BIG DATA AND KNOWLEDGE MANAGEMENT AWARENESS: A SURVEY

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ABSTRACT

To maintain a competitive advantage and for day to day operations organizations are making use of data and information. Emergence and widespread use of computers and computer networks are changing the face of data and information management. Big data is the new term when we talk about data. Massive, voluminous, high velocity, different format data. This data can aid an organization not only to inform through simple queries but provide input for decision making. Data from which decision can be made is known as knowledge. Yet concepts of knowledge and knowledge management as familiar as those of data and information. Nevertheless data, information and knowledge are ultimately all vital to organizations. Knowledge management is an area that has gained immense interest. Many organizations are trying to implement or are planning to implement knowledge management. Success rates are much lower compared to failure rates. The modern employee in an organization is at one level or another a knowledge worker who should be aware why they need knowledge and knowledge better for effective efficient decision making. Successful knowledge management start with a culture shift where all embrace and own the process. For knowledge management to be successful, the implementing team as well as the users should understand what it truly embodies and what is required of each.

This research aimed at addressing the awareness of knowledge management in organization. A questionnaire was given out to analyze Knowledge Management awareness in a chosen Organization. Participants were members of staff from different departments of the Organizations. Analysis was done using SPSS software package.

Though knowledge management initiatives are there, there is a lot still to be done.

KEYWORDS: Knowledge, Knowledge Management, Tacit Knowledge, Explicit Knowledge, Big Data

INTRODUCTION

The big data concept has gained immense interest in different quarters. Big data can informally be defined as data that comes from multiple sources and in many formats, in high volumes and at high speeds. Databases and data warehouses provide storage options for this data. New terminologies like Data mining, knowledge and knowledge management are emerging. However the big data by itself cannot be of much importance. Big Data like other data is defined as that which is raw, necessary but not really beneficial for decision making by itself. To be useful, data

has to be converted to information through various processing mechanisms. Information can help one answer the what and how questions which data could not do. However the nature of the current market place characterized by cut throat competition is such that whatever data resources are there they should enable a decision maker to make quick and accurate decisions. Decisions such as which products / services to continue and which to let go; which branch to close; which products to pair together for maximum impact; which customers to focus on and who to woe; how much to price items; what is the customer views concerning our products among many such decisions. The traditional view of data and information are not suited to answer such questions required for decision making. They have to be looked at in a new way known as knowledge. Knowledge is data / information in a format that can be used for making decisions. Decision makers need data and information; but impactful decision making can only be achieved by application of knowledge. Many organizations have become aware of this. It is for this reason that knowledge management has become a buzzword in many organizations. Some organizations have put in place iniatives for knowledge management; others have intentions to do so. In many formal and informal gatherings knowledge management is a term flying around. The question is how many actually know what knowledge and knowledge management are and what is needed to implement such a platform. Okemwa (2006) observes that the concept of knowledge management is relatively new to many organizations and moreso those based in the sub-Saharan region of Africa. The researcher further notes that many organizations based in the region do not as yet have formal organizational knowledge management programmes. This is further emphasized by Mosoti and Masheka (2010) who are of the view that creating and implementing knowledge management practices remain a challenge to many organizations. In the next section we attempt to define knowledge and knowledge management.

According to Abdulla et al. (2008), knowledge is something that comes from information; that has been processed using data and it includes experiences, values, insights as well as contextual information. This is further emphasized by Nonaka and Takeuchi (1995) who go further to identify two types of knowledge i.e. tacit and knowledge and explicit knowledge. The researchers explain that tacit knowledge is inherent in individuals and is what is presented as expertise, talents, insights, experiences, intuitions and reflections. It is rare knowledge. It is what makes one an expertise as compared to another. This knowledge is very key in decision making. On the other hand, explicit knowledge is that which is in documented formats. In manual documentation, as computer files, in relational and other databases, in data warehouses, from sensors, captured by devices such as CCTV cameras, emitted by devices like mobile phones among other sources. Explicit knowledge can be said to better capture the big data concept. Jabar, et al. (2011) note that most knowledge management technologies in existence originally emerged from a document centric approach. These can be likened to document management systems.

Effective knowledge management requires a culture shift in organizations. Most workers in modern organizations are decision workers and the remaining supports the decision makers. To be effective all workers in an organization should be able to own the knowledge management

iniatives. This research sought to know the awareness of knowledge management in select organizations.

DATA COLLECTION

The research sought to know how knowledge workers in organizations view knowledge management, whether knowledge management is being done and if it is how it is being done as well as knowledge workers proposals for how knowledge management systems should look like. A questionnaire was sent to select organizations and select knowledge workers of the organizations. Sampling to select the population was done through simple sampling method allowing all samples of the population an equal probability in the process without any bias. Personnel from Library, Registry, Audit, ICT, Human Resource, Admin, Procurement and Finance department and other internal departments were the respondents. A total of 21 respondents filled and returned the questionnaires which were analyzed using SPSS software.

FINDINGS

The term knowledge is pretty understood from a tacit point of view with respondents defining knowledge as a practical understanding of something and skills acquired and accumulated over time. At this point the knowledge workers are not associating knowledge with data (explicit knowledge). To understand if this knowledge would be beneficial when captured and managed, 95.2% of the respondents feel that knowledge management is important to organizations with 4.8% not agreeing that it is important. 90.5% are of opinion that their organizations recognize knowledge as part of the organization's asset base while 9.5% disagree that any recognition is done by their organization. On the same note 95.2% are of the opinion that their organizations do communicate that knowledge management is beneficial to the organization while 4.8% note that the organization thinks knowledge management is a passing fad. A fair number note that data is captured and stored in documented formats, and this while considered important and relevant it is not updated regularly hence cannot be said to be urgent. It is a general consensus that getting relevant information when needed by making use of the stored data is an uphill task. Only 4.8% record a search being effective within a few minutes. The rest are of different opinions; 33% note that a few hours are needed, 19% need a few days and a surprising 42% mention that in some situations one may be unable to trace the needed information from the stored repositories. However a call to ICT does help. Concerning how information is shared for decision making, 5.3% mention collaborative work practices from one knowledge worker to another while 94.7% make use of documented information. Internet, Intranets, email systems and database systems have been implemented as recorded. 40% note that ICT should be in charge of knowledge management, 55% propose the Library and 5% propose the Human Resources department. Only 4.8% reported dedicated budgets for knowledge management while the rest are either not sure of such are there are none in place. Technology is identified as an enabler and essential tool for knowledge management.

CONCLUSION

The research found that concepts of knowledge and knowledge management are not yet fully understood by the usual knowledge worker. Data collection and storage is understood; it is there in organizations. However strategies to fully utilize this data to make it information and knowledge are not fully understood by the typical knowledge worker. A successful knowledge management calls for managing both tacit and explicit knowledge. As Irick (2007) notes, "the interplay of tacit and explicit knowledge is a critical factor in an organization's knowledge management". Most emerging knowledge management technologies are from a document-centric point hence the goals of knowledge management not fully met Pena-Mora et al. (2000), Mulder and Whitley (2007), Van der Speck and Spijkervet (1997). Mutethia (2005) portrays an example organization that has embraced and is implanting knowledge management. As he notes Amref has implemented initiatives such as holding knowledge management workshops in Delf Netherlands in 2003 and Nairobi Kenya 2004. Participants are sensitized on knowledge management and chart way forward on implementation strategies. Ogara, Jalang'o and Othieno (2010) considered the case of knowledge management at the Kenya Veterinary Services. They note that though both tacit and explicit knowledge are being managed there still exists gaps that need to be addressed. Okemwa (2006) overviews a knowledge management platform by the International Livestock Research Institute (ILRI) which provides avenues for collaboration within the organization and with its partners, information centers for sharing, training and learning centers and internet cafes accessible to both the ILRI staff as well as the public. Though seemly robust, the researcher recommends definition of standards, techniques and methods of auditing knowledge to gather its impact. Africa is also taking initiatives towards knowledge management on a continental platform. The Knowledge Management Africa (KMA) is such a platform. KMA periodically organizes conferences in different countries of Africa in order to boost the implementation of knowledge management in Africa. The above recommendations are hence advised. Initiatives to be taken into place to create awareness on knowledge and knowledge management.

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