Managing Knowledge Repository in Kashmir: Leap towards a Knowledge Based Society

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Abstract

Purpose: *Knowledge is considered as the lifeline of global economy and its proper management leads to successful knowledge economies. Knowledge based society calls for effective knowledge management and a great need is felt in Kashmir, where it is in its teething stage. Times immemorial, knowledge in different forms has emancipated from Kashmir valley but due to number of reasons it couldn't find its judicious use. So, a need to develop a knowledge based repository to enable collaboration among different societal organizations across the barriers of time and space is felt. The paper discusses the strategies to be adopted for managing a knowledge based repository that can provide the ability to connect end-users to a single gateway of customized, personalized, consolidated, integrated, and enhanced knowledge.*

Methodology: *Documentary analysis is used to engineer a well managed knowledge based repository.*

Findings: *The study found that a well managed interplay of men, money and material are the influential factors for nurturing a successful knowledge based platform.*

Research Implications: *The study does not include all the knowledge management tools/services that can help in building a future vision knowledge repository for Kashmir but includes the ones that can lay down a fundamental platform for the same.*

Originality/Value: *The study provides the suggestive measures to be implemented to achieve well knitted and effective management processes for the development of a knowledge based repository for a conflict zone-Kashmir.*

Keywords: *Knowledge Management; Knowledge Repository; Economic Management; Human Resource Management; Knowledge Resource Management; Knowledge Society*

Paper Type: *Conceptual*

Introduction

Kashmir, the hoard of saints, philosophers, writers, poets, intellectuals, culture, craft, cuisine, fruits, dry fruits and what else not, has always remained a centre of attraction and a place which always found appreciation because of its consummate beauty. Berneir, the first European visitor to Kashmir, rightly said, *"in truth, the kingdom surpasses in beauty all that my warmest imaginations had anticipated"* **(as cited in Younghusband, 1996).** Instead of being a

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mountain locked area, it has always gained an attention by people from diverse sectors and time is a bystander to this, as number of foreigners visited this land for its beauty, culture, education, tourism, & trade; etc. From times immemorial, eminent personalities all over the globe visited Kashmir, mainly because of its beauty and serene environment that made it once, a Buddhist seat of learning, perhaps with the **Sarvāstivādan** school dominating. East and Central Asian Buddhist monks are recorded as having visited Kashmir for the purpose of learning. Not only for the educational resources but the natural resources like farmland, pastureland, forests, mineral deposits, and waterpower have tempted foreigners to explore this heavenly terra firma. Industries like Kashmiri wool, Kashmiri shawls, silk carpets, rugs, kurtas, pottery, paper machie, copper work, silver work and many more have made Kashmir something special because of unsurpassed workmanship, texture, beauty and durability exported worldwide. The four major product of handicrafts industry in Kashmir, namely carpet, namdah, wood carving and paper machie form 75-80% of the total export of Kashmir **(Gupta, 1992)**. The state produces fruits like apples, cherries & walnuts worth Indian Rupees 2,000 crores (USD 424.8m) annually including export of walnuts worth INR 120 crore (USD 25.5m). The Jammu & Kashmir state has been declared as ***Agri Export Zone*** for apples and walnuts **(Jain, 2008)**. This all makes Kashmir a harmonious network of beauty, craftsmanship and talent.

Although the figures count success but in reality the number is on decline, comparative to earlier statistics. The talent, dexterity & craftsmanship of the Kashmiris which once were at their zenith and possessed by all, is now art of few. Besides, Kashmiri industry has prefered *"export selling"* rather than *"export marketing"*. Lack of interest on the part of new generation in accepting their ancestral skills and a deviation towards government jobs is leading the Kashmiri industries towards extinction.

Industries, however, if properly managed can fetch money in abundance and liberate the people of a conventional thinking that, *"government alone can solve the problem of unemployment"*. There is a need for the innovative role to be played by the information handlers, ICT people, and management professionals, the trinity of whom can be moulded into a single platform in order to manage the knowledge both in tacit and explicit modes. So, proper and timely management of knowledge from diverse sectors of Kashmir that sprouted from time immemorial at universities, research institutes, industries and other organizations or remained embedded in culture and folklore need to be taken care off. Furthermore, the impractical utility of the grey matter has resulted in grayish aging symptoms of the valuable knowledge also. The practical

applications of our research work in social, economical, political and moral developments are hindered because of the lack of proper knowledge management (KM) strategies. A need for developing a knowledge portal for Kashmir, is felt that would provide the ability to incorporate the data for the most comprehensive access, possible to needed knowledge. This new knowledge management based environment will also provide the opportunity to add new resources representing different sectors of society **(Fig. 1)**. It will provide various sources of knowledge which might be of importance for academicians, administrators, tourists, planners and researchers that currently are not published on any of the official or popular web site **(Fig. 2)**. Virtual literacy skills in an electronic environment can do wonders in nurturing the various types of industries in Kashmir, which in turn can make the societal elements literate in every aspect. A sort of ***"call centre based approach"*** should be framed out where knowledge is given prime importance in making the society a better one and that can be achieved through a well knitted knowledge base.

Fig. 1

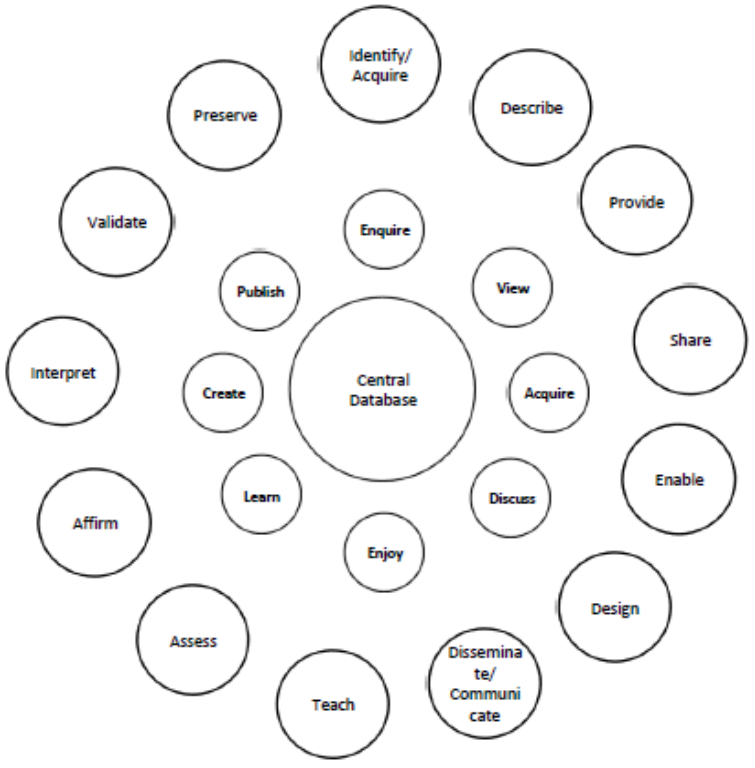
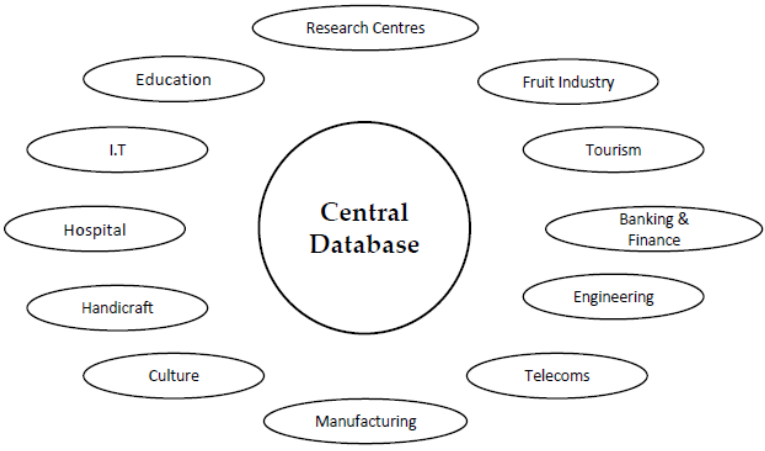


Fig. 2



Review of Literature

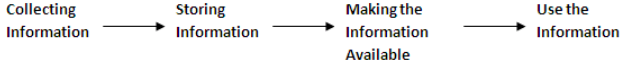
Knowledge is an important resource and its management has helped to increase the organizational excellence **(Argote, McEvily & Reagans, 2003; Nikerson & Zenger, 2004).** Knowledge repositories are an output of emphasis on distance learning and instructional technology which provide an institutional output **(Rogers, 2003)**. Management of knowledge repositories has been always of prior importance **(Dillon, 2002; Jacobs, Thomas & Mc Gregor, 2008; Tsai, Zhu, Ho & Wu, 2010; Kankanhalli, Lee & Lim, 2011)**. Centering on process-based view, **Ruggles (1998)** proposes eight major categories of knowledge-focused activities for KM, including how knowledge is generated, accessed, presented, embedded, facilitated, transferred and measured, as well as how knowledge is used for decision making. **Lee and Hong (2002); Mezher, Abdul-Malak, Ghosn & Ajam (2005)** point out that the focus of KM is on knowledge creation and diffusion processes in which all levels of employees are involved to improve organization's ability to execute their functions more effectively and efficiently. Application of information communication technology (ICT) to enhance and improve knowledge management processes has been discussed by a number of authorities **(Stein and Zwass, 1995; Constant, Sproull & Kiesler,1996; Alavi, 2000; Easterby-Smith, Crossan & Nicolini, 2000; Alavi & Leidner, 2001; Lee & Hong, 2002; Hayes and Walsham, 2003 a; Hayes and Walsham, 2003 b; Kankanhalli, Tan & Wei, 2005; Cabrera, Collins & Salgado, 2006; Franco & Mariano, 2007; Rah, Gul & Wani, 2010)**. **Jones (2007)** discusses the future repositories in the light of interoperability and considers interoperability as an incredible thing for retrieval efficiency. Visualizing

one of the important facets of ICT, Artifical Intelligence (AI), **Becerra-Fernandez (2000)** highlights the importance of AI in the knowledge management systems (KMS). **Ma, Wang, Zhu and Tang (2009)** have experimented with data exchange between repository and information environment for the management of scientific research.

Knowledge Management

The exploitation of the WWW, the development of mobile technologies, the rise of e-business, e-commerce, e-government, health informatics and intelligent and omnipresent computing have been rapid over the last two decades and have had a dramatic effect upon the whole knowledge cycle. All of these are vehicles for managing knowledge. Knowledge has now blown to bits and bytes paving a new path for its management resulting in total organizational excellence. KM and related strategy concepts are promoted as important and necessary components for organisations to survive and maintain their competitive keenness. It has become necessary for managers and executives to address *"K.M"* **(Goodman & Chinowsky, 1997)**. K.M is considered a prerequisite for higher productivity and flexibility in both the private and the public sectors **(Martensson, 2000).** It has become a tool to exploit the resources and enhance the competence of organizations. Resources here, consist of three **M'S (or M3)**, *men, money and material*. Their symbiosis will definitely help in an effective exploitation of knowledge flow for maintaining an effective balance between the explicit and tacit knowledge as confronted by **Nonaka and Takeuchi (as cited in Martensson, 2000).** Knowledge management starts with sharing the internal tacit knowledge and socializing it with others **(Hibbard, 1997).** It is a strategic management tool to improve performance, productivity and competitiveness of an organization. **Fig. 3** clearly demonstrates the knowledge management path more lucidly from its collection to the utilization for the fulfillment of organizational objectives **(Murray and Myers, 1997)**.

Fig. 3



Source: (Martensson, 2000)

It has become the governing factor for the organizational and societal success. The actual concept of K.M in Kashmir valley is still in its embryonic stage and through a managed knowledge portal, the concept will see its full bloom and glory.

Objectives

The knowledge repository of Allama Iqbal Library will fulfill the following objectives:

- to promote and publicize knowledge resources;
- to endorse research activities and opportunities;
- to accumulate and aggregate resources;
- to execute a robust and effective content-management approach;
- to deliver relevant and up-to-date knowledge through user-defined filters;
- to generate opportunities for collaboration; and
- to facilitate community building.

Framework

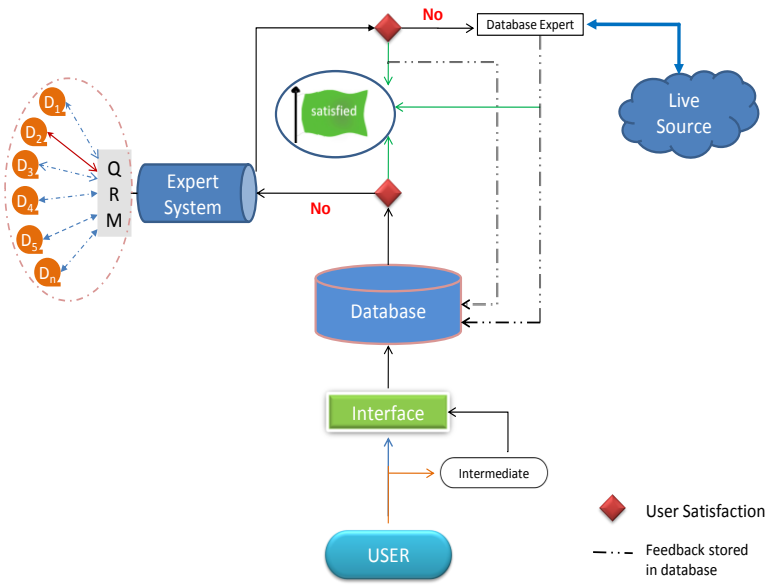
The whole framework of the knowledge base will revolve round the user needs. It will be in one way a knowledge base, *by the users, for the users and of the users,* leading to a *democratic setup* of knowledge. **Fig. 4** shows a general framework for knowledge management that makes optimum utilization of its resources (database), through expert system resources of other institutions held locally or on the web, along with the tacit knowledge. The interface will route the user query to database, the retrieved results, if satisfactory, will fetch the information needs of users. Library staff will act as intermediators to assist the users who face difficulties in formulating the queries to represent the information/knowledge that they require. For dissatisfied users, the expert system through query routing mechanism will retrieve information from the appropriate database. Apart from providing the information to users, it will also be stored in the main database, for future utility. Finally, a toll based service will be provided to the users who are still unsatisfied. Experts associated with the main database will route the query to the live sources that will be distinct figures in their respective fields; their tacit knowledge shall be recorded and passed to the users besides its deposition in core database. A nominal fee charged for seeking information from live sources shall anticipate the active participation of human expertise which will definitely lead to a successful knowledge management system.

Managing the Knowledge Repository

Establishing a knowledge based repository is not an easy task because of enormity of exercises adhered to it. It should be capable of promoting an integrated approach to identify, capture, retrieve, share, and evaluate resource assets. These knowledge assets may include databases, documents, policies and procedures, as well as the un-captured tacit

expertise and experience stored in individual heads **(Gartner Group, 1999)**. Furthermore, it is a complex and costly endeavour that requires meticulous planning and design. It must consolidate and prioritize all the requirements representing knowledge. Ultimately, it is the management that can impart success to it and it can be achieved through the ways discussed:

Fig. 4: Knowledge Management Model



Economic Management

To think of establishing a repository in the times when the markets are battered because of global recession, is really a daunting task. Infinite financial resources are needed to cope with the changing technologies, more especially for developing countries which are endemically short of adequate financial resources. The economic problems associated with hardware, software and human ware really stand as a big challenge. Furthermore, in this age, where the technology transfer takes place with the blink of an eye, makes it more difficult to establish a knowledge based repository on economical basis.

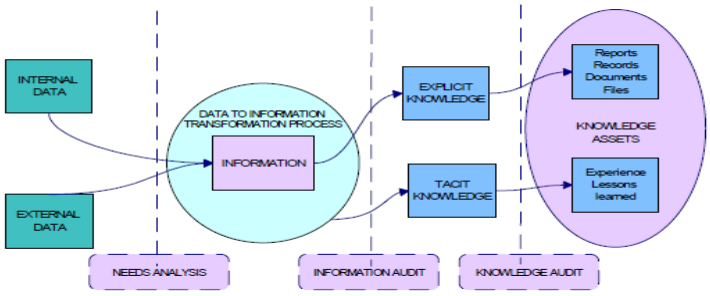
The economic burden that can hamper the dream of establishing a knowledge based repository can be solved through the open source technologies. Even developed nations have tested waters with this free platform in establishing knowledge based repositories for their societal development. Sharing a free economic model, more than 2,000

repositories worldwide enlisted in Directory of Open Access Repository (DOAR) have embraced this free model **(as on May 2011)**
Open source softwares like D-Space, E-Prints, Digital commons and many more can be used in an effective delivery of knowledge in a networked environment on a cost effective model.
The money saved over softwares can be administered to hardware and humanware. Funds generated through the content selling can also be earmarked to successful execution of elements associated with the repository. In addition, cost effective analysis (CEA) can also help in managing the economic resources by comparing the expenditure over various activities associated with the repository and the outcome of cost incurred on them. Funding agencies associated with the knowledge networking can also help in providing a strong foundation to the knowledge portal. Repository administrators should think of the economic crisis as a disrupter to the status quo and look for areas of pain **(Applegate, 2009)**. This will definitely help to overcome the economic crisis.

Human Resource Management
The inhabitants of valley are living on the equator of digital divide, where on one side people from diverse sectors are ICT literate and on the other side, we find people who are either illiterate or unaware of the dramatic changes in the ICT sector and its utility for achieving a successful knowledge based platform. As human resources are the main assets of any organization, therefore the new knowledge skills should be imparted to them in order to match the knowledge management strategies and to keep pace with the ever changing skills. So, role of knowledge managers here is highlighted which can impart managerial and IT skills to those associated with the repository to keep pace with ever changing knowledge management systems in order to fill the digital divide by joining hands with the changing technology.
In addition, it is equally important to identify where knowledge is being created, where it already exists and where it is needed to support decisions and actions. This is where human resources play a catalytic role. Managing human resources should be highly reflected through the role, each player will play in the repository. Each person associated with his respective domain in the repository should serve accordingly. Managing explicit and tacit knowledge, through proper channels will definitely lead to, in a list of resources that are required by each person or department, and can be used to rationalise acquisitions (determining what will be bought and who will it be bought for), delivery mechanisms (getting the right resources to the people who need them) and service

levels (identifying who needs specific services and at what level) which will make it a need based model **Fig. 6 (Henczel, 2000).**

Fig. 6



Stars don't shine alone. Group spirit ***(esprit de corps)*** will result in successful human resource management because the knowledge, information and skills of information professionals, I.T professionals & management professionals, on a collaborative basis can help to maintain the effectiveness of the repository. Producing top-quality knowledge work requires collaboration and flow of information among a network of top performers **(Lagace, 2007)**. Knowledge sharing (K.S), which means providing or transferring one's knowledge to others through various methods, can allow multiple individuals to benefit from the expert knowledge of a few, and leverage the power of individual knowledge to become the whole organizational power **(Wei, Stankosky, Calabrese & Lu, 2008)**. Encapsulating latest and changing I.T skills to the workers will also result in better productivity on their part in this dynamic and ever changing technological world. The test of charity is to give something that one values greatly, and after life, the greatest gift one can give, comes the personal efforts, talent, skills and learning as is testified in the **Holy Quran (Sura Al-Imran: Chapter 10, Verse 92).** So, disseminating the knowledge skills can lead to an effective human resource management. Everyone associated with the repository should sharpen their skills and knowledge by disseminating them to the less experienced ones which can help to fill the ***knowledge gap***. So, human resources can be managed through proper education and training, just as physical capital of a factory can be by modernization.

One of the most important issues when working on human K.M strategy is to create the right incentives for people to share and apply knowledge **(CSFI Knowledge Bank, 1997)**. People associated with the repository should be paid in a handsome way to nurture their skills and talent, which in turn can reap the fruits with a successful output on their part.

Human resources have a volcanic role to play in marketing the products and services of the repository. Customer-centric and competitively dominant marketing strategies are vital to promote the knowledge resources. Effective marketing strategies should be adopted by examining how repository can profitably create and sustain customer value. Leadership training programmes should be enhanced as they will help them to prepare for the next steps in their careers and lives demonstrating leadership, in their classes and among their peers. Most important, they will return to their organizations with fresh ideas, new skills, and a greater capacity for addressing the challenges, their organization will face.

Marketing on collaborative basis will also lead to better productivity as is evident from the ***Google Book Search Programme (earlier Google Book Print)***. Many libraries all over the world have joined this programme which has resulted in innovations that are having increasingly visible effect on marketing of their products. Author Richard S. Lowry has found more readers and sales of his book, *The Gulf War Chronicles* when viewed through *Google Book Search Programme*. When the book first appeared in Google Book Search programme, he saw his sales ranking on the Barnes & Noble index jump considerably by 85%. An increase of 124% visits to the *Penn State Press* website was noticed after its collaboration with Google Book Search, said, Tony Sanfilippo, Marketing and Sales Director, Pen State Press **(Gul, 2009).**

Featuring Web 2.0 services like blogs, RSS Feeds, podcasts, wikis and social networking sites will also help in marketing the resources of the repository to a greater extent as is evident from the initiative taken by JSTOR people that has proved positive for their marketing strategy. Without the less involvement of the personnel, they have seen a rise in their content market **(JSTOR News, 2007)**.

Performance appraisal can also lead to a better productivity on part of human resources as it will turn "*human resources*" to *"resourceful humans"* and become the foot soldiers of the knowledge repository

Content Resource Management

Readers are faced with an *"ocean of knowledge"* that allow them to select among a multitude of sources, and to find near substitutes when necessary. Content and credibility are what are needed to sustain a successful repository. Enriching the repository with trash and irrelevant material will result in an unmanaged repository. Selecting the knowledge resources is an important task and information professionals have a leading role to play. Plagiarism can also plague the content credibility especially in times of resource display through Web. Which sources to select and which not, usability of resources, checking the genuineness of

the resources (implicit and explicit) associated with the repository is really a challenging and daunting task.

The best way to predict future is to create it in an organized manner. Organising knowledge can help in managing the repository more appropriately. "Classification (taxonomy, categorization) is to content as mapping is to geography" **(McGovern, 2001).** So, proper categorization can lead to successful utilization of knowledge because *knowledge utilized is knowledge managed*.

Content credibility has always been baffling the people linked with the repository as well as the people accessing the repository contents. Plagiarism, a biggest threat to the intellectual property has always remained a global migraine. So, steps to stop this menace, a proactive stance should be taken to ensure high standard of integrity and credibility in the repository content. With anti-plagiarism softwares like *Turnitin* and *iThenticate*, one can ensure knowledge, free from plagiarism. *Turnitin* and *iThenticate's* well proven plagiarism detection system are based on proprietary technology since 1996. It is completely web-based, requiring no installation or software maintenance and fits well with repositories on a web based mechanism **(Emerald News, 2011).**

Tracking the usage of the knowledge content also forms one of the essential components of knowledge management. The repository should be made COUNTER (Counting Online Usage of Networked Electronic Resources) - complaint, to meet the international code of practice that effectively measures the usage of online information products and services. Many web based systems at a global level have administered to COUNTER project for reporting the online usage statistics in a consistent, credible and compatible way. This mechanism highlights the usability of the resources helping in proper decision making about the resources.

Conclusion

A symbiotic interplay between the knowledge partners will result in a win-win situation and sharing of knowledge and expertise fluidly will tend to fill the knowledge gap. A joint collaboration on part of information professionals, mangers & IT people will help to turn the dream of knowledge based society to reality. Building knowledge based network with gigabit capabilities to connect universities, libraries, laboratories, hospitals, telecom departments, research institutes, industries, agricultural institutions, and last but not least, human expertise in the Kashmir valley to share knowledge and resources will fulfill the objectives laid down by National Knowledge Commission (India) also. The knowledge repository will prove as a real customer satisfaction platform, and this *evolution* will definitely lead to *revolution* especially in a war zone like Kashmir. Successful implementation of K.M is truly measured by

its contribution to mission success. Managing three M's will definitely lead to better knowledge system , and the true goal of knowledge to serve the humanity will come true, i.e. ***Mina Zulmaat-i- Ilan Noor, (Knowledge leads to enlightment)***

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