ICT Based Knowledge Management in India for Sustainable Development and Growth

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Abstract

Today's world is very complex, competitive and uncertain. Competitive advantage amongst nations has shifted dramatically over the period. Competitive advantage has shifted from "labour" (in the agricultural era) to "capital" (in the industrial era) and now to "knowledge" (in the information era). Creation, accumulation and strategic use of cutting edge knowledge plays a crucial role for survival, development and advancement of any country. For sustainable growth and development of any country Knowledge management is considered to be very vital. Knowledge-based societies which recognize and pay high regard to learned men and women and give incentives to them will lead the world. The process of generation of knowledge requires a suitable institutional setup, requisite infrastructure and conditions conducive to the encouragement of intellectual activities and means for quick access to relevant information. In this process of creating, accumulating and disseminating knowledge ICT plays a very important role. Countries, which have recognized the potential of knowledge management activities, have started developing their information and communication technology (ICT) infrastructures. Studies conducted in developed countries particularly pertaining to use of ICT for knowledge management have delivered ultimately results. India is a major player in the ICT sector. Our IT companies and professionals play a very big role in the global IT market. But KM as a concept in India is in a nascent stage. There is no dearth of ideas and knowledge in India, but many brilliant ideas are wasted because top management lacks interest in knowledge activities. This paper focuses on the current
of KM in India and the role ICT is currently playing and the scope of ICT in enhancing the same.

1. Introduction
In recent years organizations have realized that knowledge is one of the most valuable asset for internal and external growth. The biggest challenge for an organization is to capture, store, retain, and share knowledge. Cameron (2000) noted that “Knowledge is power, but without the adequate management of that knowledge, the consequences for [organizations] could be devastating.” More recently, corporate efforts are focusing on a class of technologies referred to as knowledge-management systems (KMS) (Leech and Sutton 2002).

Knowledge management can be defined as the organizational efforts designed to
1. Capture knowledge.
2. Convert personal knowledge to group-available knowledge.
3. Connect people to people, people to knowledge, knowledge to people, and knowledge to knowledge.
4. Measure that knowledge to facilitate management of resources and help understand its evolution.

Knowledge-Management Systems (KMS) focus on bringing together the explicit knowledge and tacit knowledge that exists in organizations. The knowledge that can be easily documented, stored in database and shared with the help of information technology is called explicit knowledge and tacit knowledge that present in human brains is called Tacit Knowledge. Knowledge is derived from information and information is derived from data. In hierarchy they are arranged in order. At the bottom is data then information and at the top is knowledge.

CIBIT (1992) Knowledge Management consist of managerial activities that focus on the development and control of knowledge in an organization to fulfil organizational objectives. The paper describes knowledge objects and emphasizes the technology impact on information content management.

2. Review of Literature
Marina du Plessis, (2007), In the fast changing business world of today, innovation has become the mainstay of organizations. The nature of global economic growth has been changed by the speed of innovation, which has been made possible by rapidly evolving technology, shorter product lifecycles and a higher rate of new product development. The complexity of innovation has been increased by growth in the amount of knowledge available to organizations.
Tatiana Gavrilova, Tatiana Andreeva, (2012) The paper proposes that the special agent (analyst) might be needed to elicit knowledge from individuals (experts) in order to allow further knowledge sharing and knowledge creation. Based on this
idea, the paper proposes a new classification of the knowledge elicitation techniques that highlights the role of analyst in the knowledge elicitation process.

Fei Gao, Meng Li, Steve Clarke, (2008) Knowledge management in business organizations has the task of managing the activities of knowledge workers or the transformation and interaction of organizational “static substance knowledge” and “dynamic process knowledge” for “products, services, and practical process innovation” and, at the same time, “creating new or justifying existing organizational systematic knowledge”. Knowledge management is not simply about recording and manipulating explicit knowledge, but needs to address that which is implicit, and from which benefit can therefore be derived only through process rather than content.

3. Understanding Knowledge Management
Knowledge Management is the technique or idea that is used by organization to use their resources with the help of people. By using this technique organisation will performs well is dependent upon other things also such as how effectively its people can create new knowledge, share knowledge using IT and use the same for growth. Large number of organizations is doing knowledge management knowingly or unknowingly. Individuals are storing knowledge in their mind with training, experiences, and informal networks of friends and colleagues, whom they seek out when they want to solve a problem or explore an opportunity. Fundamentally, knowledge management is about applying the collective knowledge of the entire workforce to achieve specific organisational goals. The aim of knowledge management is not to manage all knowledge, just the knowledge that is most important to the organisation. It is about ensuring that people have the knowledge they need, where they need it, when they need it – the right knowledge, in the right place, at the right time.

• Knowledge management is focused on capturing the expertise of countries and individuals and on the disposal and application of this expertise in order to maximise the benefits and the returns from knowledge assets.
• KM helps to bring the right knowledge to the right people at the right time, thus enabling them to make the best decision.
• KM involves the identification and analysis of available and required knowledge and the subsequent planning and control of actions to develop knowledge assets so as to fulfil organization objectives.

4. Importance of Knowledge Management
Knowledge management helps in sustainable growth with its valuable resource that is knowledge of its people. This is not a new idea – for growth we need to manage “human resources” for years but in KM we need to capture, collect, refine, disseminate and maintain that knowledge with the help of IT. This focus is being driven by the
accelerated rate of change in today’s organisations and in society as a whole. All jobs involve “knowledge work” and so all staff are “knowledge workers” to some degree or another – meaning that their job depends more on their knowledge than their manual skills. This means that creating, sharing and using knowledge are among the most important activities of nearly every person in every field.

The goal of KM is to capture the knowledge required by any process and encourage knowledge workers to share and communicate knowledge with other people. By using knowledge, it is easier to determine which processes are more effective or less effective than others for an organization. The main constraint of KM, however, is initially capturing it. When an organization can succeed in capturing and dispersing knowledge, the benefits are endless. Knowledge is power and it makes an individual grow mentally and emotionally. Knowledge management plays a vital role in the up bring of an organization. Knowledge management in an organization is the capture of knowledge in a systematic way and using it for the progress. Here IT plays an important role because it disseminates knowledge from one person to another with the help of networks and other application softwares which are being used in an organization these days. Knowledge allows an organization to recognize, create and distribute knowledge. Centralised database helps to spread or share knowledge, from this concept each employee of an organization can contributes his part of knowledge in the knowledge pool, there forms a big one that helps the organization in realizing the right path towards success.

5. Role of Information Technology in KM
Firms need internal information about their financial situation, the effectiveness of their products, their production costs, and so on. And they need external information about the environment in which they operate—competitors, customers, suppliers, etc.—that helps them to get to know their customers and satisfy them immediately and effectively, and so gain sustainable competitive advantages (Maier et al., 1997). Getting information is no longer the problem. The difficulty lies in obtaining quality information, where quality is measured in terms of accuracy, reliability, precision, and timeliness, and the extent to which the information is relevant in the decision making (Huber, 1990). The IT revolution has facilitated the processes of searching for and recovering information, but at the same time it has led to an important growth in the database industry. Firms must be able to use IT to obtain useful information for their decision-making. Following Tippins and Sohi (2003), this study defines IT competency as how the firm uses these technologies to manage its information effectively. While IT is a generic term fundamentally used to refer to programs, computers and telecommunications, the term IT competency is broader and refers to the use of these technologies to satisfy the firm’s information needs (Gunasekaran et al., 2001). This study differentiates between three dimensions of this concept: IT knowledge, IT operations, and IT infrastructure. These dimensions represent co-specialized resources that indicate the organization’s capacity to understand and use
the tools necessary for managing information about markets and customers (Tippins and Sohi, 2003). Moreover, although they are independent, all three aspects must be present for the firm to achieve IT competency. For example, many firms invest in technical tools but at the same time fail to achieve IT competency.

Capturing and collection of knowledge is important part of KM but when we are not able to disseminate this knowledge to employees or people than its not worth. Than IT helps an organization to spread knowledge from one person to other person. It provides several techniques for Creation, collection, capture, organize, refinement, disseminate, maintenance through which KM can easily applied in an organization.

Considering the complexity of KM initiatives and the variety of IT solutions available on the market, executives must often confront the challenging task of deciding what type of IT solutions to deploy in support of their KM initiatives. There are two basic approaches to KM for which IT can provide support: codification and personalization (Hansen et al. 1999). With the codification approach, more explicit and structured knowledge is codified and stored in knowledge bases. The main role of IT here is to help people share knowledge through common storage so as to achieve economic reuse of knowledge. An example of such IT tools is electronic knowledge repositories. With the personalization approach, more tacit and unstructured knowledge is shared largely through direct personal communication. The main role of IT is to help people locate each other and communicate so as to achieve complex knowledge transfer. Examples of such IT tools are knowledge expert directories and video-conferencing tools.

Information and communication technologies have been closely associated with the development of the great majority of knowledge management initiatives. It is estimated that almost 70% of publications on knowledge management focus on the design of IT systems (Franco and Mariano, 2007). The influence of IT competency on knowledge management can be considered twofold: direct and indirect. Information systems can directly influence the knowledge management processes.

6. Conclusion
This paper deals with the concept of knowledge management. Knowledge management is imperative for any business organization. It is essential for any organization to capture, store, retain, and share knowledge for the sustainable growth. The goal of KM is to capture the knowledge required by any process and encourage knowledge workers to share and communicate knowledge with other people. The IT revolution has facilitated the process of knowledge management. IT helps an organization to spread knowledge from one person to other person. It provides several techniques for Creation, collection, capture, organize, refinement, disseminate, maintenance through which KM can easily applied in an organization. It is estimated that almost 70% of publications on knowledge management focus on the design of IT systems.
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