

**INFORMATION AND COMMUNICATION TECHNOLOGY BASED KNOWLEDGE
MANAGEMENT IN EDUCATION SYSTEM**

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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.

Keywords: ICT, Communication Technology, Knowledge, Higher Education, Knowledge.

INTRODUCTION

In recent years organizations have realized that knowledge is one of the most valuable assets 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 educational institutions 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.

OBJECTIVES OF THE STUDY

1. To identify the importance of knowledge management.
2. To study the Role of Higher education in India
3. To Investigates the implementation of Information and communication based knowledge management in higher education institutions

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.

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 maximize 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 fulfill organization objectives.

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 organizations 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 software which are being used in an organization these days. Knowledge allows an organization to recognize, create and distribute knowledge. Centralized 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.

ROLE HIGHER EDUCATION INSTITUTIONS IN INDIA

HE in India is offered by a variety of Institutions viz. Unitary Universities, Affiliating Universities, Deemed-to-be-Universities & Institutions of National eminence. While Unitary Universities are the ones which are confined to one campus for both undergraduate & postgraduate, instructions (viz. AMU, BHU, JNU etc.), the Affiliating Universities are characterized by a central campus comprising of schools & departments that impart PG instructions & conduct research, while the affiliating colleges take care of the UG studies (viz. Calcutta University, Mumbai University, etc.)

Deemed-to-be-Universities are institutions conferred with the status of a University owing to their long tradition of teaching / specialization / excellence in a particular area of knowledge (viz. Tata Institute of Social Science, Mumbai, IIIT-Allahabad etc.). Institutes of National Importance are so designated by an Act of the Parliament of India and as a special case empowered with all the rights & privileges of a University (viz. IIT’s)(Universities Handbook, 2002). Higher Education at grass root level in India is however affected through Universities numbering over 300, the growth & development of which is largely due to the National Policy on Education, 1986, by the Government of India. This policy views education as a process of empowerment and an instrument of social change that provides means for upward economy & social mobility.

The complexity with the Indian Higher Education (IHE) System is that while initially it was established with deep colonial roots, for the purpose of producing literate & semi-skilled manpower to largely look after the subordinate services, in the past five decades after independence, when the system has moved on to become an egalitarian one, it has been pressed immensely to meet the growing aspirations of a developing and vibrant democracy. To meet this growing demand, while the number of Indian HE institutions has grown from 18 universities in 1947 to over 305 in 2005, the quality offered by HE institutions has fallen terribly short of the expectations. This has been because of two basic reasons. Firstly, the population explosion in India has opened up so many areas for investment by the government of India that the resources allocation by it for HE, have always fallen short of the desired target.

Secondly, due to ease of availability of information about the types and quality of services offered by HE institutions in the more developed western world, stakeholders in India have become alert and have started to ask more on the investments made by them.

It is therefore that institutions of HE in India, today are hard pressed to accept the modern management and computerized interventions into their systems in order to ensure value for money (as desired by the investors of the system) and superlative quality of services offered (as desired by its stakeholders, some of whom are also its constituents). Over the years, though the HE system has been benefited by the examination & recommendations of a number of education committees & commissions, the system today is observed to be the one with lot of short comings viz :

- Lack of focused planning at Institutional Level
- Variable quality of HE in different institutions across the country (Powar, 2000)
- Inflexibility of academic structure that inhibits innovation (Powar, 2000) & excellence
- Non-productive research being conducted
- Lagging quality of curriculum due to lack of enthusiasm in revision & development of new curriculum
- Mis- as well as under-utilization of already scarce resources viz. equipments etc., due to ignorance as well as apathy of all concerned
- Low standard services being offered to students & alumni
- Very low consistency in decision making coupled with slow pace of its delivery
- Kumar and Kumar (2005), have already explained the advent of Information Technology (IT) based Knowledge Management (KM) as a modern day techno-management tool, with the help of which, institutions of HE in India could be benefited. They, while discussed about the need of such tools, the present work attempts to explain at length the perceived benefits of adoption of such interventions for institutions of HE in India.

ICT BASED KM AND ITS ROLE IN HIGHER EDUCATION

While various agencies have in their own perspective attempted to define the landscape for technologies and interventions as IT & KM, Government of India (2000) interprets IT as a set of media devices and services, out of which proper solution can be configured, based upon the needs and affordability of the target clientele in the country. Further, owing to its dynamicity, it lends a strong potential to improve & manage several facets of HE, viz. office automation, decision support system (DSS), access to & availability of reliable and updated information, etc. All these avenues influence the overall productivity and efficiency of the Indian HE system, which are important constituents of a Quality System.

Kidwell et al (2000) viewed KM as a process of transforming information & intellectual assets into the ones of enduring value, while Holsapple and Joshi (2004) view it as an entity's systematic and deliberate effort to expand, cultivate and apply available knowledge in ways that add value to the entity, in the sense of positive results in accomplishing its objectives or fulfilling its purpose. The entity's scope may be individual, organizational, Trans organizational, national, etc. Burstein and Linger (2003), define KM as a broad concept that addresses the full range of processes by which an organization deploys knowledge. This involves the acquisition, retention, storage, distribution and use of knowledge in an organization. Jennex (2005), proposes KM as the practice of selectively applying knowledge from previous experiences of decision making to current and future decision making activities with the express purpose of improving the organization's effectiveness. Knowledge management is the *explicit* and *systematic* management of *vital knowledge* and its associated *processes* of creating, gathering, organizing, diffusion, use and exploitation. It requires turning personal knowledge into corporate knowledge than can be widely shared throughout an organization and appropriately applied (Skyrme, 2003).

According to Petrides and Nodine (2003) Educational Institutions however seem to be working in a more complex way, as these organizations are adaptive and are social systems where people co-operate with technologies to evolve processes to achieve common goals. Just as ecosystems rejuvenate themselves through cycles & seasons, educational organizations grow & revitalize themselves through the knowledge they create, their processes facilitate passing that knowledge on to others and the exchanges and relationships that they foster among people.

CONCLUSIONS

This paper deals with the concept of knowledge management. Knowledge management is imperative for any educational institutions. 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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