

MANAGING KNOWLEDGE IN HIGHER EDUCATIONAL INSTITUTIONS IN THE ICT ERA: THE ROAD AHEAD

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Abstract Knowledge management is a process or a tool through which organization or institution creates, organizes, stores, disseminates and applies knowledge to achieve its ultimate objective of growth and development. Knowledge management plays a role in the increasing organizational effectiveness to share the best practices, handle issues and problems, enhance research aptitude, and improve people's skills. The information and communication technology (ICT) is being considered very good technology, which is used to communicate, create, disseminate, store and manage information at any organisation or institution.

Considering the implacability of knowledge management in the higher education sector, the purpose of this research paper is to understand and explore relationship between knowledge management and the ICT. In this research, a sincere attempt has been made to analyse last fifteen years of research studies extensively, which proved the synergistic implication of KM and ICT in higher education institutions in the fast - developing competitive globalization era.

Keywords: Knowledge Management (KM), Information and Communication Technology, Educational Institution/organization, Higher Education

INTRODUCTION

Whether it is one's knowledge or of the organisations, it is very much essential to manage effectively. The application of KM is applied across the world, may these be the Industry sector, Public and Private Organizations, Service Sector organizations, humanitarian institutions and international charities. One may wish to acquire knowledge management strategies to government, Military operation, global poverty eradication, international disaster management and even now knowledge management for global climate changes extensively.

Knowledge management is considered to have three important elements such as generation, dissemination and application of the knowledge. On the other hand knowledge management process and ICT (information and communication technology) is dependent on each other. Knowledge management effort is only a waste of time, if there is no technological infrastructure to support knowledge management System. It will also fail if people

are not willing to share their knowledge, no matter how easy it is to import it into knowledge management System Liebowitz, J., (2001). Technology is still an essential tool for implementing knowledge management processes and for support of all peoples' activities in organizing (Lu, R., & Liu, J., 2008). Krishnavani R. (2010) emphasized that information and communication technology (ICT) can be used for administration in higher education institutions.

Information and communication technologies (ICTs) are considered as tools which make easy to use communication for managing knowledge in higher education. They also make use to generate, distribute, collect and administer information and communication technologies (ICTs). ICTs are kind of tools, which used to communicate, create, disseminate, store and manage information.

Information and communication technology has raised the need for organizations to come out with new methods, policies, tools and techniques to develop frameworks, processes and technologies to promote effective management of knowledge. Meenakumari and krishnaveni, (2010)

stressed that “ICTs in the higher education has profound implications for the education process ranging from investment to use technologies in dealing with key issues of access, equity, management, efficiency, pedagogy, quality, research and innovation”.

Information and communication technology play very crucial role in higher education in various aspects like: Teaching in higher education, Student learning, curriculum development, Research and Innovation, Seminar, conferences and MDP's, Administration for students, Faculty and Staff. Most of the above mentioned areas are concerned with knowledge management, so it is clear easily that ICT play important roles in knowledge management, which helps greatly to any higher education institution or University to achieve its ultimate objective.

REVIEW OF LITERATURE

Kulkarni (2016) conducted study on expectation of B School from knowledge management system in 50 B School of India. Kulkarni found in his research that most of B Schools in India are facing challenges to implement of knowledge management System and Many B schools in India expect that knowledge management system must provide them better infrastructure to make a decision.

Godson, Uzochukwu and, and Obiageli, (2015) conducted study in Nigeria. The research was done on nine Universities in South East of Nigeria. Data was collected from lecturers in giving Universities through Convenience sampling. The Sample size is 354 out of 368. A descriptive survey with questionnaire administration was used. Obtained data were analyzed using multiple regression analysis. Researchers found that ICT significantly relates to KM. Information and communication technology enable Knowledge Management to provide a platform for Research, Innovation, information and knowledge sharing. Information and communication technology also enable and make key personnel competent in higher education.

Nawaz and Gomes (2014) studied “Review of Knowledge Management in Higher Education Institutions”. The Researchers had analysed research studies, and comparative analysis has been done on the base of two Models: Strategic knowledge (SK) and Innovations knowledge (IK). After Researched on both models, researchers found that role of information and communication technologies are vital in knowledge management.

Irissappane and Vijaychandran (2013) conducted study on titled “Knowledge Management Initiatives of Polytechnic colleges in the Puducherry region.” The aim of this research was to find out the progress of polytechnic colleges in India with respective knowledge management in technical education. The primary data were collected from 270 Faculty

members of Polytechnic Colleges in the Puducherry region. A questionnaire was prepared after a perusal of available literature and thorough consultation with the experts in the related fields. The questionnaire was constructed based on Likert scaling technique. This study attempted to examine the perception of the Faculty members towards the KM initiatives in the Polytechnic Colleges in Puducherry. The findings of this study shown that all respondents favoured managing knowledge: particularly work-related knowledge. Researchers also found that managing knowledge also increases the service productivity.

Toro and Joshi (2013) conducted this research through review of articles from 2000 to 2012 and found that how knowledge management do is possible through information and communication technology in higher education. Higher education institutions and Universities can practice knowledge management to achieve their vision. Jones et al. 2007 conducted research and found that how develop web portal for sharing information and knowledge in University can be the best resource for managing knowledge in higher education. Further Shabya (2009) conducted a review study on titled “The changing role of information and communication technologies (ICTs) for instruction in higher education institutions in Kenya.” This study disclosed the changing role of ICT to deliver instructions and giving lectures in Higher Education Institutions and Universities in Kenya. The Researcher shown that ICT enabled people to encourage self-learning, ability to address complex problems, encouraging group and team work and allow people for critical thinking.

Haqani and Ahlan (2013) conducted “Review of knowledge management in higher education”. Researchers emphasized and reviewed the requirement for knowledge management in higher educational institutions. Further researcher also emphasized on role of knowledge management in higher education institutions. The researcher reviewed that the higher education institutions, where retirements, resignations and restructuring of activities leads to brain drain, as tacit knowledge that resides in the minds of the people, in this context KM play important role to reduce the impact of brain drain on particular Organisation. The paper also emphasized knowledge management can be proved an important factor in shaping up by storing, implementing, capturing the relevant knowledge for institutions and transformation of tacit knowledge into explicit knowledge.

Savitri, Sahiraliani, and Yakhusna (2013) conducted study on “Knowledge Management Implementation within the Higher Education Institutions in Badung, Indonesia’s City of Education.” A sample was taken from two public Universities, three private Universities and one private higher education Institute. Researchers conducted quantitative research with the help of two self-administrated questionnaires: open and close-ended questions for senior managers and Likert’s

closed-ended questionnaire. After conducting questionnaire, Interview method was used for staffs to explore information based on the questionnaire. Researchers found in this research as a result that Higher Education Institutions failed to implement KM and Institutions does not have a systematic approach to practice Knowledge Management.

Sarkar (2012) conducted study on the role of ICT in Higher Education for the 21st century and found that use of ICT to focus students' centred learning and ICT in higher education is becoming important in the 21st century. This research also suggests that role of ICT is very important in socioeconomic development of the Nation.

Dhopte and Nandola (2012) conducted study on "Innovation & Knowledge Management: Leveraging Strengths of Indian Higher Education." The paper analyses the explicit innovation system from the point of view of product content-programmes and markets. It reviews the external forces and factors that are driving institutions to introduce and use innovation in this area and investigates, in particular, the role of globalization and increasing competition. This study analyses innovation in higher education sector from the product content point of view i.e. programmes and markets i.e. institutions. The result of study shows that introducing innovation in the higher education services helps to detect and correct the areas of inefficiencies and take up the challenge of competition in the higher education sector which brings a new set of responsibilities. The impact of using innovation method in the higher education sector is positive. Innovative education programmes bring greater access and an increase in the educational level of the developing countries. Innovation methods lead to diffusion of technology in the higher education sector which in turn has enhanced the efficiency and quality.

Johnson (2012) conducted study on "ICT adoption, Knowledge Management in Higher Education." The investigation identified the need of ICT based knowledge management initiatives is a potent enabler for restructuring the existing Higher education system in India. Further, organizational support, leadership, training & development; resources are the predominant themes of ICT adoption process in higher education. To effectively integrate ICT tools into teaching and learning practices, faculty must not only learn how to use technology, but also fundamentally change the way they teach. The need of ICT based.

Meenakumari and Krishnaveni (2011) conducted a study titled "Transforming Higher educational institution administration through ICT". Two main variables 'Knowledge Administration' and 'Information Administration' were identified through an extensive literature review and discussions with educational practitioners and experts and the relationships between the indicators for e-administration were examined. This study revealed that demographic

factors do not have a major impact on e-administration in higher education institutions, but integration of ICT into knowledge administration for the teaching learning process is more in comparison with information administration. It was concluded that, enhancing the usage of ICT on in these functional areas will improve the overall e-administration by serving as a base for education planners and academicians to deploy ICT-based administration in higher education to enhance overall quality of the system.

Bhusry and Ranjan (2011) conducted study title "Implementing knowledge management in higher educational institutions in India: A conceptual framework." The Researchers emphasised in this study on the need for knowledge management in higher education Institutions and studied the impact of Information and Communication and Technology on knowledge management intervention. This study disclosed that information and communication and technology based on knowledge management intervention in higher educational institutions can be promising technology management to enhance performance in various areas of higher education like: teaching and learning, research and administrative services. Researchers proposed that the conceptual framework (based on ICT and KM), the implementation of results will improve the quality of knowledge sharing and various uses in administration, teaching and research.

Rathinavelu et. al. (2004) emphasized that ICT greatly contribute to Higher Education Institute in storing knowledge, developing knowledge sharing system, Research and Innovation, administration of the Institution and collaborative learning through intranet within the Institutions.

Kidwell et al. (2001) emphasized the importance of KM techniques and technologies in Higher Educational Institutions, which helps Institution to develop decision-making capabilities, curriculum development and research, improved academic and administrative services and reduced costs. Further researchers emphasized that designing web portal help greatly to any higher education Institute in providing services like: research, development, curriculum development, faculty development programs, career placement services and other student services.

OBJECTIVES

To review research literature of fifteen years of research studies conducted in the field of Knowledge Management and ICT.

To analyse and review the implication and necessity of knowledge management along with ICT to enrich the overall higher education system.

ANALYTICAL REVIEW AND DISCUSSION

Nonaka 1998, Zack, 1999 and Tiwana 2000 identified two types of knowledge: tacit and explicit. Tacit knowledge is knowledge which is applicable at a subconscious level. Individual gains tacit knowledge through his or her experience, which influences his or her own belief, perspectives and value system. It is very difficult to share with others. Explicit knowledge refers to knowledge, which can be articulated, captured and distributed easily to another person in different formats. Nakkiran, and Sewry 2002 emphasized that “Explicit knowledge can be documented and easily communicated.” This knowledge is easier to share and use across the organization.

Knowledge management is considered as an effective technique in the curriculum development process. The process includes implementing innovation in curriculum development, knowledge of teaching and learning with technology, pedagogy and assessment techniques, student evaluations and feedback. Knowledge management enables educators to create and represent quality knowledge for students to advance and improve their learning as well as turning tacit knowledge into explicit knowledge for the students (Leask, M. and Pachler, N., 2013).

Information and Communication Technology provides tools for creating, sharing, managing, storing and retaining knowledge. These tools allow for the exchange of information via websites, social networking, etc. Information and Communication Technology enables and provides the entire infrastructure and tools to support Knowledge Management processes within an enterprise (Hendriks, P.H.J., 2001). Knowledge management in education can be considered as a process of implementing of policies and practices that can facilitate the collection and sharing of information to ensure that individual of the institution can access easily such knowledge, skills, ideas and experiences through the use of Information and Communication Technology to improve learning environments and outcomes (D. Ho, 2004).

SUGGESTIONS ON IMPLICATION IN HIGHER EDUCATION

The following suggestions extract from the systematic study and review of the research studies included in the Paper.

- More recently various Research Studies conducted in the year 2015 proved that Information and Communication Technology (ICT) is an essential and inseparable part today's higher Education System. Specifically the use of ICT enables KM activities like collaborative decisions making, research and development, knowledge sharing, and administration of institutions.

- Increase of continuous service productivity of the organizations is another significant benefit of KM.
- ICT explore and stimulate abstract concepts while encouraging self-learning ability to address complex problems, encouraging Team work and opens the door for critical thinking among the students in particular.
- It further emphasizes on the use of e-Administration, e-learning/virtual Learning environments in higher educational Institutions to increase the overall quality of the system.
- ICT enabled Institutions can proactively respond to the need of the shareholders and acquire the enhanced capability to the planning and Development aspects.
- Last but not the least KM with ICT can be the most requisite parameter to contribute the Quality and efficiency of the higher educational Institutions in the competitive Globalization Era of Knowledge explosion.

CONCLUSIONS

Hence, it is very clear that Knowledge management and Information Technology play an effective role in Higher Education on various aspects like: creation and dissemination of knowledge, curriculum development, research development and innovation, seminar, conferences and MDP's. Information and Communication Technology provide tools for creating, sharing, managing, storing and retaining knowledge and it makes quicker and easier the retrieval of knowledge. It is clear that Knowledge Management in higher education cannot get its objective without implementing ICTs. Thus, it can be understood that there is a definite and important role of Knowledge management in Higher education Institutions in collaboration with Information and communication Technology (ICT).

To conclude, the saying “Gyanaya Danaaya Cha Vardhanaya” in our ancient scriptures emphasizes that the treasure of knowledge can only be increased by sharing and giving to others.

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