

KNOWLEDGE MANAGEMENT AND ROLE OF INFORMATION COMMUNICATION TECHNOLOGY

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Abstract: -

This paper describes knowledge management concept, need and benefits. The Role of Information Communication Technology in knowledge management is given briefly. Information Communication Technology based tools for knowledge management described with their role and examples. The article aims to generate awareness about the knowledge management and Information Communication Technological tools of knowledge management.

Keywords: Knowledge, Knowledge Management, Information Communication Technology, ICT Tools.

1. Introduction

Looking to the globalization and industrialization that have been taking place rapidly across the globe, most of the organizations have realized that knowledge is one of the most precious assets for internal and external growth of organization. The biggest challenge for an organization is to capture, store, retain and sharing knowledge. Cameron (2000) noted that “Knowledge is

power, but without having the adequate knowledge about the suitable management of it, the consequences would definitely be devastating.” It is also rightly said that “Knowledge is the awareness and understanding of a set of information and ways that information can be made useful to support a specific task or reach a decision”. Needless to say that knowledge is closer to action than either information or data. More

recently, corporate efforts are focusing on a class of technologies referred to as knowledge-management systems (KMS) (Leech and Sutton).

Knowledge management (KM) is nothing but the judicious progression of creating, sharing, using and managing the knowledge and information of an organization. It refers to a multidisciplinary approach to achieving pre-defined organizational objectives by making the best use of collected knowledge.

Knowledge management can be defined as under

- (1) To garner knowledge.
- (2) To translate personal knowledge amongst all.
- 3) To connect people to people, people to knowledge, knowledge to people, and knowledge to knowledge.
- (4) To appraise that knowledge to facilitate management of resources and helps to understand its evolution.

The ultimate aim of knowledge management is to create knowledge assets and thereby achieve organizational usefulness by optimum utilization of gathered information or data. A successful Knowledge Management program will consider more than just technology. An organization should also consider below cited important factors that

directly impact the performance of group or organization:

- **People** - They symbolize how to increase the ability of individuals within the organization to influence others with their knowledge.
- **Processes** – It is proven truth that efficient and accurate identification, management and spreading knowledge across the organization really require remarkable and constant efforts so that the best business practices must be established.
- **Technology** – To enable the knowledge management purely depends on selection, configuration and proper utilization of tools and automation.
- **Structure** – Knowledge Management gives clear cut direction to help people to transforming the organizational structure and promote cross-discipline attentiveness and proficiency.
- **Culture** - It embodies how people establish and nurture a knowledge-sharing, knowledge-driven culture.

2. Knowledge and Knowledge Management

Invariably, knowledge is one of the most valuable organizational assets so it should be preserved and managed tactfully. By and large, employees use their knowledge gained over period of time and their colleagues' knowledge every day to fulfill daily tasks, to meet business challenges and to contribute significantly to their companies' overall development. Without possessing adequate and proper knowledge, business processes would undoubtedly not produce the satisfactory outcome. Every company has certain knowledge. Nevertheless, just having knowledge is never enough to take advantage of it. That's when knowledge management comes to the stage.

It is precisely systematic management of the valuable assets gained over period of time by the management for the use of creating value and meeting premeditated needs. It mainly comprises the initiatives, methods, strategies and systems, that uphold and boost the storage, appraisal, allocation, fine-tuning and at the last formation of knowledge.

In whatever forms, the knowledge exists; the prime requirement of the organization is to know and endorse a advantageous culture to learning and allocating the knowledge which would be readily available to the right people at the

right time so as to augment overall performance in light of the ultimate goal of organization and also to meet the internal and external threats as well.

It must incessantly assess, apply, purify and remove organizational knowledge in conjunction with solid long and short term factors.

Organization adopts knowledge management because of different reasons and can aim at different goals that are listed below:

- To enhance customer relationship management.
- To optimize a particular business domain and overcome competitors.
- To enter in a new business area.
- To ensure knowledge retention within a company.
- To prevent knowledge leaks if there is an intensive employee turn-over and more.

In all cases, knowledge management helps companies to see clearly what knowledge they have, identify important knowledge domains critical for organizational success, find out key knowledge experts and implement relevant tools and practices to improve corporate knowledge.

Variouly defined knowledge as, "Things that are held to be true in a given

context and that drive us to action if there were no impediments" (Andre Boudreau). "Capacity to act" (Karl Sweiby). "Justified true belief that increases an entity's capacity for effective action" (Nonaka and Takeuchi). "The perception of the agreement or disagreement of two ideas" (John Locke). In an organizational perspective, knowledge is the sum of what is known and resides in the intelligence and the competence of people.

The full scope of knowledge management (KM) is not something that is collectively accepted. However, before one looks at the differences in the definitions, one should see the similarities, too. Then and then only, one can keep the realistic balance between them.

In the words of Peter Drucker it is "the coordination and exploitation of organizational knowledge resources, in order to create benefit and competitive advantage."

Wellman (2009) limits the scope of KM to lessons learned and the techniques employed for the management of what is already known. He argues that knowledge creation is often perceived as a separate discipline and generally falls under innovation management.

Bukowitz and Williams (1999) link KM directly to tactical and strategic requirements. Its focus is on the use and enhancement of knowledge based assets to enable the firm to respond to these issues.

According to this view, the answer to the question "what is knowledge management" would be significantly broader.

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."

It is important to bear in mind that knowledge management is not about managing knowledge for only knowledge's sake. Implementing knowledge management thus has several dimensions including:

- **Policy and Process:** The organization should put its salient efforts to frame such a policy and then its process keeping in mind the central objective which could be to manage, to allocate and to form pertinent knowledge assets that could help to meet the well planned needs in order to implement the knowledge management with the flying colours.
- **Organizational Culture:** Undoubtedly, the established organizational culture influences the people from the top to bottom. It

definitely reflects one way or other in their interaction and behavior as well.

- **Management & Leadership:** Knowledgeable and proficient leadership is highly needed particularly in the top management level. As they are the people who have to play a very crucial role in successful implementation of Knowledge Management.
- **Technology:** Only the properly and suitable designed system with all necessary tools and technology helps to fulfill the organization requirements.
- **Politics:** The long term support to execute and even to maintain the initiatives that involves in nearly all organizational functions may not be profitable to implement KM. It is also seen that because of such situation, it often does not produce noticeable return on investment.

3. Need for Knowledge Management

Knowledge Management is based on the idea that an organization's most valuable resource is the knowledge of its people. This is not a new concept, but most of the organizations have been managing their human resources very vigilantly from last few years. Then, every now and then the question arises - what is new in this concept? It is the apparent focus on knowledge. This focus is

being driven by the accelerated rate of change in today's organizations and in society as a whole. Knowledge Management recognizes that today nearly all jobs involve "knowledge work" and so all staffs are "knowledge workers" to some degree or another – meaning that their job depends more on their knowledge than their skills. This means that creating, sharing and using knowledge are among the most important activities of nearly every person in every organization.

The major benefits of the knowledge management are listed below:

3.1. Enabling better and faster decision making

A well designed knowledge management system can furnish an environment for making valuable decisions by delivering pertinent information at the time of need.

3.2. Making it easy to locate applicable information and resources

The KM system makes it easy to locate the applicable information and resources while responding to a customer, solving a problem, assessing market trend, setting up yardstick against peers, recognize competition and to think out of the box, information and resources support these activities. It is easy and fast to locate

what is required and when it required to perform tasks efficiently.

3.3. Reusing ideas, documents, and expertise

As it is rightly said that recycling of any waste materials is good for the environment, similarly the reuse of ideas, documents and expertise is also good for any organization since it reduces rework, saves time, prevents problem and accelerates development. It is only possible when an effective process is developed and established across the organization. At the same times, one should also ensure that others should use the same process every time when similar need arises.

3.4. Averting outmoded effort

By not spending time in reinventing the wheel, you can have more time to invent something new.

3.5. Avoiding mistakes repeatedly

George Santayana said, "Those who ignore history are doomed to repeat it." If we don't learn from our mistakes, we will experience them over and over again. When we know that success and failure are two sides of a coin, we must learn the lessons from our past experience to avert

failures and well designed KM system gives us a great opportunity for the same. In order to do so, we must have a culture of reliance, frankness and reward for willingness to talk about what people have done wrong. The probable benefits are enormous.

3.6. Taking advantage of on hand proficiency and experience

Teams of people in organization can be benefitted from the individual's skills and knowledge of each member. There are versatile people in the organization and organization must be able to take encouraging benefit from this. However, it is also true that as the number of people in organization increases, it becomes more intricate for each individual to know about everyone else. Because of this, many a times it happens that there are people with sound knowledge who could help others significantly, people do not know about others who are in need of their proficiency.

3.7. Communicating imperative information widely and quickly

It could not be wrong if we say that in current scenario; almost everyone is an information worker, either wholly or

partially. It is also true that because of excess availability of information, many a times, we find ourselves in the horns of dilemma. In such situation, the KM helps to overcome this problem through personalized portals, targeted subscriptions, tagging, and enterprise search engines.

3.8. Promoting standard, repeatable processes and procedures

The customary and defined process and procedure must be followed across the organization to get desired result. Such thing assists the employees to learn the things in a better way. It enables the large organizations to be consistent in work performance.

3.9. Furnishing methods, tools, templates, techniques, and live examples

The frequent usage of pre defined methods, contemporary tools, templates, techniques and live examples enable the organizations to rationalize the work, to get better quality and also to make sure compatibility across the organization.

3.10. Making scant expertise widely available

If there is a resource that is in great demand due to having a skill that is in

short supply, knowledge management helps in making that resource extensively available to the entire organization.

3.11. Making customers aware about how knowledge is used for their benefit

As per current scenario in the market, it is very important to be differentiating firm with other similar firms. It is also worth to take the potential and current customers in confidence in respect of bringing benefits to them through the widespread expertise which the organization has. This could help to influence them to begin or continue doing business.

3.12. Accelerating delivery to customers

In the current modern era, timely delivery of product or service increases the win-rates and to lure the new customers towards the organization. Hence speed of execution is another vital differentiator among competitors.

3.13. Thought-provoking modernization and growth

Most businesses want to increase their revenues, but it becomes gradually more difficult as industries mature and keen competition increases in the market. Creating new knowledge through effective

knowledge sharing, collaboration and information delivery can arouse modernization.

4. Role of ICT in Knowledge Management

Leveraging knowledge effectively requires the use of IT, and thus all prominent universities and higher education institutions need to begin harnessing those technologies to realize the potential capabilities and value of KM. Although, KM in organizations is more than just implementation of ICT, it needs ICT as enablers that can promote knowledge creation, store, distribute and retrieve knowledge for reuse. These activities of KM cannot be achieved without IT as enablers in the 21st century where the need for rapid success for relevant knowledge rising tremendously.

In the more effective way, the communicators share similar knowledge, background and experiences, the more efficiently knowledge can be communicated via all the easily available electronically mediated channel. At this juncture, it is noted that a central electronic repository could be one of the best tool for providing precise factual knowledge within a stable community having a high degree of shared contextual knowledge. Nevertheless, more interactive

modes such as electronic mail or discussion data bases are more appropriate when knowledge exchanged is less open.

Significantly, the influence of globalization and impact of Information Communication Technology has given birth to today's "Knowledge Economic Era". Knowledge management is considered as a key factor for success of any organization in today's era. ICT is a tool which is frequently used in the Knowledge Management related programmes to keep the clients informed with regard to the latest innovations and developments taking place around us every now and then and also to share knowledge amid employees.

Looking to the fact, ICT's have a bigger role to play in knowledge management initiatives since information communication technologies facilitate the management to share knowledge and Information. Looking to the rapid advancement occurring in all the business fields, ICT always arouses the management of organizations to come out with innovative methods, tools and techniques which would help to encourage effective management of knowledge. The tools of ICT like creating, sharing, managing, storing and retaining knowledge allow for the exchange of

information via websites, social networks, etc., supports the KM process within an organization. To succeed in KM, it is important that assessment and defining of ICT capabilities are done properly as it supports and facilitates KM processes. Some of the KM enabling ICT tools and networks includes Knowledge Portals, Electronic Document Management Systems, Academic Publishing, Academic Contents and Exchanges, Database Management Systems (DBMS), Data Warehouse, Data Mining, Groupware, Communities of Practices (CoP), Social Communities of Interests, and Individual Communities of Interests.

Following table is providing details about Information Communication Technology tools which can be used for the Knowledge Management.

| ICT Tools | Roles | Examples |
|------------------------|---|-------------------------------------|
| Data Warehouse | A large store of data that facilitates reporting and analysis of data to guide management decisions | Customer information, mailing lists |
| Knowledge/ Information | Web-based knowledge | Bing, Baidu, Google, Yahoo, |

| ICT Tools | Roles | Examples |
|--|--|---|
| Portals | retrieval | etc. |
| Database Management Systems (DBMS) | System software for creating and managing databases | Library database |
| Electronic Document Management Systems | Repositories developed by institutions | Structured Knowledge Repositories, Digital Library |
| Scientific & Academic Publishing | Providing electronic access to database | SAGE Publications, Springer Nature, Emerald, Elsevier |
| Information and Content Exchange | Protocol based content access | Project MUSE, JSTOR, MIT OpenCourseWare |
| Data Mining | The practice of groping existing databases to generate new information | E-commerce, Supermarkets |
| Communities of Practices (CoP) | Group of persons who share their craft or profession | Professional associations, development projects, |

| ICT Tools | Roles | Examples |
|--|--|---|
| Groupware | Collaborative software to achieve goals | Text based conferencing, Telefinder, Forum, Wikis |
| Individual Groups | To manage personal knowledge and networks | Blogs, personal website, |
| Interest-based community, Social Communities | Exchange ideas and thoughts through interest-based community | MySpace, Twitter Facebook, LinkedIn |
| Communication tools | Sharing knowledge among people | Email, Bulletin Boards, chat |

Omona and Lubega have provided Information Communication Technology based tools in their research to enhance knowledge management in higher education. Organizations must aware about Knowledge Management is not a tool of ICT. Organization can decide and select an ICT Tool from the above based on the Knowledge Management framework and goal of the organization.

5. Conclusion

In the current scenario of intense competition era, majority of the organizations are now facing many unforeseen challenges because of high explosion of information availability and finding intricate to cope up with the external pressures to survive in the market and to achieve success for the organization as well. Apparently, such situation compels almost all the organizations across the globe to improve human capital endlessly through a comprehensive and strategic knowledge management because organization understand very clearly that any unplanned action could lead them towards total failure. Hence, the KM has invariably a great impact on organization success.

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