What is it in Knowledge Management that is not in Information Management?

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Abstract: *The internal and external environment is always changing which calls for relevant and appropriate information and knowledge application in organisational development. Information and knowledge are the only resources that do not decrease with use. Knowledge actually increases with use. Information is the resource on which all other resources are based; however there is need for knowledge about that information. The article examines information and knowledge management. It identifies what exactly is it in knowledge management that is not in information management. Knowledge management requires the association of the knower whilst in information management, the knower might not be really required but documents, articles books and records.*
Keywords: *information, knowledge, information management, knowledge management, data, wisdom, intelligence, performance, action, technology.*

I. Introduction

"Knowledge has become the key economic resource and the dominant–and perhaps even the only– source of competitive advantage." (Drucker, 2014:2). This is supported by Kotler (2005:1) in that "the future is not beyond of us it has already happened. Unfortunately it is unequally distributed among companies, industries and nations". Kotler (2005:158) also goes on to say that "today you have to run very fast to stay in the same place". History shows examples of lost, unused information and knowledge, the consequent cost of which can be measured not only in dollars, but on terms of disorder, ignorance and even death. Jackson (1990:13) posits that "Gregory Mendel in 1866 published the results of his experiments which laid the foundation of the modern science of human and plant genetics. But not until 1900----34 years later was his great experiment recognised and put to use. There is, therefore need to utilise information and knowledge hence, a call for this article to explore information and knowledge management. The paper differentiates information management from knowledge management and identifies their relationships.

Purpose of the article

The purpose of the article is to differentiate information management from, knowledge management.

II. Background of Information and Knowledge Management

Information and knowledge management practice has always been there from time immemorial though the terms had not been coined by that time. The establishment of libraries, records centres and archives contributed to effective information management. In earliest times there was no distinction between a record room, an archive and a library. In this sense libraries can be said to have existed for almost as long as records have been kept. A Temple in the Babylonian town of Nippur, dating from the first half of the 3rd millennium B.C, was found to have a number of rooms filled with clay tablets, suggesting a well-stocked archive or library (Encyclopedia Britannica (2014). Information management as a term has been around for more than two decades. Many authors date its beginning back to the Paperwork Reduction Act of 1980 in which U.S. federal agencies were forced to introduce information resource management. Regardless of its exact origins, there was a substantial growth in literature dealing with this topic at the beginning of the eighties (Johnson and Scholes, 2004). Norton (2009:5) notes that "today information is the bread and butter of business. The key to success is to apply it with the right pressure in the right quantity at the right place and time. We then get the quality that we want". This shows that the right information has to be applied at the right time, to the right people at the right place. Today there is need for information management in every organisation as right decisions depend on adequate and appropriate information. There is also need for evidence in every business transaction which will be provided by information and records.

Dalker (2008:12) notes that although the phrase knowledge management entered popular usage in the late 1980s, knowledge management has been around for many decades. Librarians, philosophers, teachers and writers have long been making use of many of the same techniques. However, it can also be argued that knowledge management has been around far longer than the actual term has been in use. Jashapara (2004:8) opines that knowledge and its management has been with humankind since the beginning of time. Johnson and

Scholes (2004:490) observe that in the early 21ˢᵗ century, knowledge creation and information management are issues at the front of managers' minds as the potential source of improved competitiveness. In the second half of the nineties, the term knowledge management became more popular (Information Research, 2005:1).

A number of management theorists have contributed to the evolution of knowledge management, among them Peter Drucker (2001:1), and Peter Senge (2000:1) in the United States. Drucker (2001) stressed the growing importance of information and explicit and tacit knowledge as organisational resources, and Senge (2000) has focused on the "learning organisation", a cultural dimension of managing knowledge. Chris Argyris, Christoper Bartlett, and Dorothy Leonard-Barton of Harvard Business School (2005) have examined various facets of managing knowledge. Leonard-Barton's well-known Chaparral Steel Company has had an effective knowledge management strategy in place since the mid-1970s (Harvard Business School, 2005:2). Bajaj and Nag (2005:1) observe that many economists, management experts and organisation theorists agree that the world is leaving the (old) industrial age and entering a new age, the third wave of Toffler, or Drucker's post industrial society. It is being increasingly referred to as the information and knowledge age.

Al-Hawamdeh (2010:2) asserts that the arrival of the information society and the move toward the knowledge-based economy highlighted the importance of tacit knowledge and the need to manage knowledge resources including skills and competencies. He goes on to say that "knowledge management as a concept with people taking the centre stage has prompted to rethink information management and shift focus from tying to develop intelligent systems to that of developing tools for intelligent people". Drucker (2000:1) was not alone in focusing the attention on the emergence of the "knowledge society". Many significant public and private sector organisations, for example, Anglian Water Services, Dow Chemical Co., National Westminster, Hewlett Packard, IBM, ICL, Monsanto, Skandia Corporation, and UK Department of Defence have demonstrated strong commitment to the idea that enhanced effectiveness and greater success can come from knowledge management (64th IFLA General Conference, 2000:1). From the background of information and knowledge management it has been realised that information and knowledge management has been around far longer than the actual terms have been in use. This shows that the terms information and knowledge management came after information and knowledge has always been in use.

III. What is information?

Information is organised data for a purpose. Mutongi and Chiwanza (2016) avers that the purposes of information include informing, alerting, education and entertaining. It has to be recognised by some system whether lining and electronic, mechanical device (The Linux Information Project, 2005). Wiig (2009:3) defines information as facts and data organised to characterise a particular situation and knowledge as a set of truths and beliefs, perspectives and concepts, judgments and expectations, methodologies and know-how. Mitchell, (2000:15) adds that information can be seen as data made meaningful by being put into a context and knowledge as data made meaningful through a set of beliefs about the causal relationships between actions and their probable consequences, gained through either inference or experience. However the writer of this article disagrees with Mitchell (2000) when referring knowledge as data. Knowledge is too complex to be referred to data. He goes on to say that knowledge differs from information in that it is predictive and can be used to guide action while information merely is data in context.

Mitchell, (2000:15) gives the example that if the raw data is –10 degrees, then information would be it is –10 degrees outside, and the knowledge would be that –10 degrees is cold and one must dress warmly. In other words, knowledge is closer to action while information could be seen as documentation of any pieces of knowledge. Roger and Evernden (2003:134) observe that people and organisations deal with huge volumes of data every day and there is increased volume of information which is information overload. It is therefore vital for organisations to effectively and efficiently manage information so that they end up with the right information. This then calls for information literacy. Norton (2009:6) observes that:

Information' like beauty, depends on the eye of the beholder. It has no intrinsic value in itself, value is conferred by the user. Until that happens, what we have is no more than raw data, ideas, facts or figures, a book on the shelf, an article in a journal, a statistic on the page, even a picture on the wall. These then need to be sorted and manipulated to turn data into useable information.

Norton (2009) observes that information is not knowledge or intelligence, just halfway to it. To convert information into intelligence, there is need to analyse, interpret and apply the information in order to solve problems, make decisions or draw conclusions. Evernden and Evernden (2003:1) researched that most organisations have made huge investments in information technology, but few have yet made a strong commitment to information as a corporate resource. Evernden and Evernden (2003) discovers that due to the growth in computing power and the benefits it offers, most organisations have overlooked the need to cultivate and nurture the resource that computers sustain which is information. It is as important as the human, financial and physical assets of the industrial age.

IV. What is Knowledge?

Mahapatra and Chakrabarti (1999:8) are of the opinion that the word knowledge can mean three things. First, it refers to a state of "knowing", by which we also mean to be acquainted or to be aware of, to recognise facts, methods and principles. The common usage corresponds to what is often referred to as know- how. Second, we use the word knowledge to refer to the capacity for action, an understanding of facts, methods, in the course of making things happen. This corresponds to know how. Third, to refer to codified, captured and accumulated facts, methods, principles and techniques. This refers to a body of knowledge that has been articulated and captured in the form of books, papers, manuals and computer code.

Since knowledge management became a popular phrase in the mid 1990s, practitioners have laboured under the burden of varying and sometimes vague definitions of the field. Firestone and McELROY, (2004:1) observes that it is a frequent occurrence at meetings of practitioners discussing KM Metrics, KM Methodology or KM approaches that someone suddenly asks "What do we mean by knowledge management?" Frappaolo (2002:8) is of the opinion that "defining knowledge management is not a simple issue. It is not a technology, although technology should be exploited as an enabler". The most important issue today for all organisations irregardless of size, is the knowledge in the organisation and the organisation's ability to deal effectively with that knowledge (Evernden and Evernden, 2003:1). According to Dalkir (2005) Knowledge management is the deliberate and systematic coordination of an organisation's people, technology, processes and organizational structure in order to add value through creating, sharing and applying knowledge as well as through feeding the valuable lessons learned and best practices into corporate memory in order to foster continued organisational learning.

Johnson and Scholes (2004: 150) define knowledge as "awareness, consciousness or familiarity gained by experience or learning". Frappaolo (2002: 8) defines knowledge management as "the leveraging of collective wisdom to increase responsiveness and innovation". He goes on to say the definition implies that three criteria must be met before information can be considered as knowledge which are as follows:

- Knowledge is connected. It exists in a collection (collective wisdom) of multiple experiences and perspectives;
- Knowledge management is a catalyst. It is an action-leveraging. Knowledge is always relevant to environmental conditions, and stimulates action in response to these conditions. Information that does not precipitate action of some kind is not knowledge. According to Drucker (1998:8) knowledge for the most past exists only in application;
- Knowledge is applicable in encountered environments. Information becomes knowledge when it is used to address novel situations for which no direct precedent exists. Information that is merely "plugged in" to a previously encountered model is not knowledge and lacks innovation.

Knowledge has become increasingly more valuable than the traditional physical or tangible assets (Dalkir, 2008:16). Bajaj and Debjani (2009:4) assert that the competitive advantage for an organisation comes from its knowledge base and its ability to mobilise and integrate knowledge. Knowledge plays a dominant role in an information and knowledge era. Drucker (2001) argued that knowledge has become the global currency because it is fluid; it crosses boundaries and is scarce.

Allee (2002:33) argues that "how you define knowledge determines how you manage it". The existing literature still lacks an adequate definition of knowledge. Most literature shows knowledge as existing in the mind. However, if it only exists in the mind how then can it be studied? This article shows that knowledge comes from the outside world and resides in someone's mind and it can be expressed outside someone's mind through a person's performance, acts, behaviour and products and services.
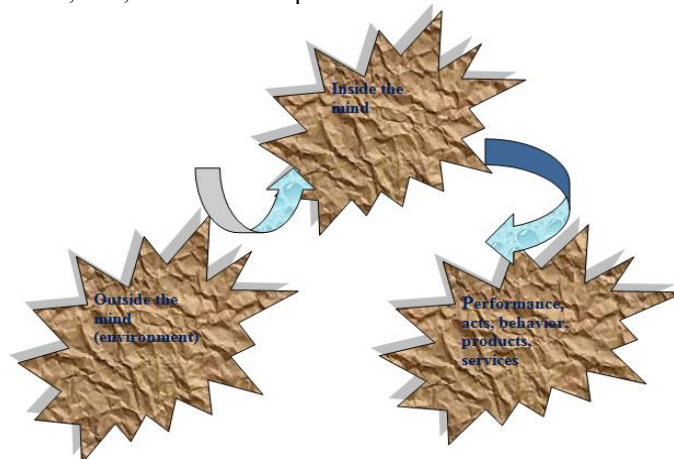

Figure 1: Knowledge expression

Knowledge cannot just be in someone's mind. It is acquired from the environment and resides in the mind then expressed through performance, acts, behavior, products and services. It is when we realise that there is knowledge being expressed. If it is not expressed then how so we get to know that one has some knowledge?. Prusak (2011) describes some of the principles focusing on knowledge management which are as follows:

- Knowledge is a fixed pool, a collection of resources that can be measured and used by standard management techniques,
- Technology is the key tool to unlock the value of this resource – more technology, the better,
- Individuals are the critical unit of analysis in working with knowledge – the more productive the individual is the more knowledge is being used. He concludes:

It is now clear in hindsight that these principles were developed with information in mind, not knowledge, and that they were not at all suitable to working with such elusive intangible. It is because of these ideas that many knowledge management efforts ran into problems and that the whole subject began to fade in the minds of busy executives.

Prusak (2011) assets that, although it does not always get the expected outcomes when put at work in organisations, the positivist paradigm of KM, influenced by computer science and information technology, is the most implicitly recognised paradigm by researchers and practitioners in KM. From this viewpoint, this paradigm needs to be enlarged to a general view resting on a constructivist paradigm. Numerous authors analysed the notions of data, information and knowledge among them Davenport and Prusak (1998:1), Sena and Shani (1999), Takeuchi and Nonaka, (2000), Amin and Cohendet, (2004:17) and Laudon and Laudon, (2006:416). Plato regards knowledge as a justified true belief but this leaves a question is all justified true belief knowledge? This approach also regards knowledge as infallible and fixed but knowledge can change. To regard knowledge as infallible means that there is no room for mistakes in knowledge for one to end up having that knowledge, one would have passed through a process which involves mistakes (Mutongi, 2016). What used to be true ten years ago might no longer be true today. Due to the emergence of technology what used to be true yesterday might no longer be true today. Snowden (2000) argues the developing practice of knowledge management has seen different approaches, one arises from information management and sees knowledge as some higher-level order of information, often expressed as a triangle progressing from data, through information, knowledge and wisdom (the DIKW model). However, knowledge cannot be too limited too be just put in a form of hierarchy. Knowledge according to the social constructivists results from a far more complex process that is social, goal-driven and culturally bound. People get to having knowledge due to desires curiosity experiences mistakes and interactions with the world. Mutongi (2016) opines that in this regard knowledge is not really determined by information, for it is the knowing process that first decides which information is relevant and how it is to be used. Therefore in this case knowledge comes first and is at every level.

4.1 Knowledge characteristics
Dalkir (2008:2) brings out the following knowledge characteristics
- Use of knowledge does not consume it;
- Transferal of knowledge does not result in losing it;
- Knowledge is abundant, but the ability to use it is scarce;
- Much of an organisation's valuable knowledge walks out the door at the end of the day.

Whittington (2001:15) observes that "knowledge is dynamic in unpredictable ways-experience and events are always adding to it, regardless of formal efforts at research and development". Ruggles and Holtshouse (2000:11) identify the following key attributes of knowledge management:
- Generating new knowledge;
- Accessing valuable knowledge from outside sources;
- Using accessible knowledge in decision making;
- Embedding knowledge in processes, products and/or services;
- Representing knowledge in documents, databases and software;
- Facilitating knowledge growth through culture and incentives;
- Transferring existing knowledge into other parts of the organization;
- Measuring the value of knowledge asserts and/or impact of knowledge management.

V. Information management
Bouthillier and Montreal (2002:1) expounded that "to differentiate the management of information from the management of knowledge, one must examine the distinctions drawn between the related concepts: **data, information, knowledge and intelligence.** Attempts to define these concepts are numerous and produce

slightly different results, depending on which discipline is looking at them. Dictionaries define data as factual information (measurements or statistics) used as a basis for reasoning, discussion, or calculation, information as the communication or reception of knowledge or intelligence, knowledge as the condition of knowing something gained through experience or the condition of apprehending truth or fact through reasoning, and intelligence as the ability to understand and to apply knowledge". For Meadow, et al. (2000:35), data refer to "a string of elementary symbols, such as digits or letters. As they point out, information "has no universally accepted meaning, but generally it carries the connotation of evaluated, validated or useful data. Knowledge, on the other hand, involves a higher degree of certainty or validity than information and has the characteristic of information shared and agreed upon within a community". Intelligence, for the previous authors, is a form of information but it is also "a measure of reasoning capacity". As we can see, many conceptual overlaps exist between all these terms (Meadow, et al 2000:38). Information management is the process of acquiring, organising, dissemination, using, reusing and evaluation of that information. Powell (2009) posits that "managing information means working out what information is needed by the people whom you work with, where it might come from, and what they need it for". It involves seeing information as a resource which is available to your organisation, and which can be consciously used and reused to meet its needs.

Powell (2009:8) observes that good information management rests on some straightforward principles which are as follows:

- Information management should be based on a consideration of the needs of all the people concerned, and how they use, create, and exchange information,
- It should understand and define issues such as the appropriate quality, accuracy, detail, frequency, format, location and maintenance of information, so that the information can be used effectively and efficiently,
- Links between information and power should be understood-the cultural and organisational contexts in which information is being valued, interpreted, and exchanged. It must be understood that information, its use, and therefore its management are dynamic and permanently changing,
- Information management must be functional. It may or may not be possible to create the most beautiful information system over the next two years, but information needs managing now.

VI. Knowledge management

Firestone and McELROY (2004:60) note that some approaches to knowledge management seem to view any manipulation of knowledge as knowledge management for example knowledge sharing, knowledge production and knowledge transfer. Knowledge management involves the whole process which incorporates knowledge acquisition, creation, organising, storing, sharing, using, reusing and evaluation. In this view knowledge management is part of every business process but is knowledge management really everything and anything having to do with knowledge and knowledge processing. The obvious answer is no. Firestone and McELROY (2004:61) assert that knowledge management is knowledge management process that involves the management of knowledge production, knowledge integration, the knowledge life cycle and the outcomes.

Koulopoulos and Frappaolo (2009:37) expound that knowledge management is the leveraging of collective wisdom to increase responsiveness and innovation. They go on to say that this definition implies that three criteria must be met before information can be considered knowledge:

- Knowledge is connected. It exists in a collection (collective wisdom) of multiple experiences and perspective.
- Knowledge management is a catalyst. It is an action: leveraging. Knowledge is always relevant to environmental conditions, and stimulates action in response to these conditions. Information which does not precipitate action of some kind is not knowledge. In the words of Drucker, (2008), "Knowledge for the most part exists only in application.
- Knowledge is applicable in unencountered environments. Information becomes knowledge when it is used to address novel situations for which no direct precedent exists. Information which is merely "plugged into" a previously encountered model is not knowledge.

Wiig (2003) posits that given the importance of knowledge in virtually all areas of daily and commercial life, two knowledge-related aspects are crucial for viability and success at any level. These are knowledge assets that must be applied, nurtured, preserved, and used to the largest extent possible by both individuals and organisations and knowledge-related process to create, build, compete, organise, transform, transfer, pool, apply and safeguard knowledge that must be carefully and explicitly managed in all affected areas. Suresh and Mahesh (2006:ix) demonstrate that "knowledge management aims to create and expand wealth and societal value by providing people with access to individual and organisational knowledge. This Knowledge, in turn creates an ever changing and deepening repository of new skills and competencies for innovation, decision making and performance improvement. Each organisation should establish systems and

processes to help build a pervasive culture to foster individual knowledge sharing of experiences and learning with the rest of the organisation".

Suresh and Mahesh (2006: ix) are of the opinion that the key elements of a knowledge Management vision are to:

- Enable and support every individual action by the power of knowledge;
- Empower every employee with the knowledge of every other employee and
- Leverage knowledge for improved development and delivery of products, services and solutions.

Whittington (2002:25) argues that "knowledge resides insides in the heads of lower ranking staff, not in the files of top management". Cohen (2007:56) asserts that the primary purpose of knowledge management is networking and sharing of information and knowledge across the enterprise. Knowledge management programmes are typically tied to organisational objectives and are intended to lead to the achievement of specific business outcomes such as shared business intelligence, improved performance, competitive advantage, or higher levels of innovation. Wiig (1998) observes that knowledge management in organisation must be considered from three perspectives with different horizons and purposes:

- Business perspective-focusing on why, where and to what extent the organisation must invest in or exploit knowledge. Strategies, products and services, alliances, acquisitions or divestments should be considered from knowledge-related points of view.
- Management perspective-focusing on determining, organising, directing, facilitating and monitoring knowledge related practices and activities required to achieve the desired business strategies and objectives.
- Hands on –operational perspective-focusing on applying the expertise to conduct explicit knowledge related work tasks. The hands on indicates knowledge processing.

The business perspective focuses on resource allocation which is a managerial activity. Although there is a lot of literature on Knowledge Management, there is still much confusion concerning its meaning. This article considered Firestone and McELROY (2004:61) definition as a workable definition of knowledge management. Knowledge management is the process of acquiring, creating, organising, sharing, using, reusing and evaluating knowledge.

VII. Distinction between Knowledge Management (KM) and Information Management (IM)

The distinction between Knowledge Management (KM) and Information Management (IM) is far from being well-articulated in the KM literature and this is compounded by the confusion around the concepts of knowledge and information. In fact, there is no consensus regarding the claim that KM is a new field with its own research base, since much of the terminology and techniques used, such as knowledge mapping, seem to have been borrowed from both IM and librarianship (Koenig, 1997). Although many KM initiatives are documented in the business literature what is actually entailed in these initiatives remains vague and ambiguous because there are many interpretations of knowledge management.

From a management perspective the key difference between information and knowledge is that information is much more easily identified, organised and distributed. Knowledge, on the other hand, is difficult to manage because it resides in one's mind. Thus, KM is essentially limited to creating the right conditions for individuals to learn (using information and experiencing the world) and apply their knowledge to the benefit of the organisation. The application of one's knowledge can, hopefully, thereby be translated into relevant information and knowledge that is shared and used. It should result in the production new products and actions that create value.

There are also very important differences between information and knowledge management when it comes to strategies for protecting of valuable intellectual capital. An IM perspective will lead organisations to put too much emphasis on "front-door security", badges, firewalls, permission and access levels and so on. Although in many cases these measures can be of utmost importance, in many other circumstances, truly important knowledge resides within people's heads and an active and systematic protection strategy of this type of knowledge should be put in place. The strategies to protecting knowledge involve retention policies and the circulation of knowledge as well as sharing the knowledge. Retention policies are more clearly understood. Circulation of knowledge strategy relates to actively developing mentoring thus helping juniors learn from more senior people that hold strategic knowledge and fostering teamwork and communities of practice which is making sure a number of people develop knowledge collectively, therefore, reducing the potential of losing knowledge suddenly by the departure of a particular individual. Mutongi (2016) delineates that since knowledge is a form of information in explicit knowledge, it that knowledge information management is a small part of knowledge management.

In both Information and knowledge management, there is creation, acquiring, organising, sharing, using, reusing and evaluating. The way these aspects are conducted might be different in information and knowledge management especially if it is tacit knowledge. In information management, one can acquire

information through purchasing books for example but in knowledge management, one can acquire knowledge through interactions with the world, learning and experiences. The word dissemination is more applicable in information management and sharing is more applicable in knowledge management. If it is explicit knowledge, then the process of information management can also apply together with knowledge management.

VIII.   Conclusion

We had an opportunity to learn more on information and knowledge and their management. A distinction was made between information and knowledge management. In protecting knowledge management, retention policies, circulation and sharing of knowledge is called for. The protection strategies for information management might be firewalls, front door security permission and access levels. Knowledge management should be linked to the knower which might not be the case in information management as concentration is on management of documents, books and dissemination of such. However the way explicit knowledge is management can apply to both information and knowledge management.

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