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Conclusion

7.1 Introduction

The systematic study of Knowledge Management as management and scientific discipline started visualization during 1994. With the use of Information and Communication Technology (ICT) and Internet Technologies, knowledge has been playing a vital role in the lives of mankind. Universities need to play the role of developing a Knowledge Society. In order to do so, special efforts are needed to promote knowledge development processes and arrange to use them to develop knowledge for the society in terms of academics, economics, social entrepreneurship, linguistics and commercial progress.

The prime objective of this research study is creating, managing and disseminating knowledge by using ICT in Universities. Various ICT models and frameworks are suggested as the outcomes of the research. Stress is given on making the theoretical foundations more powerful and clear so that a practical approach can be implemented onto it.

Having worked in a University for a long time, it was observed that although tremendous knowledge lies in the University, it is untapped or ignored. Hence this study was carried out by taking Sardar Patel University to explore the possibilities of using Information and Communication Technology in managing the knowledge. During our study we could find that many areas like administration, learning, libraries, and service to the society need special attention for smooth functioning of the University. The study also sought to know how effective the functioning of the University would be if a proper Knowledge Management System is in place.
7.2 Conclusion and Research Findings

A study on evolution of Knowledge Management was carried out. Key concepts in Knowledge Management are discussed with examples. There are various definitions of Knowledge Management related to specific areas. The definition of Knowledge Management given by different authors is analysed and a definition suitable for Knowledge Management in the present context is taken as a base throughout the thesis. A detailed study on various models of Knowledge Management was carried out which include:

1. The SECI model by Nonaka and Takuchi
2. WIIG Model
3. Von Krogh and Roos Model of Organizational Epistemology
4. The Choo Sense-making Knowledge Management model

A detailed study on various models of knowledge cycles was carried out which include:

1. The Meyer & Zack Knowledge Management Cycle
2. The Bukowitz & Williams Knowledge Management Cycle
3. The McElroy Knowledge Management Cycle
4. WiiG Knowledge Management Cycle

A comparative study of the knowledge models and knowledge cycles was also carried out and the concepts suitable to the University were used in various areas for managing knowledge in the University.

The Universities all over the globe have the deficit of knowledge experts, researchers, supporting tools and infrastructure, especially, in the countries like India where apart from the parameters discussed above, finance is also a major crunch.
In order to sustain in the competition, the Universities are trying to implement new strategies in order to enhance the quality of education and research. We feel, Knowledge Management is the best tool which can improve the position of the Universities all over the world in general and Universities in India, in particular. Information and Communication Technology (ICT) can play a lead role in managing the knowledge in different areas of the Universities that include teaching-learning, administration and service to the society. ICT can now become the enabler for improving the performance of various areas of Knowledge Management which include knowledge creation, storing, transferring and reusing.

A three tier reference model is proposed that can be the foundation on which the ICT based Knowledge Management systems can be built. We have named these tiers as KM T1, KM T2 and KM T3. The KM T1: contains knowledge about the “University’s Aspects” i.e. deals with pertinent information about the University, functions, roles, vision, mission, goals and the relationships among them. The second tier: KM T2 contains all the processes required to control the elements of KM T1. The third tier: KM T3 provides the resources to the elements of the second tier. This reference model will help the University to update the existing model of Knowledge Management or construct a new model.

Knowledge generation from the existing models of the University Administration is a rarely explored application of data mining. A large amount of data is being added throughout the years. We propose to extract, create and present the knowledge in different forms to the stakeholders. Different models are used to extract information and to create knowledge e.g. The areas that are concentrated for this purpose include: trends of the selection of a course by students of the University as per exposure and market demand, result analysis, and admission analysis among several others. We explore the possibilities to improve decision-making and policy making in University Administration. This attempt forms a broad framework for futuristic knowledge-based model of
the University, which would help in improving the Quality of Services in a University and in attaining the status of “Centre of Excellence”. As the contemplation exercise, data of admission to various courses of the last three years in the University was taken and we used Tanagra, a free software tool of data mining to identify how it can be useful in providing necessary knowledge to the decision makers in the University. After using this tool for analysis of data, we found that for the users who are not well versed with statistics may find it difficult to use. Hence we propose architecture for Knowledge Discovery Management System for a University. The system developed using this architecture would be an intelligent system which would help the users analyse the data sets automatically.

We present the Knowledge Management component in relevance to understand the management of personnel like administrators, faculty members and staff members and suggest a model to access knowledge about an individual for improving the functioning of the system. The knowledge about the students will help in understanding their strengths, weaknesses and their whereabouts. This will help in developing a knowledge base of talented human resource in various sectors of economy. The knowledge provided to the stakeholders will be relative to their positions, e.g. a student seeking a course in the university may be interested to know about the qualifications and expertise of the faculty, an employer would be interested in knowing the above parameters apart from others like his/her behaviour with colleagues, sincerity and others. These traits will be gathered from the other persons involved with that individuals like guide, peers, students, parents and other stakeholders. This study deals with the designing appropriate forms for accessing the information from an individual/other related persons for designing the database and using the appropriate Information and Communication Technology (ICT) tools to make the suggested model workable. A model is proposed which will help to manage knowledge of personnel of the University.
Reforms in the process teaching and learning were observed during the study. From the findings of the study it was felt that traditional teaching and learning system should be supplemented by another approach so that knowledge dissemination can take place in a better way. E-Learning is suggested for Knowledge Management in the University. A study was carried out for using the existing infrastructure of the University for E-Learning. As far as the hardware infrastructure is concerned, it was a perfect setup but a robust software application is needed to establish this facility. A detailed study on theoretical aspects of teaching and learning was carried out. Various software solutions available were studied viz. Moodle, etc. We have proposed a framework based on the constructivist view of TLA, SCORM Model using Service Oriented Architecture for e-learning in the university. This framework is suggested keeping Knowledge Management in central view.

e-Governance in the University improves efficiency, transparency and accountability of administrative activities. It helps in appropriate and faster access to services, and reduced costs for administrative services. A detailed study on e-Governance was carried out. The benefits and challenges in implementing complete e-Governance system were investigated and it was found that the existing e-Governance system which was developed under the guidance of the researcher needs major changes. A new system using semantic technology principles is proposed for the University which would be highly beneficial to the stakeholders. Architecture for e-Governance of the University is proposed which would increase efficiency, transparency and accountability of various administrative activities. It will help in appropriate and faster access to services, and reduced costs for administrative services.

Academic Libraries play an important role in the Universities. The Universities are identified by their libraries and services. The growth of University largely depends on intellectual assets its academic library has. Knowledge Management is the workable solution to improve the services of the libraries.
Apart from improving services in the library to provide knowledge to the users, digitization of libraries is the pre-eminent solution. Applying Knowledge Management concept in digital library will enhance and expand the capability, scope and depth of knowledge service. By providing the knowledge services through digital library, the society in general and the students in particular will be benefited. A study was carried to explore the possibilities of establishing a digital library in the University. As a result of which an open source software for digital libraries called DSpace was installed with a specific aim of digitizing the publications of the University. The response to this installation was overwhelming. But we found that still there was a scope to develop a software in-house so that the features which do not exist in the software can be incorporated. Hence, we present architecture for the proposed digital library system. The proposed system is expected to be user-friendly and a guide for decision makers for making this library vibrant.

The role of Universities in not only teaching and learning activities is vital but extension activities are also equally important. We have suggested the areas where the Universities play leading role in serving the society.

The study on managing knowledge in the University has helped the researcher to design a new Website for the University.

7.3 Future Research

As University is an organization where the scope of using ICT for harnessing Knowledge Management are enormous., the study was carried out for this research and having experience on working in the system, we have suggested frameworks in different areas. Some frameworks are technically tested and some are partially implemented but technical feasibility is tested.

The future research can be carried out develop a system that will cover all areas of the university where Knowledge Management can be used. Moreover,
alternative models can also be suggested which can be beneficial to the Universities.

7.4 Recommendations

In order to implement Knowledge Management in the Universities in India, we list some recommendations that are required to be adopted at different levels:

i) A culture of sharing knowledge should be developed among the employees of the University.

ii) Proper means should be developed to record this knowledge so that it can be stored in a central repository.

iii) The procedures should be well-defined and should be available to the stakeholders.

iv) A team of computer professionals, administrators and faculty should be on set up on the campus to decide on the criteria of providing knowledge.

v) A separate substantial budget should be provided for development of necessary software and hardware infrastructure.