Supporting Techniques of Knowledge Management and its Future Prospects

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ABSTRACT

"Knowledge Management is the key to success in the organization as with the help of this key you can open many locks of hurdles and problems"

Every organization big or small requires a lot of information or knowledge for carrying out all of its activities. With the emergence of knowledge based economy, organizations are realizing the fact that knowledge is a resource requiring explicit and specific management policies to be processed proficiently. Developing knowledge increases the innovative ability of employees which can be applied for achieving additional values. The paper focus on the techniques employed for managing knowledge within the organization for example, SWOT analysis, balanced scorecards & RADs (Role Activity Diagrams). The main purpose of the study has been to help improve knowledge management through several knowledge management techniques in order to accomplish the goals faster and more cost effectively, with gaining edge over competitors.

Keywords: *Knowledge Management, Organizational Knowledge, Knowledge Management Techniques*

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Introduction

"The single greatest challenge facing managers in the developed countries of the word is to raise the productivity of knowledge and service works." -

Peter F. Drucker 1909-2005, American management guru, in Harvard Business Review Nov-Dec 1991

Knowledge Management (KM) is a new branch of management which helps in achieving better business performance through the people, processes and technologies. It seeks to change the present pattern of the knowledge which enhances both the organization and the outcomes of the organization. Knowledge management focuses on various grounds for example the management of change, uncertainty, complexity etc.

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In the early 19th century the railroad was new for the business enterprise, in the 20th century the assembly line was new for the manufacturing and in the same way the knowledge management is proving to be just that new thing. The 'information' and 'knowledge' are playing such a vital role in the modern business organization that the present time is referred to as 'the information age' or 'the knowledge economy'.

Revolution means a great change. In the Indian history there are three main revolutions i.e. Green Revolution, Industrial Revolution and the information Revolution. Earlier there comes green revolution. It was related to the greenery in the agricultural field. Then there comes industrial revolution. In the industrial revolution it was related to labor intensive and capital intensive. At present it is the time for the knowledge revolution is education intensive and human intelligence intensive. The figure 1 depicts various types of these revolutions:

Revolutions in the Indian History
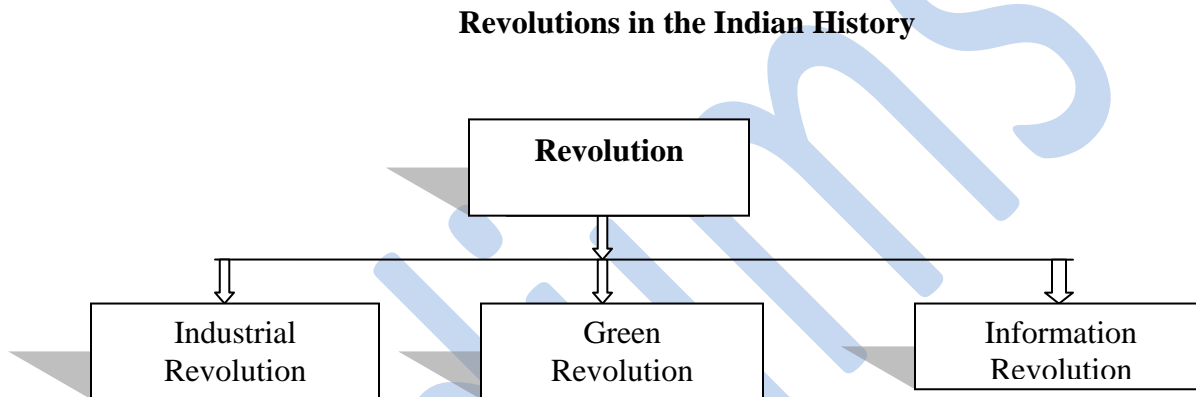
(Figure 1)

Information Revolution is the revolution with so many information based intelligent products available in the market. The word knowledge Management can be studied by splitting it as under:

Knowledge management= Knowledge +Management

To understand the precise meaning of Knowledge Management one must understand the meaning of knowledge and the meaning of management exactly.

Meaning of Knowledge

"People are difficult to govern because they have too much knowledge"

- The way of Lao-tzu, (604 BC-531 BC)

Knowledge is a defined body of information. Knowledge represents information that is put to productive use through development of strategy, practice, method or approach.

The knowledge tells the practitioner how to do a particular thing. Different expert have given different views regarding knowledge.

''Knowledge has the highest value, the most human contribution, the greatest relevance to decisions and actions, and the greatest dependence on a specific situation or context. It is also the most difficult of content types to manage, because it originates and is applied in the minds of human beings''- **Grover and Davenport, 2001**

"Knowledge is the only meaningful resource today."- **Peter.F. Drucker**

"Knowledge is experience. Everything else is just information."- **Albert Einstein**

"Knowledge refers to a person's state of being with respect to some body of information. This state may be of ignorance, awareness, familiarity, understanding, facility, and so on."- **Fred Nickols**, Executive Director, Strategic Planning and Management, Educational Testing Service.

Some of the most important characteristics that set knowledge apart from other resources:

- ➢ knowledge is intangible and difficult to measure
- ➢ knowledge is volatile, that is it can "disappear" overnight
- ➢ knowledge is most of the time embodied in agents with wills
- ➢ knowledge is not "consumed" in a process, it sometimes increases through use
- ➢ knowledge has wide ranging impacts in organizations (e.g. "knowledge is power")
- ➢ knowledge cannot be bought on the market at any time, it often has long lead times
- ➢ knowledge is "non-rival", it can be used by different processes at the same time

Distinction between Knowledge and Information

The word Knowledge is very distinct from information. The different characteristics of knowledge and information are presented in the following table 1:

Distinction between Knowledge and Information

Knowledge	Information
Knowledge is created by understanding and analysis of information.	Information is created through processing of data that is already available.

Knowledge is the output of thinking.	Information is the input for thinking.
Knowledge belongs to individuals and communities.	Information resides in hard and soft form in different media.
Knowledge moves around in communities	Information is static until it is accessed.
Knowledge is a human process.	Information relates to data and facts.

(Table 1)

Meaning of Management

The word management is made as:-

Manage + Men + T (Tactfully)

Management is as old as the history itself and it can be found everywhere.   Management means managing the things tactfully. In the Knowledge management, the manager is going to manage the knowledge in such a way that it produce fruitful results for the both the internal organization and the external people.

Knowledge Management

The practice of Knowledge management has been in existence in the past as well. Corporations had some processes to synthesize their experience and integrate it with information acquired from outside sources to create useful knowledge pool for managing organizational operations.   But, with the advent of information technology and development of computing power, knowledge management has acquired a very critical role in the growth and survival of business organizations. Experts have defined and interpreted knowledge management in their own ways. Knowledge management is hard to define precisely and simply. It is defined in a number of ways by the different experts' ''Knowledge management is the generation, representation, storage, transfer, transformation, application, embedding, and protecting of organizational knowledge''- Schultze **and Leidner, 2002**

''For the most part, knowledge management efforts have focused on developing new applications of information technology to support the capture, storage, retrieval, and distribution of explicit knowledge''- **Grover and Davenport, 2001**

"Knowledge management is not just about creating a library or an archive where one has all kinds of information available at the click of a mouse. Instead, it is about ensuring that employees access and use the documented knowledge that is availble within the system, to perform better in their day-to-day business dealings along with bringing

strategic benefits to the organisation."- **S.K Palekar**, Senior Vice President, Marketing and Knowledge Management at Eureka Forbes

Techniques employed for managing knowledge

Success in an increasingly competitive marketplace depends critically on the quality of knowledge which organizations apply to their key business processes. For example the supply chain depends on knowledge of diverse areas including raw materials, planning, manufacturing and distribution. Likewise product development requires knowledge of consumer requirements, new science, new technology, marketing etc.

A. SWOT analysis

A SWOT analysis is a structured group activity that's useful in identifying the **internal** and **external** forces that drive an organization's competitive position in its market.

Procedure:

A SWOT analysis involves seven steps:

1. Define "SWOT" for your meeting participants.
2. Analyze the **internal** environment.
3. Analyze the **external** environment.
4. Clarify ideas.
5. Narrow the list.
6. Develop a strategy.
7. Write action plans.

Step 1 Define what "SWOT" means for your meeting participants
SWOT is an acronym for **S**trengths, **W**eaknesses, **O**pportunities and **T**hreats. For purposes of this exercise, we define each as follows.

Strengths identify any existing or potential resource or capability *within* **the organization** that provides a competitive advantage in the market. For example, an organization might define it's capabilities as having *a strong distribution network*, *intense employee commitment and loyalty*, *increasing profit margins*, etc.

Weaknesses point to any existing or potential *internal* **force** which could serve as a barrier to maintaining or achieving a competitive advantage in the market. For example: *lack of a clear company strategy*, *lack of training opportunities for using new technologies*, *inability to rapidly indoctrinate new employees*, and so on.

Opportunities are existing or potential forces in the *external* **environment** that, if properly exploited, could provide a competitive advantage. For example: *high customer satisfaction ratings*, *raving fans*, *proprietary technologies*, *new technologies*, and so on.

Meanwhile, **Threats** pertain to any existing or potential force in the ***external environment*** that could inhibit the maintenance or attainment of a competitive advantage. Here, examples might include: *a new competitor*, a *recession*, *rising (or even lowering) interest rates*, *tight credit lines*, etc.

Step 2 Analyze the internal environment. (i.e., Strengths, Weaknesses.)

Ask knowledge manager to identify the **Strengths** of the organization. Questions that you might consider asking include:

- What strengths are unique to our (company, organization, department...)?
- What differentiates us from the competition?
Next, ask knowledge manager to identify the **Weaknesses**. Questions to consider include:
- What knowledge do we lack?
- What skills do we lack?
Step 3 Analyze the external environment. (i.e., Opportunities, Threats.)

Ask knowledge manager to help you list **Opportunities**. Questions that you might consider include:

- What additional services can we offer existing clients?
- How can we engage our highly satisfied customers and raving fans to expand our offerings?
- What new markets are we positioned to enter?
Finally, ask knowledge manager to do a similar exercise in identifying **Threats**. Questions to consider:
- Who are our closest competitors?
- What new companies are poised to enter our market?
- What environmental or regulatory issues might affect our industry?

The resulting list might look something like this:

Figure 5 the SWOT Analysis
Source**: http://aclaro.blogs.com/.a** /**6a00d8345161c269e20120a7332e6d970b-pi**

Step 4 Clarify ideas

Review each idea within each of the domains; ask clarifying questions while discussing the underlying drivers of each idea. It will help to ask members who presented an idea to help clarify and explain to the rest of the team what they meant about the idea. Remember, the goal in this step is to *clarify*. Avoid debating the importance of any particular idea.

Step 5 Narrow the list. (If needed)

This step will likely require the use of some kind of facilitative "narrowing" technique to help combine similar ideas. It may be a mixture of a number of ideas which may form a good new idea.

SWOT is also a technique that can help sole proprietors, small business owners and as well as large industrialists to conduct business planning for the New Year or new quarter.

Step 6 (Develop a Strategy) and Step 7 (Develop Action Plans)

The key thing is not to stop after you've narrowed your list into tight little bundles of Strengths, Weaknesses, Opportunities and Threats. Strategy development and Action Planning are meaty topics in themselves.

On the basis of above analysis you will attain knowledge and on the basis of which a new strategy of an action plan can be implemented.

B. Balanced scorecards

Proper monitoring of each and every aspect is the main requirement of knowledge management. The Balanced Scorecard can – and should – be used by both small and large organizations. In this respect, key performance indicators (KPIs) can be used as an accommodating tool. For knowledge management, KPIs can be divided into four major perspectives-

- Financial perspective,
- knowledge preservation perspective,
- knowledge creation perspective and
- Knowledge distribution perspective.

Financial perspective includes such indicators as % savings in cost, percentage increase cost of training in KM activities, percentage change in document storage cost per repository and percentage change in administrative and operational cost.

Knowledge preservation perspective is durable memorization of the relevant information. Steps to modify a document, paper to electronic document ratio, frequency of updates and percentage compliances are the KPIs included in this perspective.

Knowledge creation perspective deals with the expansion of organization's knowledge through its acquisition and development. KPIs such as number of knowledge sharing sessions, % of staff trained in KM activities, percentage increase in searches per repository and number of collaborative contributions come under this perspective.

Knowledge distribution perspective includes number of bulletin distributed to the employees, % use of intranet, number of mentoring & coaching relationships and KM briefings and communication sessions facilitated.

For efficient performance improvement and management with Balanced Scorecard, it is not enough to create just a top-level scorecard for top managers. The scorecard should go deep into the organization structure, e.g. scorecard of CEO should be linked to scorecards of top managers and scorecards of top managers should be linked to scorecards of their employees. That idea is called *Cascading Scorecard*.

For instance, the manager of the HR department can place his scorecard on the web-server. The CEO of the company can connect to this scorecard and use its indicators or performance values of the whole category or the performance value of the scorecard. This way, the user can link to scorecards located on the web site, file in the network or hard disk.

Balanced scorecard implementation steps

- Create good scorecard to be followed in the organization.

- The first step in KPI implementation is testing. You should test your scorecards and check if your employees are able to understand what you have created. If your indicators are measurable and clearly described then you will see soon that people can use your scorecard. If there are some problems, find them and fix them.
- The second step, you should start using in your KPI real data. It is very important, as people will not take it seriously unless it will be using real information from your business.
- The third make sure you can easily share results of scorecard with your employees. It is important that everybody in your company have information about performance indicators.
- Use implemented scorecard for some time, and then try to obtain feedback from people involved in usage of scorecard.

C. Role Activity Diagrams

Role Activity Diagrams (RADs) are a useful way of describing processes. They are valuable in documenting processes as they are now, and as they might be in the future. Role Activity Diagrams are a reasonably simple diagramming technique. It is not difficult to learn how to draw them and it is not difficult for most people to interpret them.

A RAD depicts:

i. The Roles played by participants within a process;
ii. The information resources available to each Role;
iii. The activities within each Role; and
iv. How the Roles interact.

In particular, a RAD caters for flexible, dynamic activity. Rather than prescribing fixed sequences of behavior, it is used to show precisely which information resources are needed by whom, under what conditions they become available and are required, and how these resources are used.

Roles

- Role - a set of activities which when taken together achieve some particular goal.
Roles are drawn as sets of boxes:

Officer

Chairman
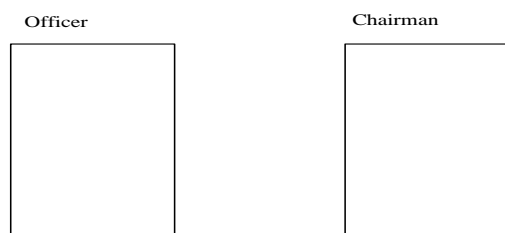
Figure 6. Role bodies

In Figure 7, we start to construct a Role Activity Diagram by focusing on two roles 'Officer' and 'Chair.'

Activities

- Activities - the items of work that people do.

Activities are represented as boxes within a role.

Officer   Chairman
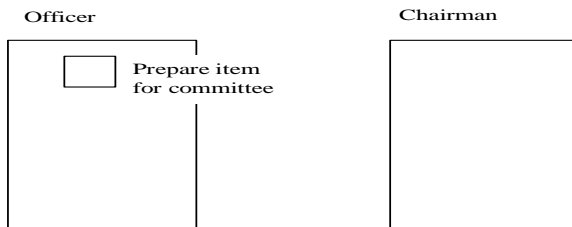
Prepare item
for committee

Figure 7. An Activity

In Figure 8 we see that an activity has been added to one of the role bodies. This is 'Prepare item for committee' and is performed within the role 'Officer.'

Ordering

- Ordering - activities are ordered by state. The vertical lines linking activities denote the different states of the role. Formally then it can be understood that completion of the activity. The completion of on activity leads to the starting of another activity. In the figure 9 the ordering is shown by the vertical line.
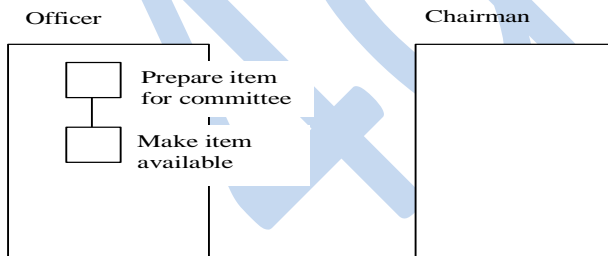
Officer   Chairman

Prepare item
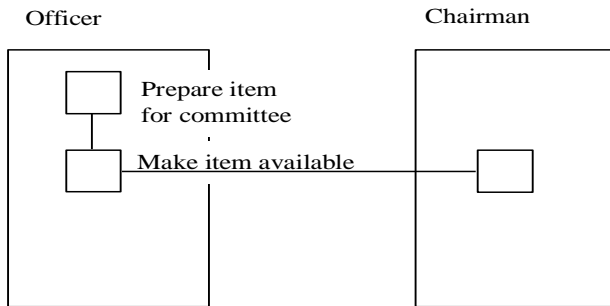for committee

Make item
available

Figure 8. Ordering

Interactions.

- Interactions – the point at which a role interacts with another role in order to fulfil an objective. Interactions are shown by a horizontal line linking two boxes.

Officer   Chairman

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┌──────────────────────┐         ┌──────────────────────┐
│  ┌───┐  Prepare item  │         │                      │
│  └───┘  for committee  │         │                      │
│  ┌───┐  Make item available      │      ┌───┐          │
│  └───┘────────────────────────────────  └───┘          │
│                        │         │                      │
│                        │         │                      │
└──────────────────────┘         └──────────────────────┘
```

Figure 9. Interaction

With the help of this the knowledge manager set the roles of various personnel of the organization. The technique helps the manager to record the information of the different departments of the organization. Moreover the knowledge manager can also have the information of the subsidiaries of the organization and as well of outsiders.

Knowledge Management Roadmaps

Knowledge Asset Road Maps highlight the critical knowledge assets required by an organization to meet market needs five to ten years in the future. They are mechanisms enabling organizations to visualize their critical knowledge assets, the relationships between these and the skills, competencies and technologies required to meet future market demands. They allow:

- Individual knowledge management actions to be defined and justified in terms of their contribution to the overall aims.
- Effective communication of the work and progress on the programme to the participants and observers.
- Management aids for those involved in carrying out the programme and measuring its progress.
- More effective communication between users, researchers, technicians, managers and directors involved in the various aspects of the programme.
- Sensible decisions to be taken on the opportunities for further exploiting the results of the programme.
- The identification of knowledge gaps that need to be filled.

The Road Map is a living document regularly updated and serves as a framework for the monitoring of the knowledge management programme. The document reflects the current state of the interrelationships between work in progress and proposed for the future. (Macintosh,A.,Filby,I.&Tate,A.,1998).

The Future of Knowledge Management

"Organizations are becoming more Knowledge intensive they are hiring 'minds' more than 'hands".

From the last few years there is a lot of talk about knowledge management as the role of knowledge management is increasing day by day. Before Knowledge management, the in which people shared knowledge was person to person, just in time and in the context of solving a specific business problem. With the help of this valuable force the corporate and other sectors are going on the path of success and ultimately achieving their goals. People are natural knowledge managers. They receive new information all throughout each day and they decide what to retain and what to ignore. They learn and get smarter as a result of every experience.

Many companies are investing in knowledge management these days. Companies are getting bigger and more disconnected. What is known in one office may have never even been heard of in another. The more people write down what they know and what their experiences have been, the more important it is to be able to access that information without specifically asking for it. One person won't know that another has just written. The KM system must be able to realize that the experience that Joe has just had will help Mary with the problem she is working on now.

The original premise of knowledge management was that if the most valuable resource of organizations' is knowledge, then it should be leveraged and made more productive Knowledge management has provided the foundation for dramatic improvements in organizational performance. There are most organizations; especially large ones organizations are spending a huge amount on the knowledge management. They are investing in the expectations that KM would be able to improve

- Growth and innovation in organizations,
- Productivity and efficiency (reflected in absolute cost savings),
- Customer relationships,
- Employee learning, satisfaction and retention, and
- Management decision making.

The greatest challenge to business management in the 21st century is, and will be, improving the personal productivity and effectiveness of front-line workers doing increasingly complex and unique jobs, which is possible by knowledge Management. It is rightly said –

"Our goal is to make it easier for a knowledge worker to create and share unique results."

-- Jim McGee, Professor, Kellogg School of Business, Oct. 2003

In a world of growing complexity it is critical to ensure sufficient distribution of the existing knowledge throughout the company. This allows the use of Knowledge Management in the enterprise. The future of knowledge management lies in a better integration into the common business processes, a concentration on the human-organization-interface and a better match of IT-aspects to human factors.

The future value of knowledge management in a corporate context is dependent on the discipline's ability to overcome many of the limitations of its current guise. The Knowledge management in future will be called upon as 'new knowledge management'. The new KM focuses on the whole of knowledge processing, both knowledge integration (including sharing) and knowledge production.

Knowledge Management is managing the knowledge in different areas and of different departments. I suggest knowledge management is really about:

- managing information - explicit/recorded knowledge

- managing processes - embedded knowledge

- managing people - tacit knowledge

- managing innovation - knowledge conversion

- managing assets - intellectual capital

Moreover researches should be continued on this perspective knowledge management. Knowledge management techniques and methods should be adopted to achieve the goals efficiently and effectively for bright future of Knowledge management.

Conclusion

Knowledge management involves a strategic commitment to improving the organization's effectiveness, as well as to improving its opportunity enhancement. The goal of knowledge management as a process is to improve the organization's ability to execute its core processes more efficiently. Knowledge Management is continually discovering what an organization knows—codifying tacit knowledge, Data Mining, and Business Intelligence; continually increasing what the organization knows—organizational learning and communities of practice, and continually organizing and disseminating explicit knowledge for use throughout the organization.

Knowledge management is the set of proactive activities to support an organization in creating, assimilating, disseminating, and applying its knowledge. Knowledge management is a continuous process to understand the organization's knowledge needs, the location of the knowledge, and how to improve the knowledge.

This is not to say that enabling people to contribute effectively to the management of organizations is impossible and that sharing knowledge and enabling people to use their

creativity in innovative ways in organizations is impossible - simply that it is very difficult, and that it does not reduce to some simplistic concept of 'knowledge management'! It demands the use of proper tools and techniques to collect the knowledge retain and use the knowledge for the benefit of the organization.

Bibliography:

1. The Icfai University Journal of Knowledge Management Vol. VIII No. 1 & 2 January & April 2010, p.p. 57-61.

2. KPMG. "The Knowledge Journey: A Business Guide to Knowledge Systems,"1999.

3. Ghuman Aswathappa, Management concepts, practices and cases, 2010, Tata McGraw Hill publication, pp 592-600.

4. Kelloway E K and Barling J (2000), "Knowledge work as organizational Behaviour", International Journal of Management Review, Vol 2, No 3, pp 287-303.

5. Tuomi Ilkka (1999), "Data is More Than Knowledge: Implication of Reversed Knowledge Hierarchy for Knowledge Management and Organizational Memory", Journal of Management Information System, Vol. 16, No. 3, p.p 105-116.

6. The Icfai Journal of Knowledge Management Vol. VI No 2, March 2008, p.p17-25.

7. Andriessen, Daniel (2004). "Reconciling the rigor-relevance dilemma in intellectual capital research", p.p 393-401.

8. Chaudhry, AS& Higgins, SE 2001, 'Perspectives on education for Knowledge management'.

9. Bellinger G, Castro D and Mills A (1999), "Data, Infromation, Knowledge and Wisdom", available at www. Outsights.com/systems/dikw/dikw.htm.

10. Alavi, M ., and Leidner, D.E. "Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues," MIS Quarterly , 2001, p.p.1-25.

11. Nonaka I (1994), "A Dynamic Theory of organizational Knowledge Creation", organisation science, Vo. 5 No.1, p.p. 14-37.

12. Leibonitz J and Chen Y (2001), "Developing Knowledge Sharing Proficiencies", Knowledge Management Review, Vol 3, No.6, 2001.

13. Prusak (2001), "Where did Knowledge Management Come Rrom?" IBM System Journal, Vol 40, No 4, 2001.

14. Bhatt G (2001), "Knowledge Management in organizations: Examining the Interaction between Technologies, Techniques, and People." Journal of Knowledge Management, Vol. 5, No.1, p.p. 68-75.

15. Polanyi, M. The Tacit Dimension. London: Routledge & Kegan Paul

16. Khanna, S. (1996). 'The New People Economy', Business Today, Fourth Anniversary Issue, January 7-21, 1996, pp.12-17.

17. http://www.brint.com/km/

18. http://www.bscdesigner.com/cascading-scorecards-connecting-to-external-scorecards.htm

19. http://knowmgt.blogspot.com/2007/07/goals-and-objectives-of-knowledge.html

20. http://www.systems-thinking.org/kmgmt/kmgmt.htm

21. F:\Knowledge management Balanced Scorecard (BSC) Metrics (KPI) Template for Excel.htm

22. http://en.wikipedia.org/wiki/Knowledge_management

23. http://www.systems-thinking.org/dikw/dikw.html.