

APPLICATION OF KNOWLEDGE MANAGEMENT IN HIGHER EDUCATION IN KENYA: AN ASSESSMENT OF SUCCESS FACTORS

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ABSTRACT

In the knowledge-based economy, knowledge has become a key resource or asset. The strategic management of this resource has significant influence on the success or failure of any organization, both public and private. Higher education just like any other organization can apply knowledge management strategies to achieve their objectives. This can be done effectively by ensuring top management support, developing a knowledge sharing culture, managing the various knowledge management processes and adopting appropriate technology. Unfortunately, most of the institutions of higher learning in Kenya have not embraced knowledge management in a systematic and well coordinated manner. The paper seeks to address key success factors critical in the application of knowledge management in higher education. The paper adopts a conceptual and descriptive approach.

Keywords: *Knowledge Management, Higher Education Institutions, Kenya*

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Introduction

According to Ward (2007) the knowledge assets of any company – rather than plant, capital or other traditional assets – are what, today, ensure its competitive success. The knowledge based economy (KBE) comprises of four pillars. One, an 'economic and institutional regime' which provides incentives for the efficient creation, dissemination and use of existing knowledge; Two, an 'educated' population which can create and use knowledge; Three, an efficient 'innovation' system of firms, research centers, universities, consultants and other organizations that can tap into the growing stock of global knowledge and assimilate and adapt it to local needs, as well as create relevant new knowledge; And finally the fourth pillar refers to an 'information and communication technology' infrastructure that is dynamic to facilitate effective communication, dissemination and processing of information. The four pillars can thus be summed as, business environment, ICT infrastructure, innovation and education (World Bank, 2008).

Knowledge Management Africa (KMA) is an initiative that aims to utilize knowledge as a key resource in development. It seeks to enhance governance and service delivery in Africa by establishing KM platforms, creating access to existing networks, and facilitating the sharing and utilization of knowledge (KMA brochure). KMA has so far held four biennial conferences (Johannesburg, 2005; Nairobi, 2007 ; Dakar, 2009; Tunis, 2012). Kenya sends delegations to the KMA conferences, a sign of commitment to achieving the initiative's goals. Other KM initiatives in Kenya include; 'The Kenya Knowledge Network' (KNET) which is a KM network established in 2006 to promote research, policy, development and networking. The aim of the network is to facilitate sharing of knowledge, expertise, resource materials, best practices, lessons learnt and experiences

For Higher Education Institutions (HEIs) to be competitive in KE and create greater opportunity for research, innovation and learning, they must effectively manage their knowledge assets (Hayes, 2004). In the past, higher education worked in a relatively stable environment with very little competitive pressure. In the changing global economy the academic environment is quite dynamic and volatile. Higher education just like other profit and non-profit organizations are facing by various challenges in the changing global economy. These challenges include: increase of external pressures such as competition in higher education we are witnessing unprecedented growth of HEIs, which have more than doubled (There are 22 public universities, 9 constituent colleges and 17 private universities CUE, 2013) , university internationalization, university rankings, and demands for high quality graduates that require universities worldwide to seek better strategies for competitive advantage. Further, there is a rising number of enrolments into the various programs offered by universities. In addition, teaching and learning processes have changed with provision of lectures anytime and anywhere hence, the need to improve and increase communication between the faculty and students through the use of ICTs. HEIs, do have significant KM activities reflected by various authors (William and Amin, 2006; Biloslavo and Trnavcevic, 2007; Bechina and Bommen, 2006; Dalkir, 2000) such as creating, capturing, storing, disseminating and sharing knowledge which Rowley (2000) contend it is important to recognize and use as foundations for further development. In addition she feels that, universities can benefit from KM by creating and

maintaining relevant knowledge repositories, improving knowledge access, enhancing the knowledge environment and valuing knowledge.

Therefore, HEIs just like any other institutions can apply KM to achieve their objectives (Kidwell et al., 2000). At the same time, higher education by nature are knowledge intensive organizations where they are recognized to be in the knowledge business as knowledge production, distribution and application are ingrained in the organization (Ho et al, 2008). HEIs in Kenya can play a significant role in the development of the nations workforce and economy particularly in the achievement of vision 2030. However, KM in most of these organizations is not done in a systematic and well coordinated manner. Hence, the paper raises awareness to higher education on the success factors that should be considered in the application of KM.

The Concept of Knowledge

Knowledge entails a progression from data and information. Data refers to facts, events, transaction, etc, which have been recorded (O' Brien, 1993). They are regarded as raw material from which information is produced. Information hence is the result of organizing and interpreting data (Ojeda, 1994).

Knowledge has numerous definitions provided by various gurus (Davenport and Prusak ,1998; Nonaka, 1994; Polayi, 1962). Mutula and Wamukoya (2007) provide the following manifestations of knowledge in organizations; opinions, actions, pronouncements, minutes of meetings, presentations, websites/portals, databases and e-mails. Others include; records management systems, integrated financial management systems, communication systems, human resource management systems, communication systems or e-commerce.

Polanyi (1966) identifies two types of knowledge as explicit and tacit knowledge. Explicit knowledge can be expressed in numbers and words and shared formally and systematically in the form of data, specifications, manuals, procedures, and rules among others. Tacit knowledge is embedded within individual experience, judgment, skills, intuitions, know-how, rules of the thumb, lessons learned, and insights. Its is difficult to express and formalize and hence difficult to share (Nonaka et al., 2000; Manville, 1999; Davenport and Prusak, 1998; Nonaka, 1994). Both explicit and tacit knowledge are needed for an organization to achieve greater performance (Sanchez et al., 1996). In order to manage knowledge well it is important to understand what knowledge is and what it entails.

Knowledge Management (KM) defined

There is not yet a common consensus or universal definition on the concept of KM (Sanjay et al, 2007; Earl and Scott, 1999). The various discipline such as epistemology, sociology, psychology, cognitive sciences, computer science etc, have defined KM using terminology pertinent to their area of expertise and their own personal conceptions of knowledge and management. This has in turn produced multiple definitions for knowledge management. For example, Management information systems' researchers and practitioners tend to define KM as an object that can be recognized and controlled in computer-based information systems. Management researchers, on the other hand, address knowledge as processes based on individual and organizational competencies such as skills and know-how (Davenport and

Prusak, 1998; Nonaka and Takeuchi, 1995). Other KM definitions have been given by Davenport (1997), Malhotra (2000), Bahra, 2001; Collinson and Parcell, 2002; Mutula and Wamukoya (2007) among others. Joseph (2001) provides a KM definition from the perspective of higher education and opines that KM is a process where institutions formulate ways in an attempt to recognize and archive assets from within that are derived from employees from various departments of faculties, and even from other institutions sharing similar areas of interest.

In summary, a number of different authors have contributed perspectives on the nature of knowledge management. However, it is important to remember that KM is a complex process which is understood differently in different contexts. Notwithstanding, KM must develop into a management tool, with shared meanings to be embraced globally. Therefore, KM represents a deliberate and systematic approach to ensure the proper management of knowledge, expertise, experience, among others in order to create a more efficient and effective organization.

Importance of KM in Organizations

The knowledge economy recognizes that advanced economies derive a high proportion of their economic growth from the creation, exploitation and distribution of information and knowledge. Therefore, Knowledge has become a key resource that can create sustainable advantage for a firm or a nation. Roberts (2009) identifies the features of a Knowledge Economy (KE) as: knowledge as an input into the economy; ICTs; knowledge as an economic output; commercialization of knowledge such as Intellectual Property (IPR's); increase of knowledge workers; impact of knowledge across all sectors of the economy; the rise of knowledge practices and globalization.

According to Neef (2001) what has taken place in the world economy can be likened to a knowledge-based chain reaction made of several components such as: communication via computer, business process engineering, the electronic marketplace and upskilling. Other components include; speed of change, global telecommunication, capital, relocation and organizational change. Further, Neef adds that, the need for KM or Knowledge foundation entails four key features namely: knowledge-based strategy, knowledge-sharing culture, technical support infrastructure and business research and analysis. KM means change focused on information and knowledge-based activities. KM encompasses both the management of information and the management of people. Singh, 2007 adds that, KM efforts typically focus on organizational objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, and continuous improvement of the organization. KM efforts can help individuals and groups to share valuable organizational insights, to reduce redundant work, to avoid reinventing the wheel per se, to reduce training time for new employees, to retain intellectual capital as employees turnover is experienced in an organization, and to adapt to changing environments and markets (Mutula and Wamukoya, 2007; Thompson and Walsham, 2004).

Knowledge Management (KM) Success Factors

KM success factors or enablers refer to the key factors that determine the effectiveness of executing KM within the organization. KM is a mix of three components namely, people, processes and technology (Cong and Pandya, 2003).

KM is important in an organization's ability to realize the full potential of its intellectual assets in strategic and tactical decision making and in creating a competitive advantage (Rowley, 2000). There are numerous success factors that have been identified in literature (Chong and Choi, 2005; Earl, 2001; Davensport and Prusak, 1998). The paper will address the following success factors: leadership, KM processes, culture, and technology.

Leadership

The introduction of a KM program is a type of organizational change. Therefore, top management support is bound to determine its success or failure (Liebowitz, 1999). Davenport et al (1998) state that the role of top management in KM is to, communicate the importance of organizational learning as keys to the success of the organization. The top management has an important role in the provision of financial and other resources that act as building blocks for KM. The management needs to clarify the kind of knowledge that is important to the organization.

The top management is responsible for the appointment of the knowledge leader to provide strategic visions, motivate others, effectively communicate, act as a change agent, coach others around, model good practices, and carry out the knowledge agenda (Debowski, 2006) Holsapple and Joshi (2001) add that the enthusiasm, drive, and energy of the knowledge leaders play a major role in building commitment from others around. Leaders establish the necessary conditions for effective KM.

KM Processes

Processes entail strategic management of the various stages of KM practices. Processes help enhance how knowledge flows in the organization. McAdam and Reid (2000) point out that there are various representations and models that depict the KM process as given by the following authors: Biloslavo and Trnavcevic (2007); Bechina and Bommen (2006); Dalkir (2005) and Handzic (2001), among others. The current study highlights knowledge processes as reflected by Bouthillier and Shearer (2002) as knowledge discovery, acquisition, creation, organization and storage, sharing, use and application/ utilization

The first step in the knowledge process is knowledge discovery. It entails the identification of internal knowledge within an organization. A point of caution is that an organization can be unaware of its knowledge assets especially if the organization is geographically dispersed.

The second step in the knowledge process is knowledge acquisition which entails the process of acquisition and capturing information about knowledge in explicit forms. It also involves bringing knowledge from outside the organization. Burk (1999) is of the view that much knowledge can be available on the internet; however, KM is more than databases and networks.

Knowledge creation is the third step in the knowledge process. Knowledge can be created by integrating the existing internal knowledge, experiences and analyzing existing knowledge. Technology can be a key enabler in the synthesis of data and information that have been captured from different sources (Oluic-Vukovic, 2001).

The fourth step in the knowledge process is concerned with knowledge organization and storage. It is important to have a clear strategy for storing knowledge assets. Knowledge is gathered and stored in a convenient way and appropriate place or repository to facilitate easy access for present and future use. Knowledge storage activities help maintain viability of knowledge within the organization (Newman and Conrad, 1999).

In the knowledge process, the fifth step is knowledge sharing. Sharing refers to activities associated with, flow of knowledge from one party to another (Newman and Conrad, 1999). Knowledge that has been gathered has to be shared and accessed by others. It involves transfer of knowledge from one/more to other(s). There are different methods of sharing different types of knowledge (Snowden, 1999). Mohayidin (2007) identifies key knowledge sharing activities as: informal discussions, teaching and training and consultancy among others.

The final step in the knowledge process is concerned with knowledge use and application. The knowledge practice is complete when stored knowledge is utilized for organizational benefit. KM processes involve major investment in a wide spectrum of areas related to knowledge capture, storage, value addition, distribution and finally educating employee about the benefits of knowledge creation and sharing (Davenport, 2000)

Organizational culture

Organizational culture is a key factor for successful KM (Martensso, 2000). Effective KM requires a "knowledge sharing" culture to be successful. Corporate culture is the combination of value, core belief, behavior model, and emblem. It represents the value system of the organization and will become the employees' behavior norm.

Every organization's culture is an independent entity different from any other organization. The general consensus is that corporate culture has the key influence on KM or its effectiveness (Davenport et al., 1998). Culture influences the efforts that the employee is willing to share and contribute to the organization's knowledge inventory.

Knowledge sharing (KS) as one of the most important KM process, is critical to knowledge creation, organizational learning, and performance achievement (Bartol and Srivastava, 2002). Contributing on this, Davenport and Prusak (1998) acknowledge that the lack of knowledge sharing has proved to be a major challenge to the effective management of knowledge in organizations. They further add that, KS is based on trust and cooperation, "without trust, knowledge initiatives will fail, regardless of how thoroughly they are supported by technology and rhetoric and even if the survival of the organization depends on effective knowledge transfer".

Gupta and Govindarajan (2000) assert that a "knowledge-sharing culture" is dependent on the growing importance of the intellectual capital to organizations and the need for effective KM. To create a KM culture, you need to encourage people to work together more effectively, collaborate and to share. In KE, knowledge is the only factor of production which does not decrease through the use, but its value is expanded when shared. Changing corporate culture is

difficult, it means change. Change is not always popular. However, motivating employees through rewards and incentives can enhance knowledge sharing. Malhotra and Calleta (2003) caution that, the mere use of incentives does not always guarantee a successful KM program. It is important to understand your organizational culture and work within it rather than against it while gradually working to change it.

A key element for an enterprise to be successful in pushing KM is the process to encourage people to communicate and share their knowledge with others (Nonaka and Takeuchi, 1995). A time has come for universities to view employees as their most important knowledge resource. Universities must incorporate into their organizational strategic plans, the concept of KM. It is crucial for an employee to be willing and enthusiastically motivated to participate and engage in obtaining and sharing of knowledge (Szulanski, 1996). People can come together to form Communities of practice (COPs), peer groups, teams and so on. This facilitates the formation and maintenance of a learning community or organization.

Information Technology

There are several debates about whether KM and sharing practices should be people-driven or technology-driven. KM is not about technology, on the contrary, technology should be employed to fit in the organization's people and processes, and otherwise it will not be used. The focus should be on developing a knowledge sharing culture among the people, which are supported by appropriate processes and which may be enabled by technology.

The management discipline argues that knowledge sharing is about people's adaptations to social dynamics of the work place rather than technology (Davenport, 1997). Notwithstanding, Information and Communication Technologies (ICTs) play an important support function without which most sharing practices would be less effective and applications less timely. Whichever way, People should be the center of KM process. Increasingly, technology is being used to facilitate efficient knowledge creation, capture, storage, organization, and distribution (Ruggles, 1997). Several technologies can effectively be exploited by an organization for KM which include and not limited to:

- i. Codification of knowledge Assets (examples are: Document Management Systems (DMS); Data mining; knowledge repositories etc.)
- ii. Knowledge sharing (Help desk applications; E-mail; wikis; weblogs; bulletin boards among others)
- iii. KM technology (IT infrastructure; communication systems; Internet/intranet/extranet; servers; application software, Dataware houses and so on.)

Effective KM requires a complementary combination of people, processes, and technology in order to gain and share real knowledge (Schwartzwalder, 1999).

Further Research

The paper was mainly conceptual, hence the need for further research in Kenya's HEIs with a view of finding out the real situation of Knowledge management.

Conclusion

Knowledge management (KM) is one of the components of good management in the Knowledge-based economy. Knowledge Management is important in all kinds of institutions including higher education. Application of KM depends on deliberate strategic approach addressing the key success factors that include: top management support (leadership); ensure adequate knowledge flows within the organization; develop a culture that encourages knowledge sharing which requires motivational strategies that includes incentives and reward system and finally adopt appropriate technology based on user needs.

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