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Knowledge Portal as a New and Innovative Approach for The Public Libraries in a way of Self Service Application: a Study of Offshoot Technology

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ABSTRACT

Knowledge Portals (KPs) are highly integrative Knowledge Management Systems (KMS) that promise to synthesize widely dispersed knowledge and to interconnect individuals in order to provide a 'one-stop knowledge shop'. Yet, KPs face major challenges in practice, as the intricacies of knowledge exchange are subject to varied individual and social factors. At the same time, growing anecdotal evidence from case studies indicates KPs' enormous potential. In this paper, describes the concepts of the knowledge portal, feature, components architecture, process and disadvantage of knowledge portal..It concludes with the remarks that the Public library and Community Centre Professionals should play a proactive role in the creation of the knowledge portal and accept the advantage offered by the knowledge portal. It also discusses the importance and beneficiary Role of Knowledge Portal for the Public Libraries and also highlighted the various facet and issues of Knowledge Portal. Information and Communication technology (ICT) and it offshoot technologies such as Internet, Intranet, electronic databases, web directories , web Portal and E Portals, Knowledge Portals etc. have played a significant Role in the Public Libraries and Community Centers. Owing to various information needs, integration and collaboration of knowledge, single point access to resources and information technology has changed the scenario of the Public library and information centers in information organization. Public Libraries and Community Centers are creating a library portal and knowledge portal to fulfill the need of their users. To cope with these problems Public Libraries and Community Centers have been creating knowledge portal.

KEYWORDS : Information and Communication technology (ICT), E-Mail (Electronic Mail), HTML (Hyper Text Markup Language) Tacit Knowledge (TK), Explicit Knowledge (EK) Standard Generalized Markup Language (SGML), Portable Document Format (PDF)

Introduction

In these recent days we are seeing that our Public library system of India moving towards use of emerging technologies or specially towards the free and Open Source Information to satisfying their clientele without any extra financial expense . It is common knowledge that the face of the libraries has completely changed in recent times. There are fewer books on the shelves but a sea of information in Microchips. With the emergence of IT application s, particularly Internet, there has been a major shift in Public Libraries from traditional print resource to electronic resources or you can say that Development of information technologies such as internet, internet, extranet and the Web has changed the role of information professionals. Digitization, Networking and Modernization of Public Libraries simultaneously modify the function of acquiring storing dissemination of information to creation, organization processing maintenance increasing and spreading knowledge .In this regard Public Libraries and oraganisation are creating various knowledge portals in different areas. A digital repository, digital library and various Public Library Institution as well as Community Organization websites are considered as a part of the knowledge portal. The Portal serves as a gateway to knowledge for the Public librarians or Public library user or Public Library Personals. It offers a wide range of resources and services in a simple, concise, and an attractive format which could include E-mail forums Web searching, news, free-E-mail, discussion groups directory of links online shopping references and other services .A knowledge portal provides a personalized single point of access to the online resources as well as in –house resources that support an organization or institution in all the aspects of their learning teaching working research and other activities. The human knowledge can be classified as Tacit and explicit knowledge .The first knowledge is personal knowledge which comes from the experiences and practices and basically stored in the human mind. It is not easy to transfer or communicate without willingness of respective personal .The second is a formal knowledge which is available in the form of written documents (procedures principal's rules, scientific formulae journals books etc.) know as explicit knowledge. It is easy to communicate to others. In brief the knowledge portal involves gathering, collaborating, dissemination and sharing of data Information knowledge and best practices gained by the experiences.

2 Definitions

KPs are a type of Knowledge Management System (KMS) that strive to provide a 'one-stop knowledge shop', that is, a single point of access to the knowledge available in an organization (or even beyond), reprocessed in such a way that it is useful and applicable for a knowledge-seeking user. As a motivation for such a system, consider that large companies many have hundreds or even thousands of separate knowledge management systems, not to mention

Thousands of knowledgeable employees potentially available to share their experiences. It can be a challenge simply to find a relevant system or person, much less to find relevant knowledge and to integrate diverse sources. Yet, knowledge is quite an intractable resource, and implementers of all sorts of KMS struggle both to get individuals to contribute their knowledge and to provide knowledge seekers with useful reprocessed knowledge. Organizations have thus faced difficulty to fully obtain value from KPs and frequently experienced disappointments with the modest outcomes that KP deployments have yielded. According to Denis, Howe a portal is" A Website that to be an entry point to the World-Wide Web, typically offering a search engine and /or links to useful pages, and possibly news or other services. These services are usefully provided for free in the hope that users will make the site their default home page or at least visit it often. Most portals on the Internet exist to generate advertising income for their owners other may be focused on a specific group of users and may be part of an internet or extranet. Some may just concentrate on one particular subject, say technology or medicine and are known as vertical portal".

We define a *portal* as a system designed to provide secure, customizable, personalizable, and integrated access to dynamic information from a variety of sources, in a variety of source formats, wherever it is needed (Detlor 2004; Smith 2004). One important aspect of a portal is the repository of information to which it provides (ubiquitous) access. In addition, a portal includes personalization and role management and a common interface that integrates the diverse functionality. Its gateway character is commonly realized in the form of a web site (Smith 2004). In organizational contexts, portals are, hence, embedded in an organization's Intranet, meaning that integration of Internet access and functionalities is a supplementary feature but not a necessity.



Figure 1: Portal

We then define a *Knowledge Portal* (KP) as a type of portal that purposely supports and stimulates knowledge transfer, knowledge storage and retrieval, knowledge creation, knowledge integration, and knowledge application (i.e., the processes of knowledge management) by providing access to relevant knowledge artifacts. Repository-oriented components and functionalities of a KP include a knowledge organization system, repository access, search, and applications and services. In addition to the repository-oriented functionality of KPs, such a portal must also offer network-oriented components and functionalities. Some types of knowledge are most readily transferred through direct interaction between a knowledge seeker and another knowledgeable individual. To that end, a KP also provides functionalities to identify and connect users based on their expertise, such as collaboration and communication tools. We Discuss each of these components and functionalities in more detail in the following section.



Figure 2: Knowledge Management Concept

E-Portal is a mechanism that filters the overwhelming amount of information and provides a fast, easy and convenient way to get relevant information in a cost-effective way to disseminate critical information to users at the right time. E-Resource Portal integrates, captures and manages various E Resources published through various Publishers at a various Places at a single web portal .in other words ,E-resource portal is a single shop/gateway for subscribing to all kinds of E-resources published worldwide.

The Sun & Sun (2002) describe a portal as" A Web page that serves as an entry point or gateway to resources and services.

What is a knowledge portal?

Knowledge Portals (KPs) are highly integrative Knowledge Management System (KMSs) that promises to synthesize widely dispersed knowledge and to interconnect individuals in order to provide a 'one-stop knowledge shop'. Yet, KPs face major challenges in practice, as the intricacies of knowledge exchange are subject to varied individual and social factors. At the same time, growing anecdotal evidence from case studies indicates KPs' enormous potential. The knowledge portal provides a single point of access to the tacit and explicit knowledge that support members of the institution or organization in all aspects of their learning, teaching, working, research and other activities.



Figure 3: What is Knowledge Management

It offers various internal, external resources with other services which encompass the management of books. Journals, databases, Websites, learning object library catalogues, E-mail, forums, and lesson learned best practice and experiences of individuals of the organizations. Access to some of these resources and services are usually restricted to the member of the organizations or institution .It offers the opportunities to all the members of the institution to directly and actively participate in the creation and sharing of the knowledge."It contains intelligent agent software to identify and automatically distribute information and knowledge effectively to knowledge workers based on knowledge profiling".

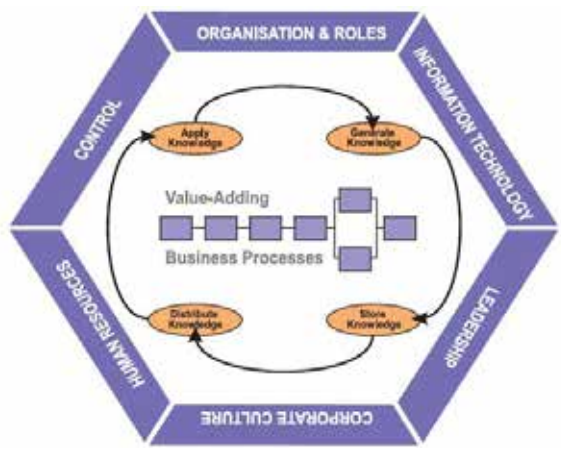


Figure 4: Knowledge Management Basics

Object

- To support working, learning, teaching, research and developments.
- To provide entry point to the Web resources as well as local resources with special services.
- To integrate internal and external resources and allow interoperability or cross- search or federated search.
- To provide internal and external knowledge through a single platform with the elimination of various interfaces and passwords.
- To help in the research and development of organizations.
- To store and retrieve tacit and explicit knowledge of individuals.
- To assist in sorting out any problems that has occurred in future or has occurred earlier.
- To save the time of the users through personalized search, categorization and effective navigation of complex and disparate collections.
- To add powerful collaboration and cataloguing tools.

Components and Functionalities of a Knowledge Portal

As a background to our discussion of problems in deploying KPs, we now discuss typical components of a KP and the repository- and the network oriented-functionalities they provide. Our definition thus goes beyond views of a portal as just web access to knowledge arti-

facts. We cover in turn the knowledge organization system, repository access/knowledge repositories, search, applications and services, collaboration and communication tools, personalization and role management, and the interface, as shown in Figure 5.

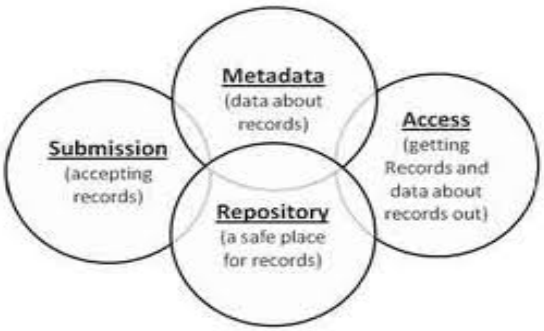


Figure 5: Components of a Knowledge Portal

- Communication Tools
- Knowledge
- Repositories
- Search
- Knowledge
- Organization
- System
- Unified
- Interface
- Personalization and
- Role Management Applications and Services
- Experts

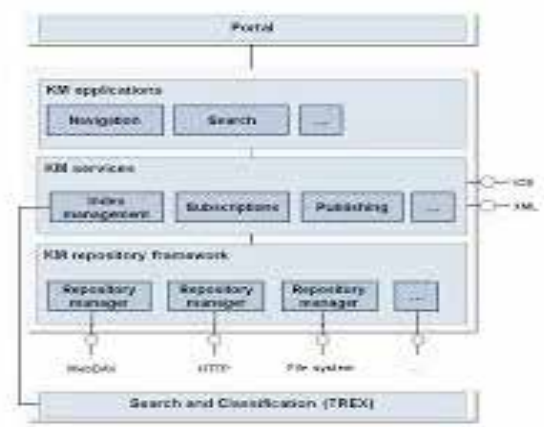


Figure 6: Architecture of Knowledge Portal

Knowledge Organization Systems.
Knowledge organization systems constitute the most essential component of KPs, as they address knowledge and information integration by structuring met information for the underlying repositories and networks (Collins 2003). Under this broad concept, we subsume the more specific content management systems, which offer the possibility of classifying and (re-)codifying knowledge artifacts from various sources in an integrative manner (Benbya et al. 2004). Other important sub-categories are document and project management systems, as well as knowledge maps (Lee et al. 2009).

Simple components of knowledge organization systems can be registers and categorizations (Collins 2003). Registers are lists or indexes of information, for instance, comprising glossaries, dictionaries, or authority files (Collins 2003) that facilitate a common understanding and language. Categorizations are relevant in particular for facilitation of the knowledge retrieval process, and are important no matter how powerful the search engine is (Garud and Kumaraswamy 2005). They comprise, for example, subject headings or content separation schemes (Collins 2003). On a more complex structural level, knowledge organization systems include taxonomies. First of all, like all portals, a KP regularly contains an organizational information taxonomy (Detlor 2004) or 'business information directory' (Dias 2001), representing a metadata catalog prompted by the different publishing units and ideally comprising all codified information existing in the organization (Dias 2001). In addition, a KP can integrate a variety of other taxonomies, such as simple thesauri or more complex ontologies. The latter can enhance the search function (Horrocks 2008) and other functionality of the system (Benbya et al. 2004) by giving information a semantic underlay (Collins 2003; Liming et al. 2007). The purpose of taxonomic meta-information is to provide context and to indicate where knowledge or knowing individuals can be found (Alavi and Leidner 2001; Liming et al. 2007). Thus, organization systems contribute to navigation and coordination, thereby enhance knowledge retrieval, storage and transfer processes.

Repository Access/Knowledge Repositories
Integrating access to an organization's repositories of information and knowledge artifacts is a key functionality for KPs (Collins 2003; Terra and Gordon 2003) in the context of knowledge integration. We refer to this functionality of KPs as the repository focus, as the emphasis is on access to repositories of knowledge artifacts that convey knowledge in codified form. Repositories can be as simple as plain databases (Carlsson 2002) or more sophisticated, meaning repositories that store, index, and synthesize knowledge artifacts (e.g., codified best practices), so as to promote knowledge reuse (Gray and Durcikova 2005; Markus 2001). As we noted above, a large organization may have hundreds or even thousands of such repositories, making it valuable to provide more streamlined access. *Search.* Search represents an essential functionality for the knowledge retrieval process, making a search engine a necessary component of a KP. Basic categories are standard, concept-based and metadata search (Collins 2003). The integration of varying sources and evolving insights into search is a particularly important issue for KPs (Terra and Gordon 2003). The search engine is intertwined with the KP interface; it is mostly implemented as a static feature (Collins 2003), requiring adapted and contextualized display (Detlor 2004).

Applications and Services.
A KP delivers integrated access to different software tools and a variety of services to facilitate knowledge work (Goodwin 1987), such as multi-repository support, process and web service applications (Collins 2003). Multi-repository support refers to an application that overlies a variety of other repositories, thus providing an integrated point of access for the separate systems. One can consider the integration of applications and the integration of repositories as complementary parts of a holistic integration of existing IT (Carlsson 2002). The main issue is the visual integration of different interface structures without losing the applications' functionality or giving up on the KP's established logic of use.*Collaboration and Communication Tools.* In addition to the repository-oriented functionality discussed above, KPs offer collaboration and communication tools to connect people (Benbya et al. 2004) thus

Enabling Direct Transfer of Knowledge
This network focus relates to the system's capability to enhance the communications network of participants. Work-group productivity tools and specialized transactional functionality make an effort to foster and facilitate collaboration and communication by providing a convenient platform (Detlor 2004). Available tools are versatile, among them email, shared document writing spaces, net meetings, video conferences, (Lee et al. 2009). One notable example is semantic blogging, considered especially pertinent for more decentralized knowledge management (Cayzer 2004).

Personalization and Role Management
By definition, portals offer customization and personalization, being important means to reach a higher degree of structure and usefulness of retrieved information and distinguishing it from common web services (Benbya et al. 2004). To do so, user and role management, which recognizes and administrates users and access (Carlsson 2002), is required (Collins 2003). Roles can be defined according to tasks (Patnayakuni et al. 2006), with the purpose to pre-determine knowledge flows towards user groups (Carlsson 2002) as specifically as possible. Role management can be considered the groundwork of 'tailored' personalization. There are two possibilities for supplementary personalization. KPs may allow the users to organize knowledge

flows (Collins 2003) providing those with means to avoid an overload of information and save browsing time (Terra and Gordon 2003). This functionality is referred to as explicit personalization or (user) customization. Alternatively, KPs can personalize the web page based on rules or user behavior (Benbya et al. 2004; Forsati and Meybodi 2010), which is called implicit personalization.

Unified Interface

Finally, a KP's interface is the point of visual contact with the user. It must offer direct and unified access to relevant features. Explicit personalization, for example, must be provided for displayed content, but also for the visual representation itself (Smith 2004). The key function of the unified interface is visual integration, having to be geared to the user experience in order to present all functionalities: for example, enabled by knowledge organization systems, it complements content pages by content relevant pages, thereby helping the user to interpret the main body (Collins 2003).

Components of Knowledge portal

E-mail

E-mail (Electronic Mail) is an information service provided by the portal to the users' communities to share messages, ideas, and knowledge and stay up-to-date. It is also used for the sending or the contents to related experts.

Real-Time Messaging and Awareness

It allows communication with the co-workers in the same room or remote locations. It also has ability to track a user's "electronic presence". It consists of various types of tools and awareness techniques such as –

- Instant messaging Group chat
- Whiteboard collaborations,
- Application sharing,
- Desktop sharing Co-browsing,
- Video and Audio conferencing tools, ect.

Discussion Forums

The discussion forum offers a place to all the members of the communities to directly participate in the sharing and exchange of the ideas so that the new knowledge will be created. The forums should be supported by the powerful search engine-based repository so that all the data, information, research results, and preprint, technical content including case studies, technical papers, white paper, guidelines, can be stored and retrieved as and when required.

Knowledge Catalogue

It is a kind of database that contains the list of the experts with their specially and location, when a researcher or an employee needs help from the experts to resolve problems they will be able to quickly look up the expert from the knowledge catalogue, It offers various types of contents such as data type, meta contents etc. and also has the ability to discover a new relationship in content.

Repository

It is an important component of portal for information or document communication process. It includes preprint post- print, journal articles, conference papers, research reports, theses, dissertations, seminar presentations, working papers and other cerebral items such as approach papers, case studies, newsletters, technical documents, tips and guidelines, white paper ,best practices, practice expertise notes, etc. The resources are available for every professional.

Database Tools and Software

These are the major components of the knowledge portal because it offers technological support to the creation of various databases such as library resource database, expert profile catalogues, ect. Some software's are involved in the indexing, filtering, organizing integrating, liking and sharing of the knowledge among the professional communities of practice.

User Interface:

The portals offer easy users' interface, routing through knowledge catalogues, simple and advance search interface and save and re execute the queries as and when required. The user can be personalized or customized according to their requirements. The user can access all the contents at the single point and also filtered on the basis of some criteria.

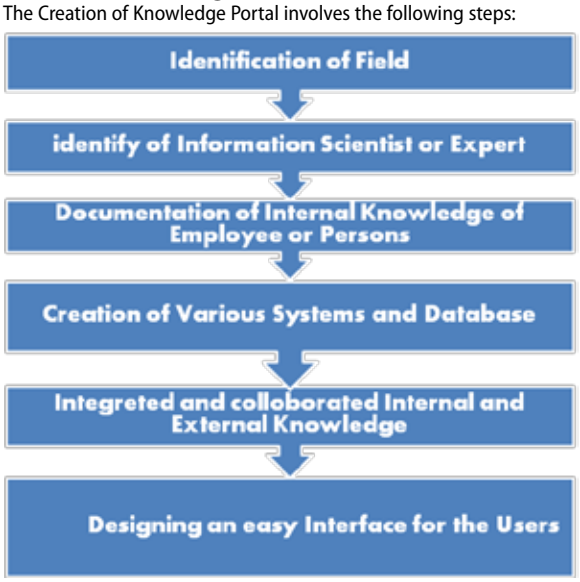
Software for portals:

There are several software's available in the market but only a few are listed in the following table.

Name of the Product	Company	URL
Microsoft SharePoint	Microsoft	http://www.microsoft.com/sharepoint/default.mspx
Video E-Portal	Vidor,Inc	http://www.vidor.com/
IBM Web Sphere Portal Server	IBM	http://www-306.ibm.com/software/websphere/
SITS Vision Portal	Strategic Information Technology Service Ltd.	http://evision.ucs.ac.uk/
JA-SIG U Portal	JASIG	http://www.uportal.org/

Creation of Knowledge Portal

The Creation of Knowledge Portal involves the following steps:



6. Advantage of Portal

- It disseminates various types of information (events, reports, and programs), knowledge, ideas, messages and data.
- The available resources can be used to enhance the competitiveness and productivity of employees.
- It reduces the time delay in handing out tools caused by the difficulties in contacting the relevant individual.
- Improve knowledge management and offers experience of individuals or groups of individuals that is the key assets for the future generations.
- Knowledge management portal improve the learning process and develop the learning environment in organizations.
- The portal allows sharing all the internal documents, best practices, Policies and procedures, expertise and experience of individual and external documents.
- The portal improves the security of the contents because it allows access on the single platform which is protected to view or manipulate.
- It allows you to integrate various applications into the single database so that the relevant information can be obtained as and when required.
- The portal provides various documents' contents in a single platform it consists of creation of taxonomy, categorization and aggregation of contents.
- It allows content management which consists of documentation, capturing, storing and managing contents.
- It creates a content browsing and searching structure which facilitates easy access of information.
- It improves decision-making through accurate information.
- It reduces the labor cost, paper-based documents in the organizations or institutions.

- It enhances and develops harmony and relations and relations and saves the time and money of the user.
- It helps in day –to-day routine works.

7. Conclusion

In a currant Scenario we have seen that Public Libraries are changing drastically and finally These Public libraries are involved in the generation of knowledge. They can create a Knowledge portal for the storing, sharing and disseminating internal and external knowledge to achieve its aims and objectives. Therefore, each and every Public Library should create a knowledge portal to save the intellectual work in different fields so that the present and next generation can use the same which leads to increase in productivity of output in quality and quality of any Public Library. Public Library professionals are required to play a proactive role in promoting usage of internal and external resources among the employees, users and researchers through the portals.

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