Knowledge Management

An Information Professionals Viewpoint

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Abstract:

Over the last twelve months Knowledge Management (KM) has become the latest hot topic in the business world. There has been a phenomenal growth in interest and activity, as seen in many new publications, conferences, IT products, and job advertisements. Various professional groups, notably HR professionals, IT specialists, and librarians, are staking their claims, seeing KM as an opportunity to move centre stage. People often used to describe librarianship as the organization of recorded knowledge, so perhaps our time has come.

KM does not seem to have been had much impact on the higher education sector so far, but there is some evidence of involvement of the Universities and Publishers undertaking research on KM initiatives; IGNOU, IIT's, IIM's, DRTC, CRRID and some other organizations are part of a Knowledge Management Consortium.

Confusion arises over what KM is, and what it involves. Some people view it as just an up-market label for information management, and therefore something our profession should naturally embrace. Others see KM as a useful term to signal the more complex work involved in organizing access to networked information resources, and thus equate it with subject gateways. Cynics dismiss KM as the latest management fad - yet another effort by management consultants and IT vendors to sell their 'solutions' to desperate business people, who ought to know better. These are all fair comment up to a point, not least because there is still quite a gap between KM theory and KM practice.

There are numerous definitions of KM - to be found at conferences, in print, and on the Web. The following are a representative sample, beginning with one of the most widely cited,

"...a discipline that promotes an integrated approach to identifying, managing and sharing all of an enterprise's information assets. These information assets may include databases, documents, policies and procedures, as well as previously unarticulated expertise and experience resident in individual workers." (Gartner Group Inc, October 1996)

"Knowledge management is the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use and exploitation. It requires turning personal knowledge into corporate knowledge that can be widely shared throughout an organization and appropriately applied."

Davenport and Prusak distinguish 'knowledge' from 'information', and information from 'data', on the basis of value-adding processes which transform raw material (for example, transaction records) into

communicable messages (such as documents) and then into knowledge and other higher-order concepts. (For convenience, they include 'wisdom', 'insight', etc. in their working definition of organizational knowledge.) These value-adding processes include in the first instance contextualization, categorization, calculation, conversion and condensation; and in the second, connection, comparison, and conversation. Other commentators - notably Thomas Stewart - dismiss the notion of a data-to-wisdom hierarchy as bogus and unhelpful in this context, on the grounds that "one man's knowledge is another man's data".

A more important distinction - which is fundamental to the concept of knowledge management - is that between 'explicit' and 'tacit' knowledge, explained by Ikujiro Nonaka,

"Explicit knowledge is formal and systematic. For this reason it can be easily communicated and shared, in product specifications or a scientific formula or a computer program. Tacit knowledge is highly personal. It is hard to formalize and therefore difficult, if not impossible, to communicate."

Tacit or implicit knowledge (also referred to as 'experimental' knowledge) is thus both unrecorded and unarticulated.

Intellectual Capital is a related concept, based on the view that the real market value of a commercial enterprise consists not only of its physical and financial assets (its 'book value') but also its intangible assets created through intellectual activities, ranging from acquiring new knowledge (learning) and inventions to creating valuable relationships. Intellectual assets thus include things such as patents, copyright and other forms of intellectual property, which are often estimated to be worth many times the book value.

“Universities have no experience of valuing their intellectual capital and entering those values on their balance sheets” assesses Jennifer Rowley (2000) in her very fertile paper discussing the question whether higher education is ready for knowledge management. The expert’s general assessment is summarized: “Despite being in the learning business, teachers, schools and education authorities are notoriously bad knowledge sharers” (OECD, 2002). The concept of the university as a knowledge entrepreneur is believed to be instrumental to deal with the present scenario of education. At the heart of KM is the production of knowledge. It describes the ability to identify and appropriate knowledge and other innovations which lead to a higher performance in knowledge production. In his view the university creates knowledge through research. In a second step that knowledge is de-constructed through its dissemination to the students and the industry. In other words, this depicts a constant creation of human capital (through education) and knowledge capital (through research) which flows towards the utmost mission and is there invested for the fostering of business, governmental and societal causes.

Irrespective of the terms used, the practical management objectives are similar: to convert human capital (individual learning/team capabilities) to structural capital (organizational knowledge or 'what is left when people go home', such as documented processes and knowledge bases) and thereby move from tacit to explicit knowledge, and reduce the risk of losing valuable knowledge if people leave the organization. Loss of 'corporate memory' as a result of downsizing is one of the prime reasons given for adopting formal KM practices. Other factors often mentioned include global competition and the pace of change; organizations see KM as a means of avoiding repetition of mistakes, reducing duplication of effort, saving time on problem-solving, stimulating innovation and creativity, and getting closer to their customers.

KM is not 'new' in that it has grown and developed from existing practices, and it is already well established in many organizations. KM can be presented as a convergence of ideas promulgated over the past decade, including core competencies and resource-based theories of the firm, 'info-mapping' and information resource management and intangible/intellectual assets, the learning organization, total quality management and business process re-engineering and the networked organization.'

However, while KM is arguably an evolutionary rather than a revolutionary development, there are several aspects of this current phenomenon which taken together represent a significant change in the way organizations manage people, processes and information. KM involves taking a more *holistic* view of information, not only combining internal and external information - previously practiced in some corporate libraries, relatively rarely in other sectors - but also coordinating planning and control (monitoring) information, and consolidating informal ('soft') and formal ('hard') information. KM also requires a *strategic* focus on valuable knowledge, concentrating on knowledge that will contribute to the improvement of organizational performance.

Also, although all the gurus stress that KM is a people-and-process issue and should not be viewed as an expansion of the IT function, they also acknowledge the significant contribution of *technology,* including features not widely available until relatively recently. The ability not only to disseminate information rapidly around the organization, but to develop knowledge bases incorporating contextualized information with links to contributors and multimedia enhancements has opened up new possibilities for capturing and exploiting know-how, and encouraging inter-departmental collaboration. In addition IT has the potential to change culture by cutting through traditional structures, inspiring an informal style and fostering the social networks which underpin knowledge-sharing.

KM initiatives generally have several strands, but usually involve the selection of priority areas for initial effort, and a combination of making formal/explicit knowledge more visible and usable and making informal, private and tacit knowledge explicit, public and useful. Converting informal personal contextualized knowledge to formal systematic organizational knowledge is the key objective, exemplified by creating databases of frequently asked questions (FAQs) searchable by both employees and customers, and compiling lists of what went right and what went wrong in projects (lessons learned) as guidelines for similar future undertakings.

In addition to improving the *visibility* of knowledge, another aim is to develop its *intensity,* by creating a climate to encourage generation of ideas within workgroups, and (eventually) generalization to other areas. At the same time, as organizations are concerned about information overload, a further objective is to achieve a better balance between 'pushing' and 'pulling' it, by giving people just-in-time access to knowledge, allowing the need to know to be determined by the information user (not the 'owner').

Applications typically fall into the following broad categories:

Knowledge databases and repositories (explicit knowledge) - storing information and documents that can be shared and re-used, for example, client presentations, competitor intelligence, customer data, marketing materials, meeting minutes, policy documents, price lists, product specifications, project proposals, research reports, training packs;

Knowledge route maps and directories (tacit and explicit knowledge) - pointing to people, document collections and datasets that can be consulted, for example, 'yellow pages'/'expert locators' containing CVs, competency profiles, research interests;

Knowledge networks and discussions (tacit knowledge) - providing opportunities for face-to-face contacts and electronic interaction, for example, establishing chat facilities/'talk rooms', fostering learning groups and holding 'best practice' sessions.

Examples can be found in all sectors of business and industry, especially among professional service organizations. The large accountancy and consultancy firms have led the way in launching formal knowledge management initiatives, closely followed by IT companies. In some cases the project involves establishing a central physical presence, for example Ernst and Young has set up a Centre for Business Knowledge (replacing a corporate library, with the introduction of new knowledge management functions). Booz Allen and Hamilton's KOL - Knowledge On-Line and Price Waterhouse's Knowledge View both involve information specialists in managing content and providing services to consultants. In India none such initiative has been undertaken yet.

These efforts must be supported by building a knowledge management infrastructure, including both technical and organizational aspects - systems and processes for capturing, structuring, diffusing and re-using knowledge; roles and responsibilities for making things happen; and a culture and style that promote communication and sharing. Although a culture of teamwork and trust is more important than the technological infrastructure, a consistent and reliable organization-wide communications and IT infrastructure is essential (incorporating security, standards and support for users). IT thus provides the network for sharing at a technical level; it is a necessary condition, but not sufficient in itself to ensure successful KM.

Commentators perceive the technical issues as relatively straightforward, and mostly utilizing established technologies. The key technologies are online databases, document management systems and groupware, with corporate intranets the fastest growing area. The typical approach is a suite of tools based around groupware (Lotus Notes) and/or an Intranet-based web, with Lotus Notes favored for discussion-based applications (e.g. lessons learned) and database management (especially where there is a need for database replication for remote disconnected use) and the web for hypertext-linked knowledge, publishing across multiple platforms and multimedia databases, generally supported by a specialized search engine and online company thesaurus.

More sophisticated systems use intelligent search agents, case-based reasoning (notably for customer service/help desk applications) and neural networks (for data mining). With library management systems moving to web-based catalogue access, it becomes easier to combine published and internal/informal

information. Notebooks library automation software and NORMA records management software allow users to view details of library/records collections alongside intellectual capital databases.

KM requires a mix of technical, organizational and interpersonal skills: the mix and emphasis varies according to responsibilities, but everyone involved needs to be able to understand the business, communicate effectively and have at least basic competence in handling information and using IT. Although LIS people are not always prominently involved at the outset of KM initiatives, many organizations have brought them in at a later stage, when the ongoing management of *content* usually emerges as the major technical challenge. The need to structure and codify information, to have a common language, and to manage selective dissemination of information, has highlighted information specialists' skills in indexing systems, thesaurus construction, and user profiling for customized alerting.

Some corporate libraries are being reinvented as knowledge centers, often with bigger budgets. Nevertheless, their future is by no means assured as there is no shortage of other people ready to take on these tasks; librarians' traditional reluctance to move beyond the information *container* towards analysis and interpretation of its *contents* has resulted in organizations overlooking their potential contribution, even in areas where their competence should be obvious. Information professionals are seen as *service*-oriented, but not *value*- oriented - they don't understand the impact they can have on the business. Both the Indian Librarian Association and the Knowledge Commission are concerned about the profession's role in KM, and are sponsoring investigations of skills needs to influence curriculum development for professional education and the continuing professional development of practitioners.

So what about KM in Higher Education? As indicated above, there are few formal KM initiatives at present, but many institutions are already using intranets to manage some types of explicit knowledge, such as minutes of meetings, lecture notes, etc. There is possibly scope for more route maps and directories, in the form of expert locators and other resource guides, and most Higher Education Initiatives could probably make much better use of the skills of their information professionals if they viewed information holistically and applied the professional expertise of content specialists to managing the wide range of information which underpins institutional operations and decisions - instead of assuming that only academic-related information requires this sort of treatment.

A particular issue for Higher Education Initiatives arises with the types of knowledge associated with academic institutions: academic (subject) knowledge and administrative (organizational) knowledge need to be viewed and managed in different ways - a point which does not seem to have been adequately addressed in Knowledge Commission Reports. It makes sense to formalize processes for capturing best practice in course administration and grant applications within an institution, but knowledge networks for discipline-related discussions are more likely to be inter-institutional. One of the questions here is how to link academic networks with their library counterparts.

In summary, knowledge management involves connecting people with people, as well as people with information. It is a management *philosophy,* which combines good practice in *purposeful* information management with a culture of organizational learning, in order to improve business performance. The core skills of library and information professionals are both relevant and essential to effective knowledge management, but they are often under-utilized and under-valued. Surely it is our job to put this right!

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