

Chapter 79

Institutional Knowledge Repositories: Enterprise Content Management in Academics

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ABSTRACT

An Institutional Knowledge Repository (IKR) is “a digital archive of intellectual product created by the faculty, research staff, and students of an institution and accessible to end users both within and outside of the institution, with few if any barriers to access.” This chapter discusses the growing trend in Open Access Repositories, Institutional Repositories worldwide. It throws light on the concepts of enterprise resource planning and enterprise content management and then explores academic institutions in India who have already initiated the use of Institutional Knowledge Repositories, as an enterprise content management system for knowledge sharing & management with regard to content, access, and other factors.

INTRODUCTION

The development of the internet and application of information technologies on academic campuses has led to significant changes in scholarly communication among both faculty and students. Technology is opening up avenues for innovation in design and delivery of courses, sharing of expertise and content among faculty and students. Educational

material is now being created in digital formats. This digital educational material is used for teaching and for enhancing the traditional method of imparting education. The traditional model of imparting education is being transformed to a new model of imparting education. This new model or the modern profile of education is characterized by the digital nature of information & knowledge that is involved between the academic institutes, the teachers, students and the educational resources (Mahadevan & Rahman, 2002).

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Nonaka's dynamic theory of organizational knowledge creation holds that organizational knowledge is created through a continuous dialogue between tacit knowledge (derived from personal experience and reflects individual beliefs) and explicit knowledge (formal codified knowledge that can be communicated to others) via four patterns of interactions - socialization, combination, internalization and externalization (Nonaka, 1997). Once knowledge is explicit, it can be transferred as explicit knowledge through a process Nonaka calls "combination" (Nonaka, 1994). This is where information technology is most helpful, for information can be digitized, stored and shared.

Academic institutions grow and revitalize themselves through the knowledge they create, their processes for passing that knowledge on to others and the exchanges and relationships they foster among people. Knowledge management in academics can be thought of as a framework or an approach that enables people within the institute to develop a set of practices to collect information and share what they know, leading to action that improves services and outcomes. A knowledge management system in its initial stages can be broken into several subcomponents like repositories, collaborative platforms, networks, culture (Tiwana, 1997).

In simplest terms, a Digital Repository is where digital content, assets, are stored and can be searched and retrieved for later use. A repository supports mechanisms to import, export, identify, store and retrieve digital assets. A Digital Repository can hold a wide range of materials for a variety of purposes and users. It can support research, learning, and administrative processes. Digital Repositories in Academic Institutions may include research outputs and journal articles, theses, e-learning objects and teaching materials or research data. A repository in an academic institution is a type of content management system that both holds the core intellectual assets of the

institution (a university or college), and enables them to be used to support a variety of business processes as defined in the institution's information strategy (Hayes, 2005). The creation of repositories is becoming a growing requirement in academic institutions for capturing and managing intellectual assets, information and knowledge sharing.

Open Access (OA) ¹ means free and online access to scholarly literature that can be freely disseminated further with proper author attribution. It brings down barriers to the scientific communication by using Internet (Suber, 2007). Open Access accelerates research, enriches education, and shares learning across rich and poor nations (David, 2005). Open-access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions. The Budapest (February 2002), Bethesda (June 2003), and Berlin (October 2003) definitions of "open access" are the most central and influential for the Open Access movement. When authors make their articles freely available in digital form on the Internet, they are said to be "self-archiving" (Bailey, 2006).

There are two primary vehicles for delivering Open Access to research articles, namely OA Journals and OA Archives. OA Journals or Publishing is like conventional scholarly publishing involving peer reviewing of submitted articles by authors. The difference being that published content is freely accessible over Internet. Various business models sustain such open access publishing. The Directory of Open Access Journals (DOAJ) ² covers free, full text, quality controlled scientific and scholarly journals. OA archives or repositories refer to uploading published or pre published documents in publicly accessible digital repositories. These repositories provide easy access to their collection and allow other systems to harvest their metadata associated with documents. The exchange of such metadata is in accordance to now well-established "Open Archives Initiative-Protocol for Metadata Harvesting (OAI-PMH)" ³ protocol. OA archives are of two types – institutional and subject oriented. Institutional

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