Knowledge Management System in Higher Institution Libraries

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Abstract
This paper outlines the basic concepts of knowledge management System (KMS) in higher institution libraries, and gives a summing up of previous scientific works in the field of knowledge management. Previous knowledge management frameworks are reviewed and a knowledge management system is adopted to ensure it provide an effective and efficient understanding of knowledge management for an ever-changing environment. We present systematic process by which knowledge needed for an organization to succeed is created, captured, shared and leveraged. Current higher institutions libraries will recognize their valuable intelligences and have adopted their changing role in a society. The twenty first century pace of evolution is high and as such effectiveness of libraries will be on its ability to collect and connect knowledge.
Keywords: knowledge management System, higher institutions libraries, knowledge management frameworks

1. Introduction

We are in the era of knowledge economy, knowledge and intellectual capital are now bases of a new source of wealth for organizations and are engines of economic and social development (Bustani 2009).Knowledge intensive organization is developing quickly. These organizations create and appropriate value in unique ways and because the complex and multifaceted competitive landscape that they inhabit is very much unlike that of industrial firms (Seehan 2007) and many organizations started to implement knowledge management strategy (as well as including technology innovation strategy) in order to acquire knowledge superiority, core competencies and unceasingly promote own competitive advantage and market position (Wang .J and Xaio. J 2009) . In order to survive in the currently competitive and global business environment, most higher institution are struggling to change their existing business processes into more agile, product- and customer- oriented structures(Park.W and Han .K. H 2008) so that they can attract more patronage . Higher institutions libraries must apply knowledge management as a tool to refine their activities. (De Jarnett 1996) defines knowledge management in terms of processes of knowledge creation, followed by interpretation, knowledge dissemination and use, and knowledge retention and refinement. The required key to growth in the higher institution is in innovation which is the result of developing and managing knowledge. Organisations are discovering that they need to do a better job of capturing, distributing, sharing, preserving, securing, and valuing their precious knowledge in order to stay ahead of their competition (Liebowitz and Beckman 1998). The ability of companies to exploit their intangible assets has become far more decisive than their ability to invest and manage their physical assets (Davenport and Prusak 1998).

By managing its knowledge assets, an enterprise can improve its competitiveness and adaptability and increase its chances of success. In as much as higher institutions libraries are enterprise it is of great importance for them to develop knowledge management skill.

Knowledge Management (KM) derives its importance from the support it provides to organizations to gain competitive advantage and effective working through sharing and re-using knowledge (Abdullah *et al*., 2005).

Knowledge Management (KM) is a process where organizations have formulated ways in the attempt to recognize and archive knowledge assets within the organization that are derived from the employees of various departments or faculties and in some cases, even from other organizations that share the similar area of interests or specialization. Firestone J.P (2001).

Knowledge management is almost a new field, and experiments are just beginning in higher education. There is a tremendous value to higher education institutions that develop initiatives to share knowledge to achieve business objectives (Kidwell 2000) .(Aranganathan 2010) .we must therefore embrace and adopt KMS in our higher institution libraries to leverage on verse knowledge that is available in the twenty –first century.

2.   Purpose

The aim of this paper is to present a basic concept of Knowledge Management Framework and knowledge management systems to enable higher institution libraries understand and plan knowledge management processes in a structured so as to be effective and efficient.

3.   Method and Material

Data for this paper are based on previous scientific works in literatures.

4.   Results And Discussions

4.1   Knowledge Management Frameworks

A popular framework for thinking about knowledge proposes two main types of knowledge: explicit and tacit. Explicit knowledge is documented information that can facilitate action. It can be expressed in formal and shared language. Tacit knowledge is know-how and learning embedded within the minds of the people in an organization (Kidwell J.J 2010). A more detailed frame work for this article is adapted from the work of Kelvin Roberts, NEXT Solutions, (***Knowledge Management Framework, December 2010).*** it was prepared under the auspices of the TAC Education and Human Resources Development Council, and the primary reference in the development of the document was the Government of New Brunswick's *Knowledge Transfer Guide* (October 2009).

A knowledge management framework, including five major elements, is presented in figure 1.

A: The Basic Elements of KMS

A1. Records management

Records management is the practice of maintaining the records of an organization from the time they are created up to their eventual disposal.

- Records include items such as communications, requests and decisions, and minutes of meetings.
- Records management may include the tasks of classifying, storing, securing, and destruction (or in some cases, archival preservation) of records.
- Records management also facilitates efficient and accurate responses to requests for information from elected officials, media, legal staff, historians, researchers and the general public.

A2. Accessible information

Accessible information enables workers to conveniently access the information they need to do their jobs effectively.

- Knowing what information is available and having convenient access to this knowledge (e.g. information stored in databases, GIS systems, historic reports, guidelines, manuals and procedures) is fundamental to knowledge management.
- Another important consideration is the concept of corporate yellow pages; a list of individuals who have knowledge in certain areas, with contact information. This includes the consideration of both technical and procedural topics.

B: Improving Efficiency

B1. Documented procedures:

- Organizational procedures – step-by-step methods for conducting routine tasks in an efficient manner – are normally documented in detailed procedures manuals.
- Process maps are flow charts of the sequence of events or steps to produce an outcome, defining exactly what a business entity does, who is responsible, and to what standard a process should be completed.

B2. Tools and templates:

- Tools are job aids that are developed to improve the efficiency of undertaking specific tasks, generally applied to analytical techniques.
- Templates may exist for repetitive documentation tasks. For example, the preparation of meeting agendas and minutes, letters, memoranda.

C: Improving Skills

C1. How-to mechanisms:

- To avoid having to reinvent the wheel, it is important to document best practice processes, especially for tasks that are undertaken repetitively and by new staff.
- The documentation can take a number of forms such as:
    i.   guideline documents / manuals
    ii.   process mapping, workflows and procedures
    iii. job aids / checklists.
    iv.   Instructional designers recommend the application of electronic learn-while-doing systems as the most effective way of empowering users in the practical application of new knowledge.

C2. Training programs:

- Training is a learning process that enhances the performance of employees through:
    i.   acquisition of knowledge
    ii.   sharpening skills, concepts and rules, and/or changing attitudes and behaviors.
- Training can be formal such as attending courses, conferences, or informal such as attending meetings. Formal training includes:
    i.   courses by corporate trainers or in-house specialists
    ii.   bringing in external specialists to offer in-house training
    iii. sending staff to attend off-site training events.

    iv.   Online learning is self-directed, allowing the student to choose content and tools which may be more suited to their style of learning.

C3. Learn-from-others:

Learning from others involves interaction between more knowledgeable and less knowledgeable workers, aimed at the transfer of knowledge from the former to the latter. Strategies include:

- Mentoring – a dynamic, reciprocal relationship in a work environment between an advanced career incumbent (mentor) and a new hire (mentee) aimed at promoting the career development of both.
- Coaching – a professional relationship between incumbent and leader (coach) focused on improving performance. Coaching seeks to enrich the incumbent's knowledge, skill-set and competencies.
- Storytelling – a way of passing on complex information, experiences and ideas through narrative, typically between people with different contexts.

C4. On-the-job learning:

On-the-job learning involves active participation and observation and can be achieved through a variety of approaches:

- Secondment – an employee is placed on loan to another department or division.
- Internships – a system of training for a complex skill, mostly done on the job.
- Rotational assignment – an assignment to another position for a short term (six months to two years) for developmental purposes. The job of the person who is on rotational assignment is then filled by another individual from elsewhere in the organization and his or her job is backfilled by someone else.
- Cross training – involves the training of employees to do one another's work, providing an opportunity to develop new skills.
- Job sharing – an employment arrangement allowing one permanent full-time position to be shared between two employees.
- Job shadowing – a work experience where individual learns about a job by walking through the work day of a more seasoned employee.

D: Transitioning

D1. Orientation programs:

Orientation programs accelerate the development of new hires and the transition of employees transferred or promoted to new positions. Orientation programs may also be used to inform staff about the introduction of new procedures in the organization.

A good orientation program can answer many questions and start employees working in the right direction. Orientation programs may address:

- the structure of the company, its culture, and its goals
- the requirements of a position
- guidance on available information and resources
- guidance on policies and procedures

D2. Institutional memory:

The following strategies can help manage the retention and transfer of institutional memory:

- Succession planning – a strategic approach to ensuring that the necessary talent and skills will be available when needed, and that essential knowledge and abilities will be maintained when employees in key positions leave.
- Knowledge capture – gathering knowledge from individuals in a manner that others will find useful. It is primarily accomplished through interviews and/or questionnaires that document knowledge so that others can reuse and adapt it for their particular use (i.e. a book, a website, information repositories, etc.).
- Knowledge transfer – in addition to various forms of documentation, knowledge transfer can be facilitated through the development of virtual mentoring, which virtualizes the processes and techniques used by experienced and soon-to-believing practitioners.
- Pre-retirement or phased retirement – a leave policy that allows employees, at their option, to use a certain number of retirement allowance credits as leave during the years prior to retirement, in lieu of cash payment of the allowance on retirement.
- Double-filling involves hiring replacements prior to the departure of the employee.
- Leadership transition workshop – facilitated sessions to help an incoming leader and team "let go" of the departing leader and begin building new relationships.

E: Learning Team

E1. Knowledge sharing:

Learning organizations encourage knowledge sharing and communication between practitioners, promoting the synergy that can be achieved through collaboration of individuals with unique contributions to offer. Knowledge sharing tools include:

- Community of practice – a voluntary group of peers whose members regularly engage in sharing and learning to improve their performance as individuals, teams and organizations.
- Blogs – a Web log used to broadcast content created by single author across an entire organization or the Internet.
- Pod casts – a way to communicate, share and transfer knowledge to a broad audience.
- Wikis/Wikipedia – facilitating fast creation, sharing, and transfer of collaborative knowledge content in a highly accessible and visible manner.
- Instant messaging – enables transfer of knowledge instantly by sending text messages in real time.

E2. Improving practice:
Learning organizations continually reflect upon experience to proactively try to improve business practices by undertaking, for example:

- Post-mortems – learning from past experiences, through a detailed evaluation of an event that just ended.
- Simulations – re-enacting a situation or event to evaluate behaviors or strategies.
- Re-engineering – aimed at improvements by means of elevating efficiency and effectiveness of the business process that exist within and across an organization.
- Peer assists – a facilitated meeting or workshop where peers share experiences, insights, knowledge.

4.2   Knowledge management system
The core elements of Knowledge Management system: Culture, Content, Process and Technology
    There are four core components or characteristics of an organization that must be examined as part of the process of embracing a KM approach. These include the:
1. nature of the organizational culture;
2. processes that are used to collect, manage and disseminate information; and,
3. condition and availability of the content of the organization;
4. technology infrastructure" (Association of State and Territorial Health Officials, 2005)
    Different authors may place varying degrees of emphasis on particular components, but all agree they are inter-dependent.When all four are addressed in a coordinated, strategic manner, the result is often referred to as a Knowledge Management System. Beyond just containing all four components of knowledge management, "an effective KM system is flexible and context oriented, for just as knowledge is 'organic', so too must each KM project be unique"(Wang and Plaskoff 2002), as cited in (DiTienne et al., 2004, p.28). Of particular importance, and woven throughout the four components, is the role that people play in KM, especially with respect to tacit knowledge.(Dubois,N, and Wilkerson,T.2008)

4.2.1   Element: Culture of the Organization
"Organizational culture can be defined as the learned way of perceiving, thinking and feeling, shared and transmitted among organizational members." Commonly expressed as 'the way we do things around here,' it is a social / behavioural manifestation comprising such features as:
The values and beliefs of staff

- How people are and feel rewarded, organized, and controlled
- The work orientation of staff, the way work is organized and experienced
- The degree of formalization, standardization and control through systems
- How authority is exercised and distributed
- The value placed on various functions within the organization
- How much scope for individuality and creative expression, risk-taking and initiative is given Notions and concepts on the importance and use of time and space
- The organizational rites, rituals and stories •Organizational "language" (phrases and words that have a special meaning or significance to that organization).

4.2.2   Element: Content
This element represents the knowledge to be managed "Data, information, skills, and expertise can be thought of as the content resources of an organization" (Association of State and Territorial Health Officials, 2005). Organizations often create content on an ad-hoc basis, without the procedures to make the information accessible beyond those individual who collect and manage it (frequently perceived to be the only users). But, making content electronically available does not necessarily make it useful. Data may need to be reformatted, translated or integrated to optimize use. Organizations may provide their staff and customers with an organizational view of their content (e.g. structured by hierarchy and divisions). While it may add to an understanding of how an organization works, such compartmentalization tends to reinforce information silos and discourage the sharing of information. Content should be packaged and presented in targeted ways tailored to the user-specific needs and interests (Association of State and Territorial Health Officials, 2005). Much of the content or knowledge to be shared is based in "best practice." There is little point in passing on processes or content that either does not work,

or that has not been evaluated. Therefore, outcome and process evaluations are key components of a KM strategy. The knowledge to be identified and shared may include both the explicit knowledge (the things we can write down, share with others and put into a database) and tacit knowledge (know-how, experience, insights and intuition) needed by the organization and the organization's clients. All KM programs involve change and, in order to provoke change, individuals must be motivated sufficiently to be willing to suffer the stress of the change process to find benefit and subsequent commitment.

KM system has three critical activities related to content:

- Collecting the content - should come from both internal and external sources.
- Using the content including the technology for finding, accessing and delivering the content to users (e.g., search engines).
- Managing the content – organizing it through taxonomies. (Clemmons Rumizen 2002)

Key concerns for managing content: Collecting the right content

- Finding sources for content Selecting the best technology to deliver the content
- Developing ways to organize the content •Establishing processes to manage the content (Clemmons Rumizen, 2002, p.152).

The Importance of Context

"The salience of context is becoming increasingly apparent to decision makers as they face compressed timeframes for decision-making while at the same time the complexity of problems they face requires bringing together knowledge from experts in many specialized domains. The ability to understand the emergence and transformation of context, and the relationship between context and the sharing of tacit knowledge, is of strategic importance to the success of organizations as they face the pace and the acceleration of operations in the knowledge based economy" (Augier et al., 2001, p.135). The American Productivity and Quality Center suggests a Swiss Army Knife approach whereby those who enable corporate knowledge sharing have a variety of tools at their disposal and then select the right tool for each situation.

4.2.3   Element: Process

The processes to support KM are vital to its success. "KM processes are the activities or initiatives you put in place to enable and facilitate the creation, sharing and use of knowledge for the benefit of your organization. Processes also refer to your organization's general infrastructure and ways of doing things and the extent to which these act as enablers of, or barriers to, good KM practice" (National Health Service, 2005, p.57). "Organizations often need to make changes to the way their internal processes are structured, and sometimes the organizational structure itself … [and to] look at 'how things are done around here' to identify which processes are barriers or enablers of KM" (National Health Service, 2005). Accessing information is a key process within knowledge management. More specifically, four elements of access are identified: discovery, connectivity, language and permission" (Goddard et al., 2004).

"Processes to manage data and information exist in all organizations in a variety of forms ranging from formal to informal. Formalized processes are critical to ensure the effectiveness of the creation, assessment, management, and dissemination of content. Ideally, processes add value that exceeds the burden of implementing the process. The ability to develop and implement processes to support knowledge management is dependent on the organizational culture and business drivers. At the same time, however, changing processes can assist in changing culture to create an environment that better supports knowledge management." (Association of State and Territorial Health Officials, 2005, p.9).Public health practitioners contacted by Goddard et al. also note that "alternative methods of connecting will be required to foster cooperation among the 126 or so public health regions in Canada based on shared issues" (Goddard et al., 2004, p.117). This connection is related to the concept of communities of practice.

4.2.4   Element: Technology

Technology is a key to managing data (content). "The term data refers to a set of facts de- scribing a state or condition. The data refer to the attributes of an object, person or event. If the data identify attributes, they also identify absolutely specific causal relations. Knowledge is precisely this capacity to convert these cold data. The transition from data collection to data interpretation is central to the knowledge management issue. What is important is to give some meaning to these data which, because of their sheer volume, are liable not to be read or simply to expire in the form of statistics that are regularly published but soon become no more than a ritual" (Saussois 2003,). No technology product meets every requirement. Before selecting a solution, organizations need to clearly define their KM strategy, scope and requirements, and should evaluate available technology products to identify those that meet their needs.

The requirements needed to build a fully functional KM solution include:

- Capture and store
- Search and retrieve

- Send critical
- information to individuals or groups Structure and navigate
- Share and collaborate
- Synthesize
- Profile and personalize Solve or recommend
- Integrate with business applications
- Maintenance The Gartner Group as cited in (Bixler 2002) Technology aids in the transition of data from information, to knowledge and ultimately to wisdom. Types of enabling technology tools include (Wenger, 2001), as cited in Guptill,(2005):
- Knowledge bases (content management tools such as Document)
- Access to expertise (many incorporated into e-mail tools such as AskMe)
- eLearning spaces (ranging from interactive collaboration tools such as Blackboard to learning management systems such as HealthStream)
- Synchronous interactions (online Web meetings such as WebEx or NetMeeting)
- Discussion groups (ranging from simple list servers to asynchronous discussion boards, products include Web Crossing and Prospero) "IT systems are "hygiene factors". IT is for KM like a bathroom is for a house buyer – essential because without it, the house is not even considered by buyers. But the bathroom is not generally the vital differentiating factor for the buyer." (O'Dell, 2008) "The real challenges lie in the people side of using technology: getting the right end-product for the user, enabling the user to use the opportunities effectively, and changing the way population and public health decisions and actions take place." (Carroll, et. al., 2003)
- Web site communities (linking people to people as well as to documents, tools like Communispace or, NewSof)
- Project spaces (many of which are linked to Outlook e-mail and incorporate shared folders and project management tools)
- Knowledge workers' desktop tools (customizable Web portals such as Plumtree). Many of these tools achieve the necessary balance between technological and social approaches, an important consideration as "most technology driven approaches have failed, largely because they ignored the people issues in KM" (Wong & Aspin- wall, 2004, p.102).

Information technology (IT) can present the opportunity to store, share, retrieve data and information, but that information only becomes knowledge when there is an opportunity to discuss it. "If technologies solve your problem, yours was not a knowledge problem" (Ruggles, 1998). Customized approaches are necessary (again reinforcing the importance of context in KM) to ensure the right product is used for the right user. Predictably, this area continues to evolve at a rapid pace and additional research is needed to deter- mine the most effective technology for public health professionals (Carroll et al., 2003). Exciting advances in information technology on the horizon further support KM. "Enterprise 2.0" is a collection of online applications that are used to enable social computing on company intranets and in other business environments. These applications are user-driven, easy to use, inexpensive, open source, spontaneous and self-organizing.

Several forms of social computing, networking and collaborative applications exist, with more being developed almost daily. These include such things as:

- Wikis (e.g. Wikipedia)
- Blogs (e.g. Engadget)
- Social networking (e.g. MySpace, Facebook)
- Peer-to-peer file sharing (e.g. You Tube)
- Social bookmarking and tagging (e.g. del.icio.us)
- Mashups (e.g. Flash Earth)
- Virtual spaces (e.g. Second Life). A couple of broad rules apply to the use of technology within a KM strategy. In general, technology should represent only about one-third of an organization's total KM budget; explicit knowledge is best shared through technology while tacit knowledge (usually the most valuable) is best shared directly between people; the more valuable the knowledge, the less technology is needed to support it, or "the more tacit the knowledge, the less high-tech the solution" (Jackson Grayson & O'Dell, 1998).

5. What is expected after adopting KMS

As cited in the work of (Marjan Laal (2010) as libraries launch KM initiatives, they can learn lessons from their counterparts in the corporate sector. Some key points to remember are:

 • Starting with strategy. Before doing anything else, determining what we want to accomplish with KM;

 • Organizational infrastructure—human resources, financial measurements of success, and information technology—should support KM. Think of technology as an enabler;

• Seeking a high-level champion for the initiative; someone who believes in its benefits and who can advocate as needed;

• Selection of a pilot project for KM—ideally one with high impact on the organization but of low risk to build credibility for knowledge management.
• Developing a detailed action plan for the pilot that defines the process and the roles and incentives of the pilot project team.
• After the pilot, results assessment and refining the action plan (Kidwel 2010).

6. Conclusions

For Libraries, it is a must to deploy a Successful KM and it depends on processes that enhance individual and organizational ability, motivations, and opportunities to learn, gain knowledge, and perform in a manner that delivers positive results, Organizational processes that focus on these three attributes will lead to an effective management of knowledge (Marjan Laal 2010). The old days of continuous improvement seem as leisurely as a picnic from the past.

Colleges and universities libraries have significant opportunities to apply knowledge management practices to support every part of their mission—from education to public service to research (Marjan Laal 2010). Higher institution Libraries must aggressively approach the adoption of KMS as it will lead to exponential improvements in sharing knowledge; both explicit and tacit, and be of huge benefits. If done effectively, it can lead to better decision-making capabilities, improved academic and administrative services, and reduced costs (Kidwel 2010). The twenty first century pace of evolution is high and as such effectiveness of libraries will be on its ability to collect and connect knowledge.

References

Abdullah, R., Sahibuddin, S., Alias, R. A, Selamat, M.H. (2005). A Framework For tering evidence-based decision-making in Canada: examining the need for a Canadian popu- lation and public health evidence centre and research network. Canadian Journal of Public Health. May-Jun 96(3):I1-17.

Towards a holistic knowledge leveraging infrastructure: the KNOWNET approach. Proceedings of the 2nd International Conference on Practical Aspects of Knowledge Management. Basel, Switzerland, 29-30 Oct. 1998.

Augier, M., Shariq, S.Z. & Vendelu, M.T. (2001). Understanding context: Its emergence, transforma- tion and role in tacit knowledge sharing. Journal of Knowledge Management, 5(2), 125-136.

Bixler, C.H. (2002). Applying the four pillars of knowledge management. KMWorld, 11(1), Retrieved January 2008, from http://www.providersedge.com/docs/km_articles/Applying_the_Four_Pil- lars_of_KM.pdf

Business Source Complete, Retrieved September, 2007, from http://library.mcmaster.ca/articles/ business-source-complete

Bustani .A, A. Molina, J. Cantu, and H. Moreira, "A knowledge-based development model: the research chair strategy," Journal of Knowledge Management, vol. 13, no. 1, pp. 154-170, 2009.

Carroll, J. M., Choo, C. W., Dunlop, D. R., Isenhour, P. L., Kerr, S. T., MacLean, A. et al. (2003). Knowledge management support for teachers. Etr&D-Educational Technology Research and Development, 51, 42-64.

CEN: European Committee for Standardization (2004). European guide to good practice in knowl- edge management (Rep. No.CWA 14924). Brussels: CEN. Retrieved from http://www. cen.eu/cenorm/businessdomains/businessdomains/isss/cen+workshop+agreements/ knowledge+management.asp

Clemmons Rumizen, M. (2002). The complete idiot's guide to knowledge management. Indianapolis, IN: Alpha Books.

Cross, R., Parker, A., Prusak, L & Borgatti, S. (2001). Knowing what we know: Supporting knowledge creation and sharing in social networks. Organizational Dynamics 3(2), pp. 100-120.

DeTienne, K., Dyer, G., Hoopes, C., & Harris, S. (2004). Toward a model of effective knowledge management and directions for future research: Culture, leadership, and CKOs. Journal of Leadership & Organizational Studies (Baker College), 10, 26-43.

Drucker, P. (1967). The effective executive. New York: Harper Collins.

Goddard, M., Mowat, D., Corbett, C., Neudorf, C., Raina, P., & Sahai, V. (2004). The impacts of knowledge management and information technology advances on public health decision- making in 2010. Health Informatics Journal, 10(2), ate.

Government of Alberta (2007). Knowledge management. Retrieved February 2008 from http://www. chr.alberta.ca/Practitioners/?file=learning/knowledge/knowledge-mgmt&cf=

Guptill, J. (2005). Knowledge management in health care. Journal of Health care Finance, 31(3),10- 14.

Jackson Grayson, C. & O'Dell, C. (1998). If only we knew what we know: The transfer of internal knowledge and best practice. New York, NY: The Free Press.

Kidwell .J.J, K.M. Vander Linde, and S.L. Johnson, Applying corporate knowledge management practices in

higher education. J of Educause Quarterly, 4(2000) pp. 28-33.

Knowledge Management System Implementation In Collaborative Environment For Higher

L. De Jarnett, "Knowledge the Latest Thing". Information Strategy, The Executives Journal, Vol. 12, pt 2, 1996, pp. 3-5.

Lai, H. & Chu, T.H. (2002). Knowledge management: A review of industrial cases. Journal of Com- puter Information Systems. 42(5): 26-39.

National Electronic Library for Health (2008). What is knowledge management? Retrieved De- cember 6, 2006, from http://www.library.nhs.uk/knowledgemanagement/ViewResource. aspx?resID=88741

National Health Service (2005). ABC of knowledge management. Retrieved December 6, 2006, from http://www.library.nhs.uk/knowledgemanagement/

National Library for Health. Knowledge management specialist library: Glossary of health knowledge management terms. National Health Service. Retrieved from http://www.library.nhs.uk/knowl-edgemanagement/Page.aspx?pagename=GLOSSARY

Aranganathan.P, J. Lakshmi, Knowledge Management in Indian Information Technology (IT) Organizations in Teaching Jobs. India; (May 2010), Cited 2010 Aug 15, Available online from: http://www.indianmba.com/Faculty_Column/FC1137/fc1137.html.

Park J. W. and Han. K. H., "Process-centered knowledge model and enterprise ontology for the development of knowledge management system," Journal of expert systems with applications, pp. 7441-7447, 2008.

Public Health Agency of Canada (2008). Core competencies for public health in Canada: Background - Q & A. Retrieved on September 29, 2008, from http://www.phac-aspc.gc.ca/ccph-cesp/qa- qr-eng.php#Q1

Ruggles, R. (1998). The state of the notion: Knowledge management in practice. California Manage- ment Review, 40(3), 80-89.

Saussois, J. M. (2003). Knowledge management in government: An idea whose time has come. OECD Journal on Budgeting, 3, 105-120.

Wang. J and Xaio.J, "Knowledge management audit framework and methodology based on processes," Journal of Technology Management in Chin, vol. 4, no.3, pp. 239-249, 2009.

Wenger, E. (2004). Knowledge management as a doughnut: Shaping your knowledge management strategy through communities of practice. Ivey Business Journal, January/February, 1-8.

Wikipedia (2008). Knowledge worker. Wikimedia Foundation, Inc. [On-line]. Retrieved February, 2008, from http://en.wikipedia.org/wiki/Knowledge_worker

Wong, K.Y., & Aspinwall, E. (2004). Characterizing knowledge management in the small business environment. Journal of Knowledge Management, 8(3), 44-61.

Marjan Laal . A (2010) Knowledge Management In Higher Education .Science Direct Journal Procedia Computer Science 3 (2011) 544–549

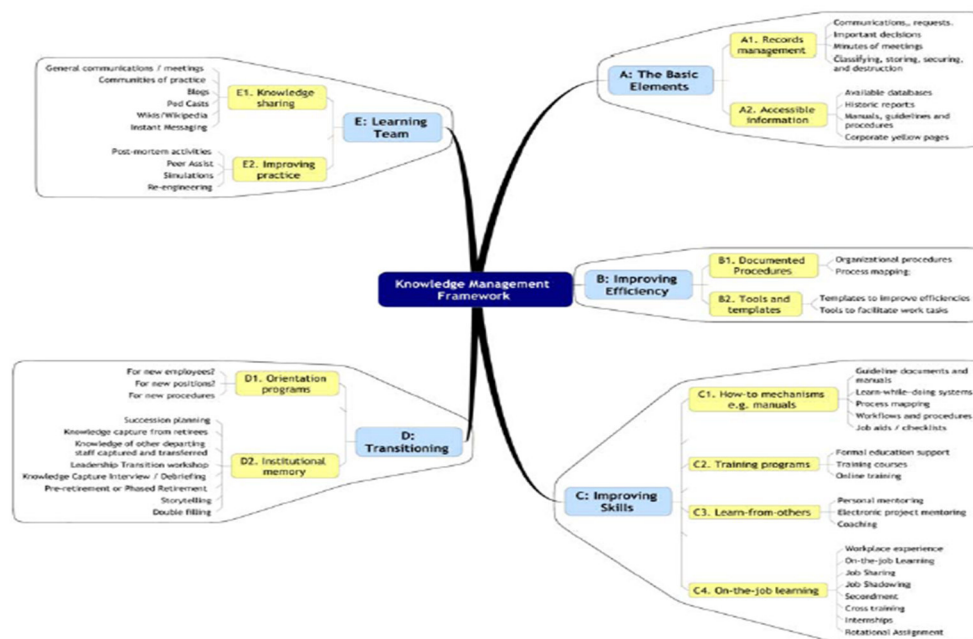Figure 1 Knowledge management activities for each element are described below.

Figure 1: Knowledge Management Framework

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