

Blending ICT into Knowledge Management at National Archives of Malawi

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Abstract

Developments in ICT is continuously offering organisations with unprecedented capacity to effectively manage their knowledge. The paper explored how ICT is used to manage knowledge at National Archives of Malawi. Although it focused at a public institution, still private institutions can also borrow a leaf. The paper's objectives were to; explore ICTs used to manage knowledge at National Archives of Malawi; explore the criteria used to select ICTs to be used to manage knowledge; explore challenges associated with technological approach to knowledge management. Data was collected using participant observations and interview.

Keywords: Knowledge Management, Information and Communication Technologies, National Archives of Malawi.

Introduction

National Archives of Malawi just like any institution needs knowledge in order to function properly. This knowledge is a fundamental resource as it allows people to function intelligently. Although knowledge is commonly perceived as what is known, Davenport & Prusak (2000) defined knowledge as a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. Knowledge is derived from information and information is derived from data and they are arranged in a hierarchical order with data at the bottom then information and knowledge at the top (Hardia, 2013).

Knowledge exists in two main dimensions. These dimensions include: tacit and explicit knowledge (Polanyi, 1967; Nonaka, 1994; Nonaka & Takeuchi, 1995). Tacit knowledge is the personal and context-specific knowledge of a person that resides in the human mind, behaviour, and perception (Duffy 2000). In contrast, explicit knowledge is formal and systematic; can be codified, collected, stored, and disseminated (Duffy 2000). Explicit knowledge is not bound to a person and has primarily the character of data. Most institutions rely and count on this knowledge as part of its resources. Although they rely on coded knowledge in form of documents or repositories but there is also knowledge in organizational routines, processes, practices and norms.

In order for National Archives of Malawi to benefit fully from knowledge, it has a knowledge management system. Knowledge management refers to organizational efforts designed to (1) capture knowledge; (2) convert personal knowledge to group-available knowledge; (3) connect people to people, people to knowledge, knowledge to people, and knowledge to knowledge and; (4) measure that knowledge to facilitate management of resources and help understand its evolution (Hardia, 2013).

When it comes to actual implementation of knowledge management strategies, organizations tend to attempt a range of approaches to knowledge management. One convenient way of categorizing these strategies is to classify them into technological

approaches and non-technological approaches. The technological approach to knowledge management employs ICT to support knowledge management in an organization (Alavi & Leidner, 2001). Such an approach aims to capture, codify, store, distribute and reuse explicit knowledge, abstract important tacit knowledge from context and make implicit knowledge explicit, portable, transferable, sharable and available through the use of ICT. Many knowledge management initiatives rely on ICT as an important enabler (Alavi & Leidner, 2001). The non-technological approach to knowledge management emphasizes on the managerial, organizational, social and cultural facets of knowledge management (O'Dell & Grayson, 1998; Malhotra, 1999; Davenport & Prusak, 2000). These approaches involve managing organizational changes, reviewing human resources policies, building informal networks or communities of practice, establishing knowledge-friendly environments and incentives to ensure knowledge workers get rewarded for fostering, creating and sharing their knowledge (Wickramasinghe, 2003).

Statement of the Problem

As ICT is continuously developing, it is offering organisations with unprecedented capacity to effectively manage their knowledge. The use of ICT in knowledge management, however, has had mixed results, with some projects successful and others unsuccessful (Davenport & Probst, 2002; Baalen et al., 2005; Teo, 2005; Tsui, 2005). This raises a question on how ICT is supposed to be used to manage knowledge.

Purpose of the study

The purpose of the study was to explore how ICT is used to manage knowledge at National Archives of Malawi.

Objectives of the Study

Objectives of the study were to:

- explore ICTs used to manage knowledge at National Archives of Malawi;
- explore the criteria used to select ICTs to be used to manage knowledge;

- explore challenges associated with technological approach to knowledge management.

Significance of the Study

The whole essence of this paper is to help institutions understand how ICT can be incorporated in knowledge management. The findings from this study are to assist National Archives of Malawi and other institutions to have an insight on knowledge management. This research is also to simulate others to do more research on knowledge management.

Review of Literature

It is a widely recognized that knowledge has become a primary source of firms' competitiveness (Drucker, 1988; Bolisani & Scarso, 1999; Zack, 1999; Davenport & Prusak, 2000; Lehaney et al., 2004; Cepeda, 2006). Having knowledge and being able to effectively use organizational knowledge enables modern organizations to maintain and develop sustainable competitive advantages (Davenport & Prusak, 1998; Zack, 1999).

The rapid advance of ICT facilitates the effective use of organizational knowledge in a more organized manner (Lehaney et al., 2004; Cepeda, 2006). Many knowledge management initiatives rely on ICT as an important enabler (Alavi & Leidner, 2001) for the effective use of organizational knowledge.

A wide range of technologies and applications has featured within the ICT based approach to knowledge management. Intranets, knowledge portals, content and document management systems, information retrieval engines, relational and object databases, electronic publishing systems, groupware and workflow systems, push technologies, help-desk applications, customer relationship management, data warehouse, data mining, business process reengineering, expertise networking, intelligent agents, conferencing, email, messaging, chat rooms, and knowledge creation

applications have all been employed at one time or another (Marwick, 2001; Tyndale, 2002; Gray & Tehrani, 2003; Malafsky, 2003; Tsui, 2003).

The incorporation of ICT in knowledge management, however, has had diverse results, with some projects successful and others unsuccessful (Brown & Duguid, 2000; Rollo 2001; Davenport and Probst, 2002; Baalen et al., 2005; Teo, 2005; Tsui, 2005).

Despite reported successes of ICT-based knowledge management projects, many have failed (Malhotra, 2002; Tsui, 2005). One of the most heated debates in the knowledge management literature relates to the role that ICT can play in processes of knowledge management, which ranges from perspectives which suggest that ICT can play a crucial role, to diametrically opposed perspectives which argue that the nature of knowledge makes it impossible to share it electronically (Hislop, 2005).

The development and presence of the necessary technological infrastructure for organizational knowledge management does not guarantee the full utilization of the potential of ICT in knowledge management (Parlby, 1997; Walsham, 2001). Malhotra (1999) finds out that there is no direct correlation between ICT investments and knowledge management.

The Courier (2002) listed some of the criteria that can be used to help in selecting technologies to be used in knowledge management and the criteria looks focuses on: responsiveness to user needs, content structure, content quality requirements capacity to handle narrative knowledge, ease integration and hardware-software compatibility issues.

Using technology to manage knowledge is no easy. Rabah (2015) said that technologies might end up being used in some different ways rather than what it was acquired for; will require additional professional development and will require a flexible funding.

Methodology

The study employed qualitative research method in order to have an in-depth understanding on how ICT is used to support knowledge management. The study also followed a realism philosophical paradigm to be both objective and subjective in interpreting the findings.

Data was collected from National Archives of Malawi using interview and participant observation. The interview had one core open ended question to allow the interviewee to explain freely on the incorporation of ICT on knowledge management. Probing questions were also asked to get specific details on areas relating to the objectives of the paper. The observation was used to verify responses given by the interviewee especially on KM technologies in use, criteria. used to select technologies and challenges faced.

Permission to conduct the study at the selected institution was sought from the authorities. Ethical issues that surrounded this study were adhered to. Ethical issues that surrounded the research were confidentiality, privacy and informed consent, these were observed. Data collected was analysed inductively.

Findings and Discussions

The findings of the study are presented and discussed in accordance to research objectives. This is done in the following sub-sections.

ICTs used to manage knowledge at National Archives of Malawi

One of the objectives of this study was explore ICTs used to manage knowledge at National Archives of Malawi. It was revealed that National Archives of Malawi uses ICTs to manage its knowledge which are categorised into:

- document management applications,
- content management applications
- Intranets,

- information retrieval applications,
- groupwares

Microsoft office applications are used at the National Archives of Malawi as document management applications. Microsoft office applications support creation, processing and reviewing of documents. Microsoft office applications used range from: word, excel to powerpoint. These application are run on computers.

Joomla and greenstone are some of the content management applications in use at the National Archives of Malawi. These applications are run on computers, tablets and smartphone. They are important as they help to store documents in a central repository, control access to documents, keep an audit of activity and changes for the documents, search the content or index of the documents.

At National Archives of Malawi, Intranet help employees to locate, view and print documents within the organisation. With the help of Local Area Network (LAN), printers, computers, smartphones, tablets and web browsers employees capture, transfer, access and distribution information relevant to their roles and responsibilities. Intranet saves employees time of moving from office to office just to search information.

National Archives of Malawi's employees take advantage of existing vast information retrieval engines on the internet. These engines index, search, and recall recorded information and supply employees with knowledge to advance their professional skills. These technologies require computers, smart phones and internet subscription

Groupwares are also used at National Archives of Malawi for communicating and collaborating among workgroups and departments in an informal or ad hoc conversations when users cannot communicate face to face. Groupware in use include Facebook and WhatsApp. These technologies require computers, smart phones and internet subscription. These technologies help in exchanging and enhancing tacit knowledge and

also provide flexible knowledge exchange as knowledge can be exchanged during odd hours and weekends.

Although National Archives of Malawi uses several technologies to manage knowledge ranging from document management applications, content management applications, Intranets, information retrieval applications, electronic publishing systems but not all technologies are used. Other possible technologies that National Archives of Malawi can use to manage knowledge include: knowledge portals, relational and object databases, electronic publishing systems, workflow systems, push technologies, help-desk applications, customer relationship management, data warehouse, data mining, business process reengineering, expertise networking, intelligent agents and chat rooms (Marwick, 2001; Tyndale, 2002; Gray & Tehrani, 2003; Malafsky, 2003; Tsui, 2003).

Criteria used to select technologies to be used to manage knowledge

The other objective of this study was to explore criteria used to select technologies to be used to manage knowledge. In order to make sure that appropriate technologies are selected it was revealed that National Archives of Malawi has a criteria used to select technologies. The criteria look at issues of:

- Responsiveness to user needs to ensure that technologies in use matches the varied and changing needs of users.
- Content structure as classification and cataloguing is important to ensure that information is easily found and quickly retrieved.
- Content quality requirements to ensure that standards for admitting new content into the system is established and met to ensure operational relevance and high value.
- Capacity to handle narrative as much knowledge is embedded in narratives.
- Integration with existing systems as most knowledge sharing programmes aim at embedding knowledge sharing in the work of staff as seamlessly as possible.

- Hardware-software compatibility to ensure that choices are made that are compatible with the existing ICT infrastructure.

The criteria used at the National Archives of Malawi matches with what Courier (2002) listed as right one for organisations to use in order to select appropriate technology for knowledge management.

Challenges associated with technological approach to knowledge management.

The other objective of this study was to explore challenges associated with technological approach to knowledge management. The study revealed that National Archives of Malawi faces some challenges when using technology to manage its organisation knowledge and they include:

Some technologies are used in manner that they were not meant for example sometimes groupware are turned into joke forums. This challenge is dealt by having strict rules on how groups are supposed to used.

Inconsistent investment in ICT equipment, infrastructure and resources. This challenge is dealt by engaging donors to support.

Inflexibility of funding also another challenges to technological approach to knowledge management at National Archives of Malawi. This challenge is dealt by engaging donors to support.

Need for additional professional development and support is also another technological approach challenge to knowledge management at National Archives of Malawi. In order to solve this challenge National Archives of Malawi sends its employees to further their study in fields related to ICT and knowledge management.

Challenges faced at National Archives of Malawi are also similar to what Rabah (2015) found.

Conclusion

ICT technologies in form of document management applications, content management applications, Intranets, information retrieval applications, groupwares offer an ideal solution for knowledge management at National Archives of Malawi. Using computers, tablets and smartphones, National Archives of Malawi can create, store and transferring information with added advantages of flexibility, customization and relevance. However, not all technologies are deemed as appropriate as there is a criterion that is used to select the appropriate technologies which focuses on responsiveness to user needs, content structure, content quality requirements capacity to handle narrative knowledge, ease integration and hardware-software compatibility issues. Using technology to manage knowledge is no easy as it is tempting to use technology in some different ways rather than what it was acquired for; requires additional professional development; consistent investment in ICT equipment, infrastructure and resources and; also requires a flexible funding.

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