Specification of Information Technology in Knowledge Management

Ms. Priya Kushwaha
Research Scholar
Amity University, Jaipur

Dr. Preeti Yadav
Associate Professor
Amity University, Jaipur

Abstract

In today's world, knowledge management is applied across the world in all industry sectors public and private organizations, humanitarian institutions, international charities and in every field of life for continuous innovation. It is developing rapidly in the present era. Knowledge management is very important term in itself and when we connect this term to information technology then it increases the value of growing demand towards innovation. In all the organizations, knowledge management fosters software development process. The digitization process helps the knowledge management system to share the information and to connect through internet/intranet. In any organization, amount of data to manage, is challenging but with new technologies like IOT (Internet of Things) it can be easy. IoT is used in every field in big firms, small firm or medium firm. In every firm Knowledge Management is required and to lead in a market with a big data, IoT is essential. So, if we talk about the impact of knowledge management related to IT in present scenario, it is required to connect different perspectives on the creation, innovation & management of knowledge. In organizations IT gives a strong support to employees regarding awareness of knowledge management and uses of technology. Integration of the knowledge management process into the business process is very supportive. The main objective of this paper is to meet the challenges that public and private organisations must take for active adoptions to new management tools, method, best practices of knowledge management through IoT.

Keywords: Knowledge Management, Innovation, IoT, Information Technology

Introduction

In 1999, the term personal knowledge management was introduced. It refers to the management of knowledge at the individual level. "With increased use of computers in

the second half of the 20th century, specific adaptations of technologies such as knowledge bases, expert systems, group decision support system, intranets, and computer supported cooperative work have been introduced to further enhance such efforts"

The Knowledge Management system is developing rapidly in the present era in the form of collection of data or knowledge information. The digitization process helps the knowledge information to be shared with other people through internet/intranet. Knowledge has become an important factor in creating and maintaining a competitive advantage in this dynamic business environment.

Knowledge management can be defined as the management of highly valuable organizational resources, making the most from their knowledge. Knowledge management is the process through which organizations generate value from their intellectual and knowledge based assets. Knowledge has become an important factor in creating and maintaining a competitive advantage in this dynamic business environment.

The term, "Internet of Things", means a variety of ideas. The Internet of Things (IoT) is a popular buzzword that describes an important trend which is having lasting effects on society at large.

Impact of IoT on Knowledge Management

Knowledge management system would have to be related to IoT for smart work at analyzing the huge amount of data, easy access, understanding the key focus areas of training and development of IT talent. In the upcoming world of technology we would be experiencing ourselves encircled with smart cities, smart communication, smart household gadgets, smart healthcare systems and connected objects.

In the upcoming world of Internet of Things, knowledge requirements of an individual will get redefined

The stages of development of KM

According to Michael E.D. Koenig, the stages of knowledge management constitute of:-

First Stage of KM: Information Technology

The first stage of KM was about how to deploy that new technology to accomplish more effective use of information and knowledge.

Second Stage of KM: HR and Corporate Culture

The second stage of KM emerged when it became apparent that simply deploying new technology was not sufficient to effectively enable information and knowledge sharing. Human and cultural dimensions were also to be addressed.

To implement knowledge Management, there are several dimensions:

Figure I : Dimensions of Knowledge Management Implementation

· **KM Strategy**: Knowledge Management strategy helps to meet tactical and strategic requirements. The objective is to manage, share, and create relevant knowledge assets.

· **Organizational Culture**: The organizational culture influences the people interact, within which knowledge is created.

· **Organizational Processes**: The right processes, environments, and systems that enable KM to be implemented in the organization.

· **Management & Leadership**: Knowledge Management requires experienced leadership at all levels.

· **Technology**: Make proper design and implementation of tools and technologies that organization's required.

· **Politics**: To implement and sustain initiatives there should be a long term support that involves virtually at all organizational functions.

Review of Literature

Manish Kumar(Jan 2005), talked about critical role play by KM in an organization. Knowledge Management is responsibility of an organization to invest significantly in IT resources for acquisition, storage, sharing & retrieval of knowledge. This paper elaborates on KM practices in various IT industries. The author focusses on eight leading Indian software companies and collects data related to knowledge management practices. Result shows that Indian software company are much aware about their knowledge management system and use KM system for improving their productivity reusability of

software components to reduce defects and to share knowledge about their new projects. The main focus of KM in these eight leading software companies is to provide the knowledge to whole industry through intranet website. There is a proper tool for the storage of knowledge management so that in future they can access data from past knowledge. The author suggests a technical and a social infrastructure which help software Development Company to enhance their knowledge management capabilities.

(Dr. R Krishna Veni(2008)) In today's world, innovation Knowledge and organizational learning processes has become a source to gain competitive advantage. Knowledge Management creates demand in IT industry by providing timely and accurately information. The basic purpose of this study is to validate the factors that influence Knowledge Management in IT industry. IT industry is facing challenges in terms of change technology managing knowledge worker and competition. All factors pressurize IT industry to make effective use of knowledge management practices in their each process and model. After applying Knowledge Management practices they compare their past performance with their current performance and find a significant difference. Knowledge Management should be adopted in a right manner to achieve good results. With the growing demand of knowledge management, product and services are continuously changing IT industry and this helps in gaining competitive advantage. Result of this study shows that 4 factor influence the importance and development of KM. These factors are:

- Culture

- People

- IT infrastructure

- Leadership

The study has provided a evidence that more emphasis should be given for managing these factors to achieve effective knowledge management.

Judy Oliver(2008), in his research paper "Knowledge Management practices to support continuous improvement" provides solution to the organizations having qualitative program and was able to construct a vision for the organization. This was motivated by culture of knowledge sharing based on openness, loyalty and trust. The development of organization increased by sharing experience, best practices, working together in team and sharing information about success and failure. This can be only possible when there is table workforce who can retain individual's knowledge in the organization and to motivate employees and gain competitive advantage. Author said that KM is correlated with SME sector growth. Findings of the study shows that Knowledge Management maturity is positively correlated with growth of SME give their ideas for the improvement.

Anand (2011), talks about Knowledge Management in small medium size enterprises. The paper focus on strategies, implementation, performance measurement and technology issue of KM in Indian SME sector. In India SME sector is also known as fastest sector of Indian industry, due to this Knowledge Management is very important to study the Knowledge assets. It deals with how to handle and take best use of these assets and get

maximum benefits. The main aim of this paper is to identify steps of implementation in SME sector so that they can improve their competitiveness sector. If SME sector wants to grow fast they have to apply Knowledge Management activities

Savita & Gautam (2013), talks about today's company wasting billions on Knowledge Management because they failed to measure what type of knowledge they required and how to manage knowledge. Most of knowledge management processes fail due to ineffective structure of knowledge management. The main purpose of this paper is to construct a theoretical framework and recognize the structure of effective KM and study the status level of Knowledge management in manufacturing companies in India. The entire study was constructed in two phases:

I phase was to identify important aspects of knowledge management structures

II phase was to construct questionnaire for collecting necessary data which would be use for the finding of result. The finding shows that there is high support provided by the employees regarding uses of technology and awareness of knowledge management initiatives. The communication network was created for sharing knowledge within the organization and it became useful in retaining the workers. Combination of KM processes and business processes is easy and very supportive for organization growth.

Anlisuresh (2013), for enhancing sustainability of organization Knowledge Management is important. The Knowledge Management practices are in introductory stage in Indian organization. It is like new business topic with various view points and less empirical data. Everybody is not aware about Knowledge Management practices. This study focuses on finding the influencing factor of Knowledge Management in various industries in Chennai and to find out the factor affecting the industry in Chennai in adopting and innovating Knowledge Management. It is observed that recognition of employee participation in Knowledge Management includes hiring and retaining talented employee for KM, deciding what type of knowledge to store and make it available whenever it necessary. Management has to influence and provide awareness about Knowledge Management strategies. The impact of Knowledge Management on employees is that they are looking to our recognition of knowledge to influence and increase awareness on adoption practice and innovation of Knowledge Management. Adoption practice and innovation are the main factor of Knowledge Management, organization should manage these factors for knowledge sustainability and growth. Knowledge Management helps organization to identify their capability and facility. It also focuses on identifying the most deficit areas of knowledge and help in developing innovative ideas of sustaining knowledge and organizational development.

Vibha Thakur & Swarnangini Sinha(2013), according to them "Knowledge Management is a systematic process for creating acquiring synthesizing, learning, sharing and using knowledge and experience to achieve organizational goals". For each organization there should be a suitable flow of information which helps in growth of organization. Today majority of organization's have knowledge management program. This study on "knowledge management in Indian perspectives" focuses on KM practices in organizations of Bhopal and role of KM in Indian business organization. The purpose of paper is to know which organization is aware about Knowledge Management and it also investigate

scope of effective implementation of KM. Today Knowledge Management initiative are adopting in almost every organization and company. Knowledge Management implementation program can be seen as new business to increase the value of market share to create future prospects in business, to increase in revenue growth, gaining competitive advantage and employee development. In India, there is a need of nationalization of the concept of Knowledge Management.

Chug, Punia & Agarwal (2013), Knowledge is an important source of competition. There are various result of Information Technology which work as a pillar to knowledge management. This study focuses on role of Information Technology in success or failure of Knowledge Management. The objective of this study is to identify technological role in Knowledge Management. Organization adopts various methods of knowledge management because there is no single method of implementation of knowledge management. Knowledge goals can be achieve by the starting of existing structure and adopt effective method according to the organization strategies. "IT supports the characterization and collaboration of explicit form of knowledge or low cost" Pinho & Rego (2012). IT is an important enabler for KM initiatives in organization with the usual caveat that KM problem has other significant social and cultural dimensions" (Daveport and Prusak, 1998).

Dr. Ajay Raj (2016). Today for the excellence in a corporate sector, Knowledge Management is required. Companies competitive ability is defined by its capability to manage knowledge and knowledge workers. Knowledge Management is very important for industries such as biotech, software, pharmacy & consultancy. Knowledge Management becomes a main issue for each type of industry. It is believed that these organizations make a culture for KM. Only these organizations can survive and can grow in a competitive environment. The main aim of this paper is to study the various factors of knowledge management and to see the Knowledge Management role and growth of the business in India. According to this study, it is analyzed that implementation of knowledge management differ from industry to industry and country to country. Knowledge Management helps in increasing in the fluctuate capital of a company and provide free flow of ideas to create innovation in the organization. With the help of Knowledge Management, organization can improve its efficiency and customer services.

Kankanhalli, Tanudidjaja, Sutanto and Bernard (2016), the increasing value of knowledge becomes a business resources and it pressurizes executives to check the knowledge which is hidden in their business. It increases the importance of knowledge management initiatives. By advancement of Information Technology, it is easy to gain (acquire), store and distribute knowledge as compare to past. It becomes challenging to executives in deciding a task on what IT solution is required for the KM initiatives out of the ones is already in the market. "There are two basic approach to KM for which IT can provide support codification and personalization" (Hansen et al 1999). The aim of the paper is to give emphasis on the role of IT is sharing the knowledge from storage to the people so that knowledge can be reused. This article provides awareness about the IT and knowledge management "match through an analysis of 12 organizations with successful KM initiatives"

It depends on the type of organization i.e., product based or service based and on context whether organization operates in fluctuated environment and it was found that the KM patterns differs. It is likely that organization may be used the "personalization and codification" approaches to Knowledge Management.

Objectives:

- · To measure the existence of knowledge management for innovation.

- · To know and understand the application of knowledge management

- · To promote a culture, sharing and knowledge creation.

- · To manage all the factors related with IT to enhance the performance of an individual.

- · To assess the attitude and role of Knowledge Management with IoT (Internet of Things).

Research Methodology

Qualitative Research is used in this paper. Data collection is purely Secondary. Secondary Data are collected from the databases like:

- · EBSCO

- · Google Scholar

Other data is collected from the discussion with campus faculties.

Literature collected for this review paper includes paper from year 1998-2016.

Findings

- · After review of the papers it was found that Knowledge Management gave the best results when we connect it to the Information Technology, It helps in measuring the existence of Knowledge Management.

- · There should be awareness of Knowledge Management to know and understand the application of KM for future benefits and we can also apply KM in all other factors to reach from bottom to top.

- · It automatically enhances the performances of an individual when KM relates with IT to give the right information at right time.

- · By innovation and creation we can develop our country & Knowledge Management with IT.

- · For analyzing the huge amount of data, Internet of Things(IoT) plays an important role and it also understand the key focus areas of Training & Development required for each individual.

Suggestions

- We have to focus more on this concept because it is one of the most important factor to get the best results to move from developing to developed.

- Updating new techniques for innovation.

- The structure of this concept should be flexible to adapt new techniques and challenges.

Conclusion

In the upcoming world of technology we would be experiencing ourselves encircled with smart cities, smart communication, smart household gadgets, smart healthcare systems and connected objects. So this advancement of Information Technology has made it easy to gain, store and distribute the knowledge to make the work smart. The Knowledge Management and the Information Technology is the best combination for the upcoming world of technology. This combination gives the best result for growing in a competitive environment, to make the knowledge available at the right time to the right people is one of the important tasks for future benefits. Now-a-days Internet of things is a popular buzzword. Knowledge management system would have to be related to IoT for smart work at analyzing the huge amount of data, easy to access, understanding the key focus areas of training and development required for each individual. Knowledge Management is required in every field in small, medium and large enterprises either in public sector or in private sector. For making India digital, it is one of the important factor for new creation and innovation. Innovation is the only term by which our nation can reach on top most in the world. Not only IT Company takes benefit for this combination but, all other organizations can also take benefit.

References

- Anand, A. (2011). Knowledge Management Implementation Steps for Indian Small & Medium Sized Enterprises. International Journal of Engineering Science and Technology ISSN : 0975-5462,3(12).

- Chugh, M., Chugh, N., Punia, D., & Agarwal, A. (2013). The Role of Information Technology in Knowledge Management.

- Davenport, T., &Prusak, L. (1998). Working Knowledge: How Organizations Manage what They Know.

- Judy Oliver (2008), "Knowledge Management Practices to Support Continuous Improvement", Journal of Knowledge Management Practice, Vol. 9, No. 4. http://hdl.handle.net/2271/80

- Kankanhalli, A., Tanudidjaja, F., Sutanto, J., & Tan, B. C. (2016). Role of Information Technology in Successful Knowledge Management Initiatives.

- Krishnaveni, R., & Raja, C. S. (2008). Factors that enable Knowledge Management in Information Technology Organizations – a Statistical Study. Journal of Contemporary Research in Management.

· Kumar, M., Pal, S., &Tadisina, S. (2005). Knowledge Management Practices in Indian Software Development Companies: Findings from an Exploratory Study. Asian Academy of Management Journal,10(1), 59-78.

· Pinho, I., Rego, A., & Miguel Pina, M. E. (2012). Improving knowledge management processes: A hybrid positive approach. Journal of Knowledge Managemen,16(2).

· S. & Gautam, L. (2013). Knowledge Management and Organizational Structure: "A Study on Indian Companies" European Journal of Commerce and Management Research,2(4).

· Suresh, A. (2013). Knowledge Management Adoption, Practice and Innovation in the Indian Organizational. Journal of IT and Economic Development,4(2), 31-42.

· Thakur, V., & Sinha, S. (2013). Knowledge Management in an Indian Perspective. The Standard International Journals ISSN: 2321 – 242X,1(1).

· Knowledge Management-An educational KM site. (n.d.). Retrieved from http://www.knowledge-management-tools.net/