Schumpeter, Robert

Solow and others, Romer has proposed a change to the neo-classical model by view on the dynamics in technological application. Knowledge has become the third factor of production in leading economics.

Knowledge based technology are now the key factors of production. Romer's theory differs from neo-classical economic theory in several important ways:

Knowledge is the basic form of capital. Economic growth is driven by the accumulation of knowledge.

While any given technology breakthrough may seem to be random, Romer considers that new technological developments, rather than having one-off impact, can create technical platforms for further innovations, and this technical platform effect is a key driver of economic growth.

Technology can raise the return on investment, which explains why developed countries can sustain growth and why developed countries can sustain growth and why developing economics, even those with unlimited labour and ample capital, cannot attain growth. Traditional economics predicts that there are diminishing returns on investment. New Growth theorists rue that the non-rivalry and technical platform effects of new technology can lead to increasing rather than diminishing returns on technological investment.

Impact of knowledge in the knowledge economy

Unlike capital and labour, knowledge struggle to be a public good. Once knowledge is exposed and made unrestricted, there is zero marginal cost to sharing it with additional users. Secondly, the originator of knowledge finds it inflexible to thwart others from using it. Instruments such as trade secrets protection and patents, copyright, and trademarks offer the maker with some fortification.

The insinuation of the knowledge economy is that there is no unconventional way to opulence than to make knowledge and knowledge-creation of primary significance. There are diverse kinds of knowledge. "Tacit knowledge" is knowledge acquired from practice, relatively than that instilled by official education and training. In the knowledge economy tacit knowledge is as vital as formal, codified, prearranged and unequivocal knowledge.

According to New Growth economics a country's capability to take benefit of the knowledge economy is dependent on how rapidly it can become a "learning economy'. Learning means not only making use of new technologies to admittance global knowledge, it also means using them

to converse with other people about advancement. In the "learning economy" individuals, firms, and countries will be proficient to fashion wealth in ratio to their competency to gain knowledge and distribute innovation.

CONCLUSION

The various economic theories of knowledge management are of great importance and effectiveness to the organization for its success and future expansion.

Exercise

Differentiate between Romer's theory and neo classical economic theory.

Do you agree with Housel & Bell knowledge based economy? Justify your answer.

Explain the impact of knowledge based economy on an organization.

UNIT IV

Learning Objectives

To understand the mechanisms of knowledge management

To have a detail knowledge of the various tools of knowledge management

To have a clear understanding of knowledge matrix

Knowledge Management Mechanisms

In this chapter will be discussed the overview of the types of KM tools available on the market today and to gain an understanding of what their role is in the KM process. KM is about managing people, culture, and organizational practices & structures. Effective KM initiatives are therefore never exclusively technology driven. However, in conjunction with sound practice, KM tools are invaluable at providing support to KM initiatives and at facilitating interaction, exchange of ideas, locating experts, and storing knowledge in both structured and unstructured forms. While it can be said that these tools were not absolutely necessary when KM peaked at the turn of the last century, today they are a necessary competitive advantage within knowledge sharing. The following are the used in knowledge management:

1. *Cross-functional project teams*

This basically refers to the practice of assembling project teams using members of the organization from different functions. Typically, this would involve selecting a number of specialists under a generalist project manager.

The role of project manager can be particularly demanding when using cross-functional project teams. Apart from being an expert at project management, the project manager must also have enough general knowledge to understand what his specialists know and how it can be used.

The project manager must also be skilled at conflict resolution, which is more likely to happen within a diverse group.

As with all projects but perhaps more so for cross-functional project teams, proper planning is required, which involves clear definitions of the roles and responsibilities of the project team, as well as a timeline and cost estimation (Zoerman 2008).

Cross-functional project teams have several key benefits related not only to knowledge management (KM) but also to innovation. These are:

Creation of new knowledge

Project teams have often been considered to be a particularly important source of new knowledge, particularly when they are given a certain degree of freedom and autonomy (Zoerman 2008, Nonaka& Takeuchi 1995, Peters 1988). Ideally, the project team should be self-organizing and be able to make its own project decisions. Using cross-functional project teams allows for the integration of a wider knowledge base into the project.

Knowledge sharing across organizational boundaries

The team members work together during the project, enabling the transfer of all types of knowledge. In the absence of this kind of arrangement, often only explicit knowledge could be transferred, since these specialists would typically not socialize professionally.

Support of the creation of informal knowledge networks

As we have previously determined, particularly in the section on communities of practice, informal networks are a crucial part of organizational learning. Cross-function project teams bring people together from different parts of the organization, encouraging future collaboration and the expansion of personal informal networks.

2. Knowledge Management Training Consultancy

This is almost always expensive but it can be very useful. Trained consultants can work with all aspects of the organization, not just implementing KM processes but also educating the managers in the subject. Make sure to have a good grasp of what the consultant plans to do, and to emphasize the training aspect. Have local management be involved hands-on throughout the process, working with the consultants so as to pass on their tacit knowledge. Finally, give the consultants the freedom to do their jobs, understanding that knowledge management is a process that involves the entire organization.

A similarly broad definition is presented by Davenport & Prusak (2000), which states that

KM "is managing the corporation's knowledge through a systematically and organizationally specified process for acquiring, organizing, sustaining, applying, sharing and renewing both the tacit and explicit knowledge of employees to enhance organizational performance and create value."

I will also choose to answer the question "what is knowledge management" in the broader perspective, encompassing not just the exploitation and management of existing knowledge assets, but the also the initiatives involved in the creation and acquisition of new knowledge. In the next article, I will arrive at a specific knowledge management definition

3. Story telling

Storytelling is a very old technique, dating back throughout most of human history. The practice is embedded into our culture; it was the primary form of family entertainment before the television (which is a different medium for story telling), it is mastered by competent politicians and journalists, and it remains as one of the most effective ways to reach someone and move them with your message.

Stories can be used to shape vision, to pass on knowledge and wisdom, and to shape identity and organizational culture. Storytelling is regarded as one of the most effective and influential techniques, and has been documented extensively in numerous fields. Sole & Wilson

(2002) identify the role of storytelling as follows:

Share norms and values

Stories act as a medium for passing on values andcreating vision.

Develop trust and commitment

Personal stories can communicate one's ownability and commitment, as well as conveying openness by sharing something personal. Organizational stories influence the perceived trustworthiness of the firm and its management (either positively or negatively).

Share tacit knowledge

Enables the users to articulate tacit knowledge and communicate with feeling, which helps them convey more than they realize that they know (Weaver 2005 in Bali *et al* 2009).

Facilitate unlearning

Unlearning often requires more than rational arguments. It needs an intuitive and emotional anchor, which stories can provide.

Generate emotional connection

We connect with stories emotionally and a storythat has had an impact on us will be easily recalled long into the future.

4. Mentoring

Mentoring is one of the most effective ways of passing down tacit know-how from an expert to an aspiring expert. This practice dates back throughout human history, and is just as relevant today.

Mentoring is about practice under the guidance of an expert. Unlike classroom learning, the apprentice or mentee is given practical tasks, under the supervision and guidance of his mentor.

Liebowitz (2009) refers to formal mentoring programs as a well-established way to retain and transfer knowledge. He highlights an example from the NASA Goddard Space Flight Center, where the mentoring program runs for a year, and includes assignments, meetings, formal mentor training, assessment, etc.

Mentoring can be implemented both formally (as above) and informally. Informal mentor relationships could involve assigning a guide to a new employee, or simply encouraging him to seek out a mentor. For the most part however, organizations are beginning to look at formal relationships designed to train the newcomer as quickly and effectively as possible.

The characteristics of an ideal mentor are:

Personal expertise

Familiarity with the organization: its procedures, culture, etc.

Desire to teach/guide

Ability to motivate

Ability to allow for personal development of the mentee: Must acceptdifferent approaches and offer his own advice as an alternative not a mandate.

Commitment: Time, Resources, Persistence, etc.

Skilled communicator

Ability to remain professional: includes the ability to realize when the mentoring relationship has run its course and/or when it is no longer functioning

Self-aware and self-critical

Ability to foster trust

Mentoring is a key process for knowledge management. Apart from transferring tacit knowledge and retaining expertise within the organization, it can also help the mentee to become a recognized and accepted member of the community, by passing on corporate vision and values and improving his grasp of corporate networking (Clutterbuck 2001). Companies should therefore consider implementing formal mentoring relationships and mentor training as an investment in the future knowledge stock of the organization.

Techniques of knowledge management

For any teaching and dissemination there is a need to recognize the applicability of different levels of teaching required. In this case, knowledge management at the strategic level requires the organization to analyze and plan its business in terms of the knowledge it currently has and the knowledge it needs for future business processes. At the tactical level the organization is concerned with identifying and formalizing existing knowledge, acquiring new knowledge for future use, archiving it in organizational memories and creating systems that enable effective and efficient application of the knowledge within the organization. At the operational level knowledge is used in everyday practice by professional personnel who need access to the right knowledge, at the right time, in the right location

1. Knowledge Development Managers:

It needs a strategic perspective on all knowledge assets. They need to understand the current state of the assets and to form a vision of how these knowledge assets could be improved or utilized t o move the organization forward.

2. Knowledge Developers

It needs a comprehensive understanding of individual knowledge assets. They need to understand all the processes, roles, rights, and constraints associated with each knowledge asset, so that they can represent everything that may be relevant when describing or applying that knowledge asset.

3. Professional Personnel

It need to know about the existence of relevant knowledge assets and must understand how to apply them at the operational level. This paper focuses on the techniques we employ for managing knowledge within the organization.

It must be recognized that the ultimate success of any knowledge management programme for a particular organization will also depend critically on the attitude and culture adjustments of its key workers.

KNOWLEDGE MATRIX

The KM Matrix by Gamble and Blackwell (2001)

This KM model presents a general theoretical framework, as well as specific guidelines for implementation..

The KM process is split into four stages. First management must locate the sources of knowledge. Then they must organize this knowledge so as to assess the firm's strengths and weaknesses and determine its relevance and reusability. This is followed by socialization, where various techniques are used to help share and disseminate it to whomever needs it in the organization. Finally, the knowledge is internalized through use.

As all sequential models, the steps are not to be taken literally, but they do provide an excellent overview of the role of the KM manager. However, one limitation of this model is its focus. First of all, the overall strategic role outline by Bukowitz and Williams is not included.

Secondly, KM's role here is limited to knowledge sharing, omitting the processes of knowledgeacquisition/creation and divestment. This is a perfectly legitimate approach to KM where the focus is on the sharing and retrieval of existing knowledge, but it does not fulfill the scope of the knowledge management definition outlined on this site.

Knowledge Matrix helps in identifying different islands of knowledge to create a Knowledge Management database/data warehouse. The following Knowledge Matrix enables organizations

to uncover various sources of knowledge in order to provide knowledge services to both internal and external customers.

KM Tools

In this section, I present an overview of the IT-based tools and systems that can help knowledge management (KM) fulfill its goals.

The scope of this section is to provide the reader with an overview of the types of KM tools available on the market today and to gain an understanding of what their role is in the KM process. This is the most important step, since there are literally thousands of options to choose from. However, in the future, I intend to also take a look at some actual KM tools and present a few reviews.

To recap, I have dealt with KM tools throughout the section on tactical management initiatives, outlining its role in knowledge discovery, organization, sharing, etc. In the section on knowledge management strategy, I presented an article on knowledge management systems implementation, where I stated that IT based tools, for the most part, fall into one of the following categories (adapted from Gupta and Sharma 2005, in Bali et al 2009)

Groupware systems & KM 2.0 The intranet and extranet

Data warehousing, data mining, & OLAP Decision Support Systems

Content management systems

Document management systems Artificial intelligence tools

Simulation tools

Semantic Networks

For now, in the subsections that follow, I will discuss **the first six KM tool categories on this list**, as they are usually what people refer to when speaking of KM tools. Simulation tools is too broad a category for the scope of this site, and artificial intelligence systems are of questionable usefulness and are outside my area of expertise. However, in the (not too near) future, I do plan to add a segment on semantic networks and artificial intelligence.

A quick note on artificial intelligence: While there was much excitement about this a few years ago, to my understanding, it has not lived up to its expectations (yet). Expert systems for example, designed to capture human decision-making and to make the correct decisions in certain circumstances, have not been so successful due to constantly changing requirements (Botha et al

2008). For more on this, research topics such as neural networks, intelligent decision support systems, and expert systems.

Again, I would like to remind the reader that KM is about managing people, culture, and organizational practices & structures. Effective KM initiatives are therefore never exclusively technology driven. However, in conjunction with sound practice, KM tools are invaluable at providing support to KM initiatives and at facilitating interaction, exchange of ideas, locating experts, and storing knowledge in both structured and unstructured forms. While it can be said that these tools were not absolutely necessary when KM peaked at the turn of the last century, today they are a necessary competitive advantage within knowledge sharing.

If IT is used right - as a supporting and enhancing mechanism for sound, existing KM practices - it can be a very valuable tool indeed.

CONCLUSION

There is a great need of knowledge matrix within the organization and the techniques derived for acquiring knowledge turns out to be very effective for the employees as well as the organization.

UNIT V

Learning objectives

To understand the concept of knowledge conversion To understand the knowledge conversion process

To understand the relation of communities of practice in organizations

To have a detail vie of communities of practice and its importance to the organization

Knowledge Conversion

Definition

The incorporation of knowledge into the process of solving analytical tasks is a fast emerging area in visualization is Knowledge Conversion.

The SECI Model and Knowledge Conversion

Arguably the most important contributor to this subject has been Nonaka. He worked extensively with the concepts of explicit knowledge and tacit knowledge, and drew attention to the way Western firms tend to focus too much on the former (Nonaka& Takeuchi 1996). This sentiment

has since been echoed throughout organisational learning and knowledge management (KM) literature (e.g. Cook & Brown 1999, Kreiner 1999, Tsoukas&Valdimirou 2001, etc.).

Nonaka and Takeuchi introduced the SECI model (***Nonaka& Takeuchi 1996***) which has become the cornerstone of knowledge creation and transfer theory. They proposed four ways that knowledge types can be combined and converted, showing how knowledge is shared and created in the organization. The model is based on the two types of knowledge outlined above.

Socialization: Tacit to tacit. Knowledge is passed on through practice,guidance, imitation, and observation.

Externalization: Tacit to explicit. This is deemed as a particularly difficult and often particularly important conversion mechanism. Tacit knowledge is codified into documents, manuals, etc. so that it can spread more easily through the organization. Since tacit knowledge can be virtually impossible to codify, the extent of this knowledge conversion mechanism is debatable. The use of metaphor is cited as an important externalization mechanism.

Combination: Explicit to explicit. This is the simplest form. Codifiedknowledge sources (e.g. documents) are combined to create new knowledge.

Internalization: Explicit to tacit. As explicit sources are used and learned, theknowledge is internalized, modifying the user's existing tacit knowledge.

The SECI Model Knowledge Creation Spiral

In this model, knowledge is continuously converted and created as users practice, collaborate, interact, and learn. The process should be seen as a continuous, dynamic, swirl of knowledge rather than a static model. It is basically a visual representation of overlapping, continuous processes that take place - or should take place - in an organization.

Below I have included a graphical representation of this concept as presented in the SECI model:

A great deal of effort has been put into investigating its practical applicability (with mixed results), but in recent years the applicability of the model has been linked strongly to culture, both organizational and national. The issue is whether culture is more than just an element in a KM model, i.e. culture-in-the-model, but rather acts as a limiting factor for a model, i.e. culture-ofthe- model (Andreeva&Ikhilchik 2011). The issue of culture as a limiting factor for KM models is an issue I will incorporate into the site in the future and provide a link from this article to the new sections.

Nonetheless, the SECI model remains at the core of knowledge conversion theory within KM, and this almost universal attraction to the model may in itself be an indication that some aspects of it appeal to virtually all cultures (Andreeva&Ikhilchik 2011).

Knowledge Conversion Processes

Nonaka and Takeuchi defined four types of conversion processes which they describe as "fundamental to creating value". The four are the combinations of conversion of explicit and tacit knowledge (see diagram).

Tacit-to-tacit (socialization) - individuals acquire knowledge from others through dialogue and observation

Tacit-to-explicit (externalization) - the articulation of knowledge into tangible form through elicitation and documentation

Explicit-to-explicit (combination) - combining different forms of explicit knowledge, such as that in documents or databases

Explicit-to-tacit (internalization) - such as learning by doing, where individuals internalize knowledge into their own mental models from documents.

COMMUNITIES OF PRACTICE

We now recognize knowledge as a key source of competitive advantage in the business world, but we still have little understanding of how to create and leverage it in practice.

Traditional knowledge management approaches attempt to capture existing knowledge within formal systems, such as databases. Yet systematically addressing the kind of dynamic “knowing” that makes a difference in practice requires the participation of people who are fully engaged in the process of creating, refining, communicating, and using knowledge. We frequently say that people are an organization’s most important resource. Yet we seldom understand this truism in terms of the communities through which individuals develop and share the capacity to create and use knowledge. Even when people work for large organizations, they learn through their participation in more specific communities made up of people with whom they interact on a regular basis. These “communities of practice” are mostly informal and distinct from organizational units. However, they are a company’s most versatile and dynamic knowledge resource and form the basis of an organization’s ability to know and learn.

LESSON 6

Learning objectives

To understand the concept of Social knowledge management To understand the concept of social network analysis

To have a clear understanding of knowledge sharing

To understand the different barriers to knowledge sharing.

Social Knowledge Management:

Social knowledge management can be defined as applying social media in the knowledge management context to identify, share, document, transfer, develop, use or evaluate knowledge.

Another Definition of social Knowledge Management is the management of social knowledge - where the aim is then more economic development - not only individual competitive advantage by companies

Increase knowledge quantity through leveraging user generated content

Use social review methods like ratings, comments to increase the quality of knowledge

Integration of social media tools and applications into organizations business context to improve knowledge access and sharing - and leverage the benefits of social media in all relevant work contexts

Leverage social media concepts to increase motivation to share knowledge, e.g. ramification, communities of practice

Use advanced, self-learning search providing context relevant results

Help to learn on demand and informally using social learning tools

Social Knowledge Management can be applied in many organizational processes, like in customer service, employee-supplier collaboration, or in people development & education.

SOCIAL NETWORK ANALYSIS

Social network analysis (SNA) is the process of investigating social structures through the use of networks and graph theory. It characterizes networked structures in terms of nodes (individual actors, people, or things within the network) and the ties, edges, or links (relationships or interactions) that connect them. Examples of social structures commonly visualized through social network analysis include social media networks, memes spread, friendship and acquaintance networks, collaboration graphs, kinship, disease transmission, and sexual

relationships. These networks are often visualized through socio grams in which nodes are represented as points and ties are represented as lines.

Social network analysis has emerged as a key technique in modern sociology. It has also gained significant in following anthropology, biology, communication studies, economics, geography, history, information science, organizational studies, political science, social psychology, development studies, sociolinguistics and computer science now commonly available as a consumer too.

Social network analysis [**SNA**] is the mapping and measuring of relationships and flows between people, groups, organizations, computers, URLs, and other connected information/knowledge entities. The nodes in the network are the people and groups while the links show relationships or flows between the nodes. **SNA** provides both a visual and a mathematical analysis of human relationships. Management consultants use this methodology with their business clients and call it Organizational Network

Analysis [**ONA**]. ONA allows you to x-ray your organization and reveal the managerial nervous system that connects everything. To understand networks and their participants, we evaluate the location and grouping of actors in the network. These measures give us insight into the various roles and groupings in a network -- who are the connectors, mavens, leaders, bridges, isolates, where are the clusters and who is in them, who is in the core of the network, and who is on the periphery?

BARRIERS IN KNOWLEDGE SHARING:

Knowledge management (KM) has proven that a knowledge-sharing culture leads to increased productivity, improved cycle times for business processes, and innovation. The ongoing role of KM is to develop an environment where people freely create, share, and use information and knowledge; work together toward a common purpose; and are supported and rewarded for doing so. While this may seem like an easy feat, it is not. It is imperative to remember that implementing a KM program is not an automatic trigger to transform an organization's culture.

Yet, many KM leaders immediately begin their efforts by trying to "change the culture." It is at this point that APQC suggests you stop, collaborate, and listen. It is vital to appreciate the culture of your organization and what drives people's behaviors before trying to implement any type of enterprise wide change. Your level of cultural understanding could determine the success (or failure) of the proposed change to a familiar process, routine, or technology.

LESSON 7

Learning objectives

To understand the mechanisms of organizational learning

To have a detail knowledge of the process of organizational learning

To have a clear understanding of social capital knowledge and its application

ORGANIZATIONAL LEARNING

Organizational Knowledge Resources

Business knowledge can exist on several different levels:

Individual: Personal, often tacit knowledge/know-how of some sort. It can also be explicit, but it must be individual in nature, e.g. a private notebook.

Groups/community: Knowledge held in groups but not shared with the rest of The organization. Companies usually consist of communities (most often informally created) which are linked together by common practice. These communities of practice (Lave & Wenger 1991) may share common values, language, procedures, know-how, etc. They are a source of learning and a repository for tacit, explicit, and embedded knowledge.

Structural: Embedded knowledge found in processes, culture, etc. This may be understood by many or very few members of the organization. E.g. the knowledge embedded in the routines used by the army may not be known by the soldiers who follow these routines. At times, structural knowledge may be the remnant of past, otherwise long forgotten lessons, where the knowledge of this lesson exists exclusively in the process itself.

Organizational: The definition of organizational knowledge is yet another concept that has very little consensus within literature. Variations include the extent to which the knowledge is spread within the organization, as well as the actual make-up of this knowledge. Hatch (2010) defines it as: "When group knowledge from several subunits or groups is combined and used to create new knowledge, the resulting tacit and explicit knowledge can be called organizational knowledge."

Others present a broader perspective: "individual knowledge, shared knowledge, and objectified knowledge are different aspects or views of organizational knowledge" (Ekinge&Lennartsson 2000). As always, texts emphasizing an IT based outlook once again offer shallower, information-based definitions, e.g. Virvou& Nakamura 2008, "Information internalized by means of research, study or experience that has value to the organization".

For the purpose of this site I will adopt a broad, knowledge-based perspective.

Organizational knowledge is therefore defined as: all the knowledge resources within an organization that can be realistically tapped by that organization. It can therefore reside in individuals and groups, or exist at the organizational level.

Extra-organizational: Defined here as: Knowledge resources existing outside

The organization which could be used to enhance the performance of the organization. They include explicit elements like publications, as well as tacit elements found in communities of practice that span beyond the organization's borders.

Implications for KM

In order to enhance organisational knowledge, KM must therefore be involved across the entire knowledge spectrum. It must help knowledge development at all levels and facilitate & promote its diffusion to individuals, groups, and/or across the entire firm, in accordance with the organization's requirements. KM must manage organizational knowledge storage and retrieval capabilities, and create an environment conducive to learning and knowledge sharing. Similarly it must be involved in tapping external sources of knowledge whenever these are necessary for the development of the organizational knowledge resources.

To a large degree, KM is therefore dependent on the understanding and management of organizational learning, organizational memory, knowledge sharing, knowledge creation, and organizational culture.

Learning is the way we create new knowledge and improve ourselves. Although there is ample debate regarding the mechanisms and scope of learning, in its simplest form this is no different for organizations. Botha *et al.* describe the organizational learning process as follows:

As one can see organizational learning is based on applying knowledge for a purpose and learning from the process and from the outcome. Brown and Duguid (1991) describe organizational learning as "the bridge between working and innovating." This once again links learning to action, but it also implies useful improvement.

The implications to knowledge management are three-fold:

One must understand how to create the ideal organizational learning environment

One must be aware of how and why something has been learned.

One must try to ensure that the learning that takes place is useful to the organization

Organizational Learning Theory: Company Perspective

Two of the most noteworthy contributors to the field of organizational learning theory have been Chris Argrys and Donald Schon. Organizational learning (OL), according to Argrys&Schon is a product of organizational inquiry. This means that whenever expected outcome differs from actual outcome, an individual (or group) will engage in inquiry to understand and, if necessary, solve this inconsistency. In the process of organizational inquiry, the individual will interact with other members of the organization and learning will take place.

Learning is therefore a direct product of this interaction.

Espoused Theory

This refers to the formalized part of the organization. Everyfirm will tend to have various instructions regarding the way employees should conduct themselves in order to carry out their jobs (e.g. problem solving). These instructions are often specific and narrow in focus, confining the individual to a set path. An example of espoused theory might be "if the computer does not work, try rebooting it and then contact the IT department."

Theory-in-use

This is the actual way things are done. Individuals will rarely followespoused theory and will rely on interaction and brainstorming to solve a problem. Theory in use refers to the loose, flowing, and social way that employees solve problems and learn. An example of this might be the way someone actually solves a problem with their computer by troubleshooting solutions, researching on forums, asking co-workers for opinions, etc.

Knowledge Management Strategy

The various cross functional teams in a knowledge based organization follow various knowledge strategies to accomplish their objectives. This strategy and sometimes it will be conflict with other teams.

The best way is to analyse whether the strategy formed runs in parallel with organization mission and focus to strengthen its core competency.

The knowledge management strategy adopted in the firm is illustrated below in form of a diagram:

The organization must involve in long term planning for man power. It is different from long term, planning for productivity. There are various factors needs to be carefully considered before planning how to develop the labour force in terms of knowledge, skill and creativity. The

organization must be very careful in approaches related to succession planning as it requires vast amount of time to plan and implement it. The long term planning also plays a role in the HR practices followed in the organization.

The organization need to invest in training and development of their laborers. They must look it a s way for gaining competitive advantages at all levels of the firm. The leaders play an important role in shaping people as the intellectual asset to the company, thereby giving the firm competitive advantage from their competitors.

Mr.Peter Drucker told that the members of an organization need to learn about expanding knowledge and it is much more imperative to learn how and when to utilise the same.

Generally the employees especially in the middle and low level of management have a tendency that their performance doesn't have impact or important for the success for organization. They are wrong about this, in fact it is their performance and their presence indeed has a great impact on the firm's success.

The organization must find a way to make employee realize this fact. The organization must inform their employees and make them aware of the realities and threats posed by external environment.

The strategic planning process is usually formulated by any firm to obtain their objectives.

This strategic planning must change completed as it supports the knowledge management and evolving strategy which supports both organizational strategic intent and knowledge management.

The organization must identify the talents and the competency required for every individual job in the organization. Then the people must be recruited according to their competencies, thereby putting right people at the right job which improves the performance of the employees and their job satisfaction level.

KNOWLEDGE AUDIT

The knowledge audit (K-Audit) is a systematic and scientific examination and evaluation of the explicit and tacit knowledge resources in the company. The K-Audit investigates and analyses the current knowledge-environment and culminates, in a diagnostic and prognostic report on the current corporate 'knowledge health'. The report provides evidence as to whether corporate knowledge value potential is being maximized. In this respect the K-Audit measures the risk and opportunities faced by the organization with respect to corporate knowledge.

Knowledge audit is a systematic examination and evaluation of organizational knowledge health, which examines organization's knowledge needs, existing knowledge assets/resources, knowledge flows, future knowledge needs, knowledge gap analysis as well as the behavior of people in sharing and creating knowledge. In one way, a knowledge audit can reveal an organization's knowledge strengths, weaknesses, opportunities, threats and risks. A knowledge audit should also include an examination of organization's strategy, leadership, collaborative, learning culture, technology infrastructure in its various knowledge processes. In order to transform an organization into a learning organization and ensure an effective knowledge management strategy, a knowledge audit should be conducted, which will provide a current state of knowledge capability of the organization and a direction of where and how to improve that capability in order to be competitive in this fast changing knowledge era. The first stage in adopting a knowledge strategy is performing an audit of existing data, information and knowledge contained within the organization.

This section will cover four main areas of the knowledge audit:

The aims and objectives of the audit the key tasks involved.

Process mapping.

The audit outcomes.

Aims and objectives

There are three broad aims of a knowledge audit:

Leveraging the organization's knowledge.

Creating new knowledge or promoting innovation.

Increasing collaboration and hence enhancing the skill level of employees

It gives tangible evidence of the extent to which knowledge is being effectively managed and indicates where improvements are needed.

It explains how knowledge moves around in, and is used by, that organization.

It provides a map of what knowledge exists in the organization and where it exists, revealing both gaps and duplication.

It provides an inventory of knowledge assets, allowing them to become more visible and therefore more measurable and accountable.

It provides vital information for the development of effective knowledge management programmes and initiatives that are directly relevant to the organization's specific knowledge needs and current situation.

It helps in leveraging customer knowledge.

The objectives of a knowledge audit are:

Study and develop a deeper understanding of existing communities (groups that share resources, provide support and show reciprocity) content (forms and combinations of words, images and pictures) and conversations (exchanges of sentiments, observations, opinions, or ideas).

Identify opportunities to add value to current communities, content and conversations.

Develop a knowledge management strategy that delivers on the identified opportunities.

K-audit helps an organization to clearly identify what knowledge is needed to support overall organizational goals and individual and team activities.

The outcome of a knowledge audit tends to be marked by the production of a document.

This document should be made available in both hard and soft copy. It should be accessible both as a dynamic Intranet site and interactive CD ROM.

Components of a Knowledge Audit

A Knowledge audit can have the following components:

Knowledge need analysis

Knowledge inventory analysis

Knowledge Flow analysis

Knowledge mapping

Knowledge Needs Analysis (K-Needs Analysis)

The major goal of this task is to identify precisely what knowledge the organization, its people and team possess currently and what knowledge they would require in the future in order to meet their objectives and goals. Knowledge need analysis can help any organization to develop its future strategy. The following figure to CAN explain the Knowledge-Strategy Link.

The K-Gap Analyzer

If an organization wants to be successful, it needs to know what the assets it requires to be successful. Similarly the knowledge based organization must identify what knowledge assets they are going to concentrate on developing their edge over the competitors.

Mostly the organizations like to improve their core competency to sustain in the market and be a leader or pioneer to other firm. The strategy and the vision of the firm will not be based only upon the current situation of the firm. It will be focused how the organization can develop its core competence in the long run.

The K-Gap Analyzer acts as a tool to identify the following:

What is the current status of the firm?

What kind of skill acquisition plans need to be contemplated?

What is the requisites time frame?

Generally a strategy is broken into small tasks to achieve the objectives. For each knowledge business drivers, the knowledge assets which are known as Knowledge – sets required to achieve that Knowledge business drivers need to be identified.

In this context, the **K- Gap Analyzer aids in the following processes**

Building the knowledge strategy

Aiding a Knowledge Need analysis

Evolving a learning strategy as well as integrated subset of the knowledge strategy

Synchronizing a top down knowledge strategy with a bottom up skills acquisition plan.

Providing a basis for a quantitative analysis of investments in knowledge acquisition versus realization of business goals.

Knowledge Management Tools

Knowledge Creation: This process depends upon knowledge sharing (asdefined above), collaboration, and access to relevant information and data. Cook and Brown (1999) suggest that knowledge creation is an interplay between knowledge and knowing, or in other words, putting knowledge into practice. The role of management in this process was identified as:

Enabling knowledge sharing:

Creating suitable work related environments: The focus here is onunstructured work environments where experimentation, trial and error, and theory in use are promoted. Selforganizing, semi- or fully-autonomous project teams are identified as one useful tool in this endeavor.

Providing access to collaborative IT systems: Groupwareapplications can be used for this purpose. These must support and not interfere with the ideal work environment.

Providing access to relevant data and information: Frominformation systems, data warehouses, data mining, etc. These can act as building blocks in the knowledge creation process.

Knowledge Acquisition: The firm can acquire knowledge externally fromcustomers, suppliers, competitors, partners, and mergers. The role of KM varies in each process (as does the type of available knowledge), but at its core its function is to establish the right channels to transfer relevant knowledge from existing partnerships into the firm, and to integrate this knowledge as best as possible. To do so, KM can use a wide range of tools including:

Common IT systems

Common projects

Interaction and socialization

Involvement of partners in certain organizational processes (e.g. design)

Cultural alignment (for mergers or joint ventures)

Setting up the right incentive systems

Identifying and protecting crucial knowledge assets: when such knowledge should not be shared with a partner

Knowledge retention involves capturing knowledge in the organization so that it can be used later. In a previous section on organizational memory, Walsh and Ungson (1991) defined five knowledge repositories, namely individuals, culture, transformations (i.e. procedures & formalized systems), structures (e.g. formal and informal networks), and external activities. This is where knowledge can exist or be retained in an organization. In this section, we are interested in the managerial side, so as to answer the question: How can management promote the retention of (crucial) knowledge?

Organizational Culture

The organizational culture influences the way people interact, the context within which knowledge is created, the resistance they will have towards certain changes, and ultimately the way they share knowledge.

Organizational Processes

The right processes, environments, and systems that enable KM to be implemented in the organization.

Management & Leadership

KM requires competent and experienced leadership at all levels. There are a wide variety of KM-related roles that an organization may or may not need to implement

Technology

The systems, tools, and technologies that fit the organization's requirements – properly designed and implemented.

Politics

The long-term support to implement and sustain initiatives that involve virtually all organizational functions, which may be costly to implement (both from the perspective of time and Money), and which often do not have a directly visible return on investment.

9.5 Creation of Tools

Knowledge creation is all about continuous transfer, combination, and conversion of the different types of knowledge, as users practice, interact, and learn. Content creation and management tools are essential to structure and organize knowledge content for each retrieval and maintenance. It consists of the following tools −

Authoring Tools

Annotation Tools

Data Mining and Knowledge Discovery

Templates

Blogs

Authoring Tools

Authoring tools include the software that allow users to create web page or multimedia applications. These are tools by which various media elements are brought together to structure and flow.

Authoring tools align with the aim of capturing the author's tacit knowledge and helping structure that knowledge into an explicit form.

Annotation Tools

Annotation tools help in addition of explanatory comments to a document after it has been created. The comments can be public as well as private. Tools like track changes in MS Word is an example of annotation tools. This tool also helps with the goal of capturing tacit knowledge by allowing authors to connect their expertise to a certain document.

Data Mining and Knowledge Discovery

Data mining pioneers new or hidden patterns in data that resides in multiple databases. It includes statistical analysis to discover relations, correlation, and market related analysis.

Various analysis tools are approached in data mining such as statistical analysis tools e.g. SAS, data mining suites, and data visualization tools.

This tool accomplishes the goal of creating new knowledge by being able to analyze existing data and making something useful out of it. It also helps in predicting future occurrence and forecast expected outcomes.

Templates

It includes designing or patterning of an item that acts as a guide for designing or constructing similar items. This tool is helpful to organize knowledge in a systematic manner, by following an established design.

Blogs

These are webpages that typically focus on a specific subject. They can be like personal pages that are much like personal diaries which are periodically updated and accessible publicly.

This web tool fits with the aim to elicit knowledge, by authors being able to express their unique ideas and opinions.

Knowledge acquisition refers to the knowledge that a firm can try to obtain from external sources. External knowledge sources are important and one should therefore take a holistic view of the value chain (Gamble & Blackwell 2001). Sources include suppliers, competitors, partners/alliances, customers, and external experts. Communities of practice can extend well outside the firm.

Knowledge acquisition is a topic that could fill books and extend well outside the knowledge management (KM) focus. For this reason, detailed descriptions of how to manage external relationships are beyond the scope of this topic. However, since KM is inextricably linked to corporate strategy, an overview of the options available to the organization will be helpful to understanding the full potential KM role.

This subsection will discuss the knowledge available from the different sources, and the managerial issues that must be considered. In the subsection titled "External Knowledge Network", I will tie this back to the overall strategic level and look at the process behind external knowledge acquisition.

The main sources are of knowledge acquisition are:

Customers

Customer knowledge comes in different forms. Gerbert et al (2002) identify three different types:

Knowledge for customer: The knowledge that the customers can gain inorder to satisfy their knowledge needs.. It can include product, market, and supplier knowledge. It can be sourced from our company or from other external sources like other customers and competitors (Zanjani 2008).

Knowledge about customer: The kind of knowledge that enables us to knowthe customer better, to understand their motivations, and to address them better. Includes requirements, expectations, and purchasing activities.

Knowledge from customer: The kind of knowledge that deals with products,suppliers, and markets. It can be used to improve our products and services.

These three categories apply to actual knowledge acquisition as well as to data and information, which can be processed and used to create knowledge (Zanjani 2008); e.g. data on purchasing habits could be analyzed to create knowledge that could improve marketing or design decisions.

Knowledge sharing is thus important, although it may take many different forms depending on the area of business. KM is particularly important for B2B relationships where the buyers are usually more prominent (i.e. either buy many products or buy expensive products) and the products are more likely to be customized to the needs of the customer. This can, and often should result in a closer relationship with more detailed communication and feedback, where the customers are involved as partners when discussing modifications and improvements (Gerbert et al 2002).

LESSON 10

10.1 Learning objectives

 To understand the concept of knowledge management team

 To understand the roles of the officials in the knowledge management team To understand the responsibilities of the knowledge management team

 To have a detail view of ethics in knowledge management

 To understand political perspective in knowledge management

KNOWLEDGE MANGEMENT TEAM

Managing Organizational Structures

This discussion deals with the physical and non-physical divisions and barriers that influence the way knowledge management (KM) operate. By "organizational structure", I refer to the layout of the company itself and also to the various bodies that exist within it.

It is important to note that many elements within this topic stretch well outside our focus, and volumes could be written on it alone. The focus here will be only on the general elements that are directly related to KM.

Types of Organizational Structures

Organizational structures deal with the way the firm is organized, and the way people relate to one another. Broadly speaking, there are two types of organizational structure, namely formal and informal. These two concepts are not independent, and the formal structure may greatly influence informal networks, both positively and negatively.

Formal: The official structure of the organization, which is normally displayed on an organizational chart, and which denotes the hierarchical relationships between members of the firm. It is beyond the scope of this site to offer a discussion on the various formal organizational structures. However, there are a few things that are relevant to KM:

 The formal organizational structure must not be so rigidly enforced so as to stifle informal structures such as communities of practice, where knowledge sharing and creation may take place. It is the knowledge manager's job to understand the knowledge dynamics of the organization and to recognize how the formal and informal structures coexist.

 The formal organizational structure, particularly in a larger firm with separate departments, will impact knowledge flows. There is no set structure that is best, since most have advantages and disadvantages depending upon the business type, firm size, etc.

However, studies seem to indicate that flatter, decentralized structures are more effective for KM (Choi & Lee 2000, Claver-Cortés et al 2007, Chen & Huang 2007). This also makes sense logically, since knowledge flows would be less hindered in such a structure.

Implementing changes to formal structures can thus mean restructuring the organization, but it can also mean enforcing existing structures to a lesser or greater degree.

Informal: The unofficial organizational structures are the ones that are created through informal networks, as a result of working within the organization. They represent the way people actually interact. Brown and Duguid (1992) advocated looking at the firm as a community of communities. Increasingly, the value of these informal structures is being understood, and the

knowledge manager must learn to identify and support these networks. This process is closely related to KM, since knowledge flows and repositories (particularly tacit) are dependent upon these structures. KM therefore must play a central role in their management, including identification of the structures and the knowledge they hold, implementing changes, bridging gaps between communities, and so on. Unfortunately, implementing changes to informal social networks is difficult without running the risk of disrupting them. There are several ways that managers can influence social networks:

Generalists (sometimes referred to as gatekeepers) can be used to identify communities and their expert know-how, and to help coordinate activities such as cross-functional projects.

Project teams and other teamwork can serve as a means to bridge the gap between communities.

Common physical meeting areas can allow communities to grow and flourish. Virtual socialization and people finders can support communities of practice. Common vision, goals, ideals, social gatherings etc. and a climate of trust can serve as a way to lessen the distance between organizational members and communities.

The skills required for a knowledge management team member ranges from business awareness to management skills, learning abilities, communication and interpersonal skills, as well as information management and information technology expertise.

KM professionals should be proficient in retrieving information, evaluating or assessing information, organizing and analyzing content, presenting content, ensuring the security of content, and collaborating around valuable content.

One of the best approaches for forming an effective Knowledge management team is to define different types of knowledge management professionals and the types of skills, attributes, and background they should ideally possess.

A KM dream team collectively possess skills of communication, leadership, expertise in KM methodology, processes, tools, negotiation followed by strategic planning, combined with the following attributes, i.e., know the organization, remain connected to the top, adopt a systems view, and be an intuitive risk taker.

Leadership and "The Learning Organization"

The term "learning organization", not to be confused with organizational learning, was popularized by Peter Senge. It describes an organization with an ideal learning environment, perfectly in tune with the organization's goals. Such an organization is a place "where people

continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole (reality) together." (Senge 1992).

This subsection will focus largely on the work of Peter Senge, and it will serve as a basis for understanding:

The ideal organizational environment for learning, knowledge management (KM),

innovation, etc, as described through the term "the learning organization".

The leadership qualities necessary for promoting and encouraging this ideal environment.

The Role of Leadership

Senge emphasized the role of the leader in the creation of this learning organization. He defined three leadership roles (1990) that would reshape the old-fashioned approach to being the boss. These are:

Leader as Designer: Senge likens this to being the designer of a ship rather than

Its captain. He defined it in three ways: Creating a common vision with shared values and purpose.

Determining the "policies, strategies, and structures that translate guiding ideas into business decisions."

Creating effective learning processes which will allow for continuous improvement of the policies, strategies, and structures.

Leader as Teacher: The leader here is seen as a coach that works with the mental models present in the organization. He must understand the (usually tacit) concepts of reality and restructure these views "to see beyond the superficial conditions and events [and] into the underlying causes of the problems."

Leader as Steward: This is the vaguest of the three and refers largely to the attitude of the leader. He emphasizes the importance of a leader that feels he is part of something greater; whose desire is first and foremost not to lead, but to serve this greater purpose of building better organizations and reshaping the way businesses operate.

The first two roles outlined by Senge shed a lot of light into the requirements of effective KM and organizational learning.

KM and Core Competencies

The knowledge management definition presented earlier, involved the reuse and creation of relevant knowledge. The word relevant links knowledge management (KM) to the concept of organizational core competencies. Once again, the challenge here is to discuss this subject without diverging too much into related topics that are not directly relevant to KM.

Core competencies:

Definitions vary greatly. The term was originally coined by Pralahad and Hamel (1990) who defined it as "the collective learning of the organization, especially how to coordinate different production skills and integrate multiple streams of technologies". Since then it has been defined in multiple ways, but very generally, core competencies refer to the firm's primary expertise, which is a source of sustained competitive advantage. Arriving at a more precise definition is not necessary for our purpose here. Suffice it to say, that these are key capabilities, which, from the resource-based perspective of the firm, are the primary drivers of innovation and competitive advantage.

Core competencies thus have a large knowledge component, and managing them is, in the very least, a product of corporate strategy working with KM and innovation management. This simplified model has strategy dictating the overall direction, KM managing the knowledge dynamics, and innovation management turning core competencies into profitable core products.

To understand the role of KM let us look at a brief overview of how core competencies are managed:

Identifying and assessing core competencies: The firm should map out its

Key competencies, possibly linking them directly to specific core products. Then, an evaluation must take place, assessing what one has vs. what one needs to have (as determined by strategy and the competitive environment). KM is responsible for identifying where the key knowledge is located, including the tacit expertise and knowledge embedded in products, routines, etc, as well as identifying knowledge gaps.

Sustaining core competencies: Organizational core competencies, like all knowledge assets, have the virtue of improving rather than depreciating through use. Conversely, lack of use will lead to erosion of any skill set. The role of KM here is twofold, on the one hand, it must keep stock of the state of key knowledge assets and, on the other, it must leverage key knowledge assets across the organization.

Building core competencies: Building new core competencies involves an inter play between knowledge, practice, coordination, and refinement. Knowledge assets must be built, enhanced, combined, and coordinated in an environment that supports experimentation and improvement. Building core competencies can be a complicated endeavor since sustained competitive advantage is derived from assets that are hard to imitate (Dierickx and Cool 1989). From a KM perspective, this implies the buildup of specific tacit knowledge and expertise (i.e. uncodified knowledge that is generally more valuable and inherently more difficult to copy and transfer), often across multiple departments or functions.

Unlearning core competencies: Organizations have a habit of trying to keep doing what they have always been doing. Unlearning a competency when it is no longer useful is one of the key aspects of a successful firm, and history is riddled with examples of companies that have failed to do so. In the process of unlearning, KM again plays an important role by identifying and managing the firm's knowledge assets in the right direction. This may be done through re-training, restructuring, creating new knowledge flows, external knowledge acquisition, outright removal, etc.

The specific dynamics of the processes of knowledge creation, knowledge acquisition, knowledge sharing, and knowledge reuse, which are central to the management of core competencies, have been discussed earlier. The purpose of this section is to emphasize that KM is not just a collection of individual initiatives. The buildup of skills and competencies, involving the coordination of multiple KM disciplines with other organizational functions, must often be managed according to long-term strategic goals and coordinated across the organization.

Knowledge Management Roles

The roles involved in knowledge management are quite distinct. These include following categories −

Knowledge leaders, also introduced as **knowledge management champions**,who are responsible for promoting KM within the enterprise.

Knowledge managers are accountable for the acquisition and management of internal and external knowledge.

Knowledge navigators are accountable for knowing where knowledge can be located, also called knowledge brokers.

Knowledge synthesizers are accountable for providing the recording ofsignificant knowledge to organizational memory, also referred as knowledge stewards.

Content editors are answerable for codifying and structuring content, alsoknown as content managers who deal with capturing and documenting knowledge researchers, writers, and editors.

Knowledge Management – Roles & Responsibilities

The primary roles and responsibilities can be summarized as follows −

Designing Information Systems − Includes designing, evaluating, orchoosing information content, database structures, indexing and knowledge representation, interfaces, networking, and technology.

Managing Information Systems − Includes maintaining the integrity, quality, currency of the data, updating, modifying, improving the system, and operating the system.

Managing Information Resources − Includes managing organizational information resources to support organizational missions and for competitive advantage.

Training − Includes coaching, mentoring, community of practice start-up andlife-cycle training support, and feed-back lessons learnt, best practices into training content.

Serving as Information Agency − Playing as information consultants orguides for clients: advising, training, guiding on information, information sources, information use, acting as agents on behalf of clients: gathering, evaluating, analyzing, synthesizing, and summarizing information for clients.

Maintaining Healthy Relations − for information systems/technology.

Designing and generating information services − and products publications, databases, information systems, multimedia products, and stories from storytelling

Workshops − Can be leveraged for developing content for internalorganizational workshops.

Offering Knowledge Journalists − The employees can offer their services byproviding insightful content based on their roles and responsibilities.

ETHICS IN KM

A discipline dealing with Good and Evil and with Moral Duty

How do people decide WHAT is right or wrong?

Philosophy

Religion and values

Conceptions of human nature (what people are like? what makes us human?)

However, ultimately people decide right and wrong based on personal opinions and societal standards.

A few ethical models consider:

Ethics of KM study the impact of KM on society, the organization, and the individual, with a particular emphasis on the potentially damaging effects it might have.

Ethics in Knowledge Management

Ethical theories are divided into three general subject areas −

Meta Ethics − Investigates where our ethical principles, standards come fromand what they mean. Meta-ethical answers to questions on the issues related to universal truths, the will of God, the role of reason in ethical judgments, and the meaning of ethical terms themselves.

Normative Ethics − It takes on a more practical task, which is to reach atmoral standards that regulate right and wrong conduct. This includes articulating the good habits that we should acquire, the duties that we should follow, or the consequences of our behavior for others.

Applied Ethics − It involves examining precise controversial issues, like environmental concerns and how whistleblowers will be treated.

Ethics in Knowledge Management comprises of valuing human beings. Ethics are also considered to be a simple matter, but that is a misconception. Much of ethics can be distilled down to boundaries that can help employees of an organization stay on the correct side of organizational policy and help clarify ethical issues.

Managing ethical liabilities involves four major processes −

Prevention, using codes of conduct and standard operating practices,principles and providing landmarks, fences.

Detection, using automated systems to accomplish and monitor ethicalcompliance and to verify appropriate use of company assets.

Reporting, where employees are able to address unethical behaviors without suffering any retaliation.

Investigation, which often needs outside assistance in order to be thorough, fair and neutral.

CONCLUSION

The roles and responsibilities of various team members in the knowledge management are of special importance to the organization which cannot be ignored. Ethics in knowledge

management can further modified for more improvement for effective functioning of knowledge management.

DEVELOPING A KM STRATEGY

There are 2 main approaches to develop a KM strategy:

Top-down: KM initiatives are based on the organization's overall strategic direction.

Bottom-up: Research is conducted to identify key needs and issues. KM initiatives are developed based on these needs and issues.

Although each approach has its strengths and weaknesses, an effective KM program must encompass both (Robertson, 2004). If KM strategies are simply developed by top management without taking into account the staff's needs, there will be problems in getting the staff involved in the new processes. On the other hand, without management support, strategies will not be implemented successfully. According to Robertson (2004), the process of developing an effective

KM strategy is as followed

First, the key staff groups, or those involved in the most important business activities, have to be identified.

Second, different information collecting techniques such as interviews, surveys, workplace observation, etc. are used to identify the needs and concerns of these groups.

An overall strategic focus must also be identified to provide a guide, or a framework for the KM project.

Based on the research findings, come up with a few alternatives, compare them and select the best alternative.

STRATEGIES ISSUE IN KM

A good Knowledge Management strategy possesses the following components −

A Stated Business Strategy and Objectives − It should have products orservices, target customers, referred distribution or delivery channels, characterization of regulatory environment, mission or vision statement.

A Description of Knowledge-Based Business Issues − Need forcollaboration, need to level performance variance, need for innovation, and need to address information overload.

An Inventory of Available Knowledge Resources − Knowledge capital,social capital, infrastructure capital.

An Analysis of Recommended Knowledge Leverage − Points that briefswhat can be done with the above-identified knowledge and knowledge artifacts and lists Knowledge management projects that can be undertaken with the intent to maximize ROI and business value.

Collection / Overview of Knowledge Inventory

The knowledge inventory should list and connect all necessary information about the above mentioned: people, routines and procedures, content and technology. Thus, the knowledge inventory is a meta-information centre. Collecting and summarizing this knowledge inventory already is a critical first step where barriers will be encountered.

1. Expert's Analysis

The expert knowledge manager can be used to identify the first signs/avenues for enhance-ments – just from analyzing what is given in knowledge inventory. Considering that the successful implementation of KM can only be achieved when all players are properly involved in the process, the expert's external analysis is only an initial step in defining KM activities.

2. Participatory Analysis

Having the personnel aboard and giving them the space to reflect on their own situation, their own input and their own needs provides very valuable hints. In most cases, participation will strengthen the process and the chances for a change. Participatory processes also help external advisors to understand how the organization 'functions' from within.

3. Proposal of Interventions

As a next step, personnel involved should work on creating ways to improve knowledge management in the future. Summarizing ideas that have been developed in a participatory manner, and proposing alternatives to resolve bottlenecks and realize enhancements, is one of the main tasks for a knowledge manager. These alternatives may consist of various approaches, like implementing new routines, collecting new information, using new technology, etc.

4. Conducting Selected Interventions

After – in best case: participatory – prioritization and decision on activities on how to enhance the management of knowledge, these activities should be implemented – thus creating a change in the inventory.

5. Knowledge Management System:

The formalized process of updating technologies, routines, organizational structures and personal skills would then be called 'Knowledge Management System'.

Challenges and Future of Knowledge Management

KM can be taken as a standalone discipline or as part of a broader education. KM courses and certifications exist at all levels, though it is usually taken as a graduate level subject. As with all subjects, the depth of the course will affect the kind of position that you are qualified for within the spectrum of KM-related positions (see "Knowledge Management Positions and Roles"). The types of educations that might include KM (but not mention it in the title) typically deal with subjects such as innovation, IM, technology management, intellectual capital, and so on.

Generally speaking, KM programs tend to have either a managerial/business or an IT focus. Since KM is now inextricably linked to technology at least to some degree, there will be a certain degree of overlap; however, the educational programs available in the various institutions do tend to have a "business school" or "IT school" focus. Similarly, positions in companies often reflect this. This means that some programs will focus more extensively on the details of KMS architecture, the design/implementation of expert systems or intranets, and so on, while others will focus more on the tacit nature of knowledge, on organizational culture issues, and on the management of people & teams.

Whichever kind of program you choose, it is important to remember that even though technology is an important part of KM today, it is never a solution in itself and it should be used carefully as part of a broader KM strategy.

In its basic form, knowledge management is about converting available raw data into understandable information. The information is then placed in a reusable repository for the benefit of any future need based on similar kinds of experiences. Knowledge management contributes towards streamlining the ideas problems, projects and deployment driving towards productivity. But, it more than just knows everything your organization knows, it’s creating a synthesis between the people and the information to the point that the whole is more than the sum of the parts.

Today's Knowledge Management Challenges

Security: Providing the right level of security for knowledge management is key. Sensitive information should be shielded from most users, while allowing easy access to those with the proper credentials.

Getting people motivated: Overcoming organizational culture challenges and developing a culture that embraces learning, sharing, changing, improving can't be done with technology. There is no use in launching a tool if there is no drive to share the knowledge.

 Keeping up with technology: Determining how knowledge should be dispensed and transferring it quickly and effectively is a huge challenge. Constantly changing structures mean learning how to be smart, quick, agile and responsive – all things a KM tool must be able to accomplish.

Measuring knowledge: Knowledge is not something that can be easilyquantified, and is far more complex because it is derived out of human relationships and experience. The focus should be on shared purpose rather than results or efforts.

Overcoming shared leadership: KM tools allow others to emerge as voices of power within an organization. Workers are given a "voice", which can sometimes cause internal conflict.

CONCLUSION

There is vast scope of discussions and space for new strategic issues in knowledge management. The future of knowledge management is full of opportunities with few obstacles as well which needs due recognition to overcome it successfully.

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