

ENABLING KNOWLEDGE SHARING THROUGH INSTITUTIONAL REPOSITORY: CASE OF BOTHO UNIVERSITY

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Abstract

Knowledge management is concerned with strategies and practices for supporting capture, creation, representation, storage, usage and evolution of knowledge. The main aim of this paper is to describe the concept of institutional repository from the knowledge management perspective. Subsequently it provides examples drawn from Botho University Institutional repository. This paper acknowledges the need of applying knowledge management tools like institutional repository in university to facilitate research-based knowledge sharing practices.

Keywords: Knowledge sharing, Knowledge management tools, Institutional repository

1. Introduction

The world economy is transforming from the industry based economy system to knowledge based economy. Knowledge based economies in general terms means “economies that are directly based on the production, distribution and use of knowledge and information” (OCED, 1996). In this context, knowledge can be considered as the most critical means of production, even more critical than land, labor and capital. “In knowledge society, knowledge has an ultimate economic renewable value; the stock of knowledge is not depleted by use. However, the value of knowledge to an economy comes from sharing it with others” (Brinkley, 2006). The efficient use and sharing of this knowledge can be affected by systematic managing of the said knowledge.

Knowledge management can, therefore, be described as a set of practices that help to improve sharing of data and information in decision making (Petrides, 2003). These practices include social and cultural interactions, involving the exchange of employee knowledge, experience and skills in the department or whole organization (Zawawiet *et al.*, 2011). It is a kind of practice which is used by organizations to identify, create, represent and distribute knowledge within the organization or outside the organization.

Knowledge sharing is often considered as a core component of knowledge management (Hedricks, 1999), even though other aspects like collection and storage are important. Knowledge sharing is not static and thus it is a process. It is a process, where individuals exchange their ideas and knowledge in the course of discussions or other forms of social interactions in order to create new knowledge, ideas and experiences (Abdullah *et al.*, 2009). Knowledge sharing happens naturally in everyday life as people communicate life stories, share personal, social, economic, and political experiences. In learning institutions, this can take the form of seminars, workshops, conferences and reading from central depository. With the advent of social media, information sharing has reached unprecedented proportions. This paper aims to review the services of Botho Institutional repository from knowledge management perspectives.

2. Knowledge management

Currently the world economy and social life are becoming more and more knowledge driven. Generally, knowledge is now the means of production, service and social activities. Different researchers define knowledge in different contexts. Scheriber *et al.* (2000) defined knowledge as the whole body of data and information that people use to carry out tasks and create new information. In other words, knowledge also occurs when people add their own experience and skills to the already existing information and in the process making new discoveries, ideas and innovations. Adhikari (2008) defined knowledge from organizational perspective; the author mentions that knowledge represents set of justified beliefs that enhance an organization's capability for effective action. Various literatures indicate that, there are two types of knowledge; which are explicit and tacit knowledge.

Explicit knowledge is also called "hard knowledge". Explicit knowledge can be expressed in a number of words and shared formally and systematically in the form of data, specifications, manuals, and so on (Balaram & Adhikar, 2008). Ismail (2012) indicates that explicit knowledge can be formally and systematically stored, articulated, and disseminated using certain codified forms and records such as databases and libraries. On the other hand, tacit knowledge consists of insights, perceptions and hunches. This type of knowledge is difficult to express and formalize and therefore difficult to share (Adhikari 2008). The subjective insights and intuitions of tacit knowledge make it hard to be passed, communicated or shared among individuals. Such knowledge is deeply rooted in a human's action and experience Klein (2008), cited by Ismail (2012). Regardless of the knowledge type, there is a need to manage knowledge to derive full benefit from it.

Knowledge management is a process where organizations have formulated ways in an attempt to recognize and archive their knowledge assets within the organization which was created by their employees or faculties. In some cases, knowledge management is concerned with strategies and practices for supporting capturing, creating, representing, storing, using and evolving of knowledge (Laoufi, Mouhim, Megder, & Cherkaoui, 2011). Knowledge management is also defined as the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusing, using and exploiting of knowledge (Uriarte, 2008). Generally, knowledge management is concerned with how to create (i.e. learning process), disseminate (i.e. knowledge sharing) and measure (i.e. intellectual capital) knowledge related assets. (Liao & Wu, 2010)

Knowledge sharing is the major pillar of the knowledge management process. According to Ismail (2012), knowledge sharing is the process of communicating and transferring knowledge, in explicit and tacit forms, within individuals or groups of people. Abdullah *et al.* (2009) explain that knowledge sharing is a process where the individual exchanges his/her knowledge and ideas through discussions or other forms of social interaction in order to create new knowledge or ideas. Similarly, Hooff & Hendrix (2008) noted that knowledge sharing is the process of bringing and collecting new knowledge and ideas. In other word it is the process where individuals mutually exchange their knowledge (tacit and explicit) and jointly create new knowledge (Ipe, 2003). Knowledge sharing is widely recognized to be a central component of successful knowledge management, and one of the central characteristics of healthy knowledge culture is that knowledge sharing is embedded in the way in which organization works (Seba, *et. al.*, 2012).

3. Institutional Repository

As it is indicated in aforementioned paragraphs knowledge management brings together three core organizational elements - people, processes and technologies to enable an organization to use and share existing organizational knowledge effectively. Digital Repositories, one of the components of knowledge management systems hold content-explicit knowledge and are concerned with managing, maintaining and distributing this content. (Doctor & Ramachandran, 2007) In other words the idea behind the concept of digital repository is directly related to the knowledge management philosophy: collecting, managing, disseminating, and preserving scholarly works created in individual institutions. The examples of repositories include digital libraries, specialty repositories, institutional repositories, research data repositories and e-learning repositories (Zuccala et al., 2006). Lynch (2003) describes an institutional repository (IR) as: a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members.

University-based institutional digital repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members.

4. Botho University Institutional repository

The Botho University institutional repository was developed in 2014 with the aim to make the University's research and scholarly outputs available internationally. This will help to maintain strong relationship between academic staff and departments both nationally and internationally. The repository is using DSpace, it is an open source digital repository software developed by Massachusetts Institute of Technology (MIT) in partnership with Hewlett-Packard in 2000 (Sheeja, 2012; Smith, MacKenzie, et al, 2003).

5. Knowledge management tool

The advancement information communication technology has brought radical change in organizational knowledge sharing process. Knowledge management tool is a set of logical rules or computer programmes that can be used to solve the problems in related to create, codify, and share of knowledge (Ghani, 2009). From library and information service perspective, knowledge management tools are software which can facilitate the process of collecting, organizing, and sharing of knowledge. For example Institutional repository, knowledge repository, electronic library management systems, etc

There are three major types of services provided by knowledge management tools: infrastructure services, core service and packaged services (Housel & Arthur, 2001; Ghani, 2009)

Infrastructure services are usually needed to implement any knowledge management solution (Housel & Arthur, 2001). The authors noted three basic types of infrastructure services: communication services, collaboration services translation services and workflow management services.

Knowledge generation, knowledge capture knowledge organization (indexing), access management and retrieval services are the major core knowledge management services which are provided by a given knowledge repository (Jain and Joseph, 2013)

Currently Botho institutional repository has been serving as knowledge management tool for facilitating institutional research based knowledge sharing activities. Botho institutional repository has provided the following services:

6. Communication and collaboration Services

Collaboration service is the kind of knowledge management service support by knowledge management tools for the purpose of networking of people who have the same area of interest (Housel & Arthur, 2001; Ghani, 2009). Ghani (2009) noted that knowledge management tools enable teams to globally share dedicated spaces for managing the project lifecycle; editing and publishing materials; conducting live discussions and interactions; and maintaining a repository of materials associated with every step of the process. Thus they are used as social networking tool.

BUIR policy allows academicians and scholars to involve in various levels. They are participating in knowledge generation such as: research articles in the form of journal, conference proceeding, thesis etc. In IR Context, Community is the highest-level administrative unit in institutional level that produces research, has a defined leader, and has long-term constancy and responsibility for setting community policies (Thakuria, 2008). In other words communities are a group of people with common area of interest that are focused on collaboration and sharing of knowledge related to that common interest.

Currently BUIR consists of five communities: Accounting, Businesses and Administration, Education, Computing, Health Information Management and Teaching Excellence. It is also possible to set up sub- community for any faculty or researcher units as needed .BURI is play an important role in sharing of research-based knowledge which enhances research sharing practices and innovation. It has been created a seamless access to the university's research outputs this has been achieved through searching, browsing and harvesting. Thus it serves as a means of research communication platform among campus communities.

Beside this the success of IR project intendeds of on the collaborative efforts of different professionals namely Librarian, Information technology professionals, leaders, students and lecturers (Farida et al 2013).

7. Workflow Management services

Workflow is an arranged and repeatable pattern of business activity enabled by the systematic organization of resources into processes that transform materials, provide services, or process information (Center of Excellence (CoE), 2009). Knowledge management tools can support for online execution and control of workflows in organization. According to Housel and Bell, (2001) knowledge management tools provide workflow management service that allows users to execute and enter the results of subtasks and view the status of other subtasks. Institutional repository, as knowledge management tool, it also conveys workflow management services.

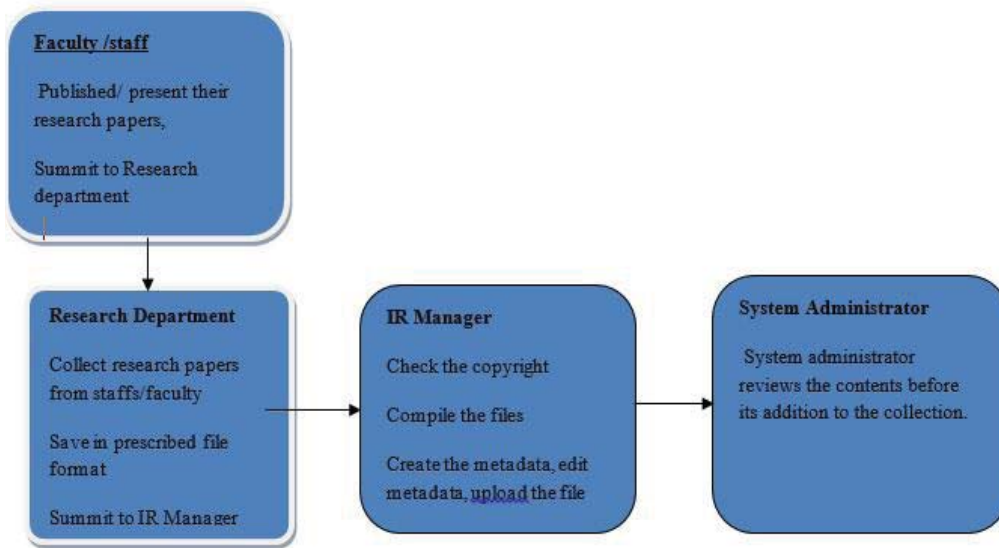


Figure 1. BURI workflow

8. Knowledge capture service

Knowledge capture is process that involves identification, elicitation, distillation, packaging and publishing (Piktialis & Greenes, 2007). Knowledge management tools can help to capture a content of knowledge in various formats (Ruggless, 2007). Similarly, IRs facilitates a number of activities that include digital asset management; preservation of digital assets; ensuring the visibility of institutions; and facilitating discovery of content (Onyancha, Al-Awah, & Cole., 2012). There are two approaches of knowledge capturing in IR: self-archiving and mediated archiving. Self –archiving practice of scholars depositing copies of their research papers in electronic repositories or ‘open archives’ (Rieger, 2007).

Self-archiving is always preferred because of the advantages it offers:

- complete ownership of the process of depositing work;
- could become part of the research process;
- could mean that an item is represented in the way an author wishes it to be represented

However, the BURI has been carried out mediated archiving. Since the concept of IR is new for university community. The academics have to be trained in various issues, like: copyright, encoding metadata, and uploading papers.

9. Knowledge organization and retrieval service

Knowledge organization is the process of describing document, their contents, features and purposes, and the organization of these descriptions so as to make these documents and their parts accessible to persons seeking them or the messages that they contain (Soergel, 2008). Specifically, it is method of indexing, abstracting, cataloguing, classification, and the creation of textual or bibliographic databases for information retrieval.

IR the term metadata means the database of data. This means a detail description of items or records. The major advantages of having consistent metadata elements in institutional repository are: to facilitate information retrieval process and to increase the accessibility and visibility of the item. For instance, BURI the existing information is displayed by the order of relevancy, title, author, submit date, issue date, either ascending order or descending order.

10. Access Management Services

Knowledge management tools can create a mechanism to control access to existing knowledge. Housel & Bell (2001) mentioned that access management service provided by knowledge management tools are usually based on the profile of users.

In IR context, some repositories allow to access abstract, or chapter without any registration, others repositories seek the user to register for accessing full text collection. Some repositories restrict full text to intranet having an agreement with publishers or owners of content (Hashim & Jan, 2011). In case of BUIR users can access the information without registration. Users can view the full metadata of records and full text based on their preferences.

11. Conclusion

Universities whether private or public, they play a fundamental role in building the nation economy. They have high status in a community, since they produce new knowledge through research and teaching. Thus universities should maintain good knowledge repository tool to like IR to meet their mission. This paper tried to highlight on concepts of knowledge management, knowledge management tools which can be used to further understanding on the concepts of institutional repository. Consequently reviewing institutional repository from the knowledge management perspective will help information professionals to implement and understand knowledge management from library and information service perspective.

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