

## from the Eastern and Knowledge Management Western perspectives: Literature Analysis

By

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### Abstract:

This paper provides an in-depth theoretical review and analysis for the concept of knowledge and knowledge management (KM) since it has become a common term in the 21<sup>st</sup> century. The main objective is to highlight the different perspectives of knowledge, knowledge management and its various processes. The literature analysis revealed that the concept of knowledge can be introduced in two different contexts, it was also shown that there are several definitions of KM and different actions in the KM processes from different perspectives as some emphasised on the importance of the technological approach of KM while others specially the Eastern researchers stressed the importance on people based approach to create a knowledge management culture. This paper will be useful for both practitioners and academics in understanding the fundamentals of knowledge management.

**Keywords:** Knowledge- Knowledge management - literature review.

**المستخلص:**

يقدم هذا البحث مراجعة وتحليلاً نظرياً متعمقاً لمفهوم المعرفة وإدارة المعرفة، حيث أن هذا المفهوم قد أصبح شائعاً في القرن الحادي والعشرين. ويتمثل الهدف الرئيسي لهذا البحث في إبراز وجهات النظر المختلفة بشأن المعرفة وإدارة المعرفة وعملياتها المختلفة. وقد كشف تحليل البحوث والدراسات السابقة عن أنه يمكن إدخال مفهوم المعرفة في سياقين مختلفين. فقد تبين أن هناك عدة تعريفات لإدارة المعرفة وإجراءات مختلفة متضمنة في عمليات إدارة المعرفة، حيث أكد بعض الباحثين على أهمية المدخل التكنولوجي

إدارة المعرفة، بينما أكد آخرون، وخاصة الباحثين الشرقيين، على أهمية المدخل المبني على الأشخاص لخلق ثقافة إدارة معرفة. وسوف يكون هذا البحث مفيداً لكل من الممارسين والأكاديميين في فهم أصول وأساسيات إدارة المعرفة.  
**الكلمات المفتاحية:** المعرفة – إدارة المعرفة – مراجعة البحوث والدراسات السابقة

### **Introduction:**

Since knowledge management can be observed from different perspectives and fields (Tingwei Gao & Yi Liu 2018), it was felt that there must be clear understanding on the meaning of knowledge management; what does it stand for and how it is applied. This paper review and analysis the literature that discuss the different perspectives and views in relation to Knowledge and Knowledge management.

### **Knowledge**

It is crucial, when embarking on a subject concerning knowledge management, to introduce the general terminology related to knowledge. In this section the concept of knowledge is introduced in two contexts. The first is introduced through the context of data and information, since many companies lack awareness of the differences between the three concepts: data, information and knowledge (Davenport and Prusak 1998; Awad and Ghaziri 2004). The success and failure of organisations, as Davenport and Prusak (1998, p.1) mentioned, "can often depend on knowing which of those concepts you need, which you have and what you can and can't do with each". Understanding the three concepts mentioned above and to move from one to another is essential in order to make knowledge work successfully. The second context is the epistemology of knowledge and the history of the concept; this can be useful in understanding different views of knowledge and how this can be acquired, as well as how it can be developed into different dimensions.

### **Knowledge in the Context of Data and Information**

Several authors, such as Zack (1999) and Selmatt *et al.* (2003), defined data as facts. Related to this idea, the definition of Gamble and Blackwell (2001, p.43) states that data are "chunks of facts about the state of the world; data may be either quantitative or qualitative in nature". Maynard (1987, p.46) gives a more comprehensive definition of data. He defines data as "a general term used to denote any or all facts, letters, symbols, and numbers that refer to or describe an object, idea, situation, condition or other factors". From these definitions, data can be seen as facts, as most researchers have stated. They can also be viewed as bits of potential information which have no meaning on their own (Johannessen *et al.* 2002, p.1105; Bunge 1985, p.161). However, the context in which data are used can shape its definition

Bierly *et al.* (2000, p. 595) claimed that, if data are supposed to be raw, then that means they do not mean much until they proceed to become information, which can be more meaningful. Information is "data that are endowed with meaning and purpose", as Gamble and Blackwell (2001, p.43) asserted. According to Davenport and Prusak (1998, p.3), "data becomes information when its creators add meaning". In addition, Davenport and Prusak (1998, p.3) defined information as "a message, usually in the form of document or an audible or visible communication; it has a sender and a receiver".

Information workers, on the other hand, provide a clearer definition of information as "data ordered in a meaningful fashion. If it is to be meaningful, then there must have been human intervention of some sort in this creation, but the information, so created, can be stored, in print or in a computer, independently of human beings" (Mahapatra and Chakrabarti 2002, p.1). Information can therefore be considered as "systematically organized data" (Meadows 2001, p 17). The notion of "systematic" implies the ability to predict or make inferences from the data and that they are organised according to some systems.

Knowledge is not the same as information. According to the Compact Oxford English Dictionary (Soanes and Hawker 2005, p.

562), knowledge is "information and skills gained through experience or education ... the total of what is known... awareness of or familiarity with a fact or situation". Knowledge is a 'higher level' of information, as O'Dell *et al.* (1998, p.5) asserted: "knowledge is information in action". The Knowledge Management Forum (1996) regards knowledge as consisting of "facts, truths, and beliefs, perspectives and concepts, judgments and expectations, methodologies and know-how". This definition also states that: "knowledge is accumulated and integrated and held over time to handle specific situations and challenges. We use knowledge to determine what a specific situation means. Knowledge is applied to interpret information about the situation and to decide how to handle it".

Davenport and Prusak (1998, p.5), in their well-known book *Working Knowledge*, provided a comprehensive definition of 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. It originates and is applied in the minds of those who know. In organisations, it often becomes embedded, not only in documents or repositories, but also in organisational routines, processes, practices and norms". The definition above, given by Davenport and Prusak, describes knowledge in the area of knowledge management in broad terms. This large scope and complexity has been pointed out by Western authors as explained below.

An in-depth study carried out by Andriessen (2006, p. 97), who analysed the metaphorical conceptualisations of knowledge comparing Western and Eastern authors, found twenty-two different metaphors for knowledge with six core metaphors: knowledge as something physical, knowledge as a wave (rather like waves of electricity, heat or other waves that have a physical reference but that cannot be seen or touched), knowledge as a living organism, knowledge as thoughts and feelings, knowledge as a process, and knowledge as a structure. These,

he asserted, were central in the work of Western authors such as Davenport and Prusak (1998), Stewart (1997) and Hansen *et al.*, (1999). On the other hand, he found that the eastern authors, Nonaka and Takeuchi (1995), viewed knowledge as a metaphor for thoughts and feelings; this idea was central in the work of Japanese authors that stressed the subjective nature of knowledge (Andriessen and Boom 2007, p. 644). These core metaphors that differ between Western and Eastern authors can reflect knowledge management practices, as Western authors place more emphasis on codifying knowledge and using repositories than Eastern authors who concentrate on the intangible nature of knowledge (tacit knowledge) and who create a culture that supports the managing and sharing of knowledge.

### **Knowledge in the Context of Epistemology**

Studying the meaning of knowledge and how we gain knowledge is a discipline in philosophy that is known as Epistemology. Epistemologies are the theories of knowledge. Many philosophers, such as Plato, Descartes, Kant and others, have provided many insights into the nature of knowledge. However, Nonaka and Takeuchi (1995) broadly accepted Plato's theory of knowledge since this theory contains an initial description of knowledge. Plato, a Greek philosopher, provided a formal description of knowledge since he defined knowledge as "justified true belief" (Plato 1960). This definition implies that a person cannot say: "I know something" because he/she believes; instead, he/she needs to justify this belief. This means that knowledge "is distinguished from true belief by its justification" (*New World Encyclopaedia* 2017). As a result, most epistemological theories are designed to know how true beliefs can be appropriately justified.

Many epistemological positions have been discussed by philosophers in the Western world. Some of these include: rationalism, empiricism, historicism, and constructivism (Hjørland 1998). These epistemological positions are reviewed below:

*Rationalism*: This philosophy was developed by Descartes who saw knowledge as determined only by reasoning and a priori theorising, not by sensory experience; this also includes the truth of mathematics (Arner 1972, p. 9; Hjørland 1998, p. 608). *Empiricism*: Although both rationalism and empiricism are European philosophies, empiricism is in contrast to rationalist philosophy as it sees sensory perception as a way to gain knowledge. It focuses on the perceptions of and experiences in making knowledge (Hjørland 1998, p. 608). Furthermore, this philosophy views scientific knowledge as being driven from observation (Russell, 1961). *Historicism*: Historicism was developed by the American philosophers and emphasises that perceptions are always influenced by culture, language or by pre-understanding (Hjørland 1998, p. 608). This philosophy seems to see knowledge as relating to the cultural factors of each human background. *Constructivism*: This epistemological position argues that knowledge cannot have the purpose of producing representations of an independent reality; instead it has an adaptive function for learning (Glaserfeld 2005). This philosophy implies that humans must strive to attain a picture of the real world that reflects their experiences.

In contradiction with the above western thoughts (philosophies) and reflecting on the issue of knowledge within a Middle Eastern context, It has to be stressed that knowledge is coloured by people' religious beliefs and values systems which are influenced in the Moslem world by the Quran and its teachings. For instance, knowledge is rarely questioned and it is taken for granted. In addition, epistemology in the East, and especially in the Middle East and in the Islamic world, is considered to be knowledge in the forms of things that are either material (existing in terms of matter- tangible things) or immaterial (intangible) and they are embedded in humans themselves (Inati 1998, p.1). These thoughts are similar to those of the Greek philosophers in explaining the nature of knowledge. However, Arab Islamic philosophers, such as Ibn Sina, Al-Farabi, and Ibn Rushed believe that material (objective) forms of knowledge can only prepare

the way for the reception of immaterial forms, since their main intellectual inquiry begins with logical materials and ends with metaphysics or mysticism (Ha'iri Yazdi 1992; Inati 1998). This constitutes the main way in which these philosophers attempt to understand the nature of knowledge and how it comes about (Inati 1998, p. 1). The Islamic philosophers also believe that knowledge comes from above (faith and beliefs) and is not mediated by any empirical analysis of social reality (Andriessen and Boom 2007, p. 647). This implies that the Islamic and Middle Eastern countries do have the same beliefs regarding the nature of knowledge as they divide knowledge into the tangible and the intangible.

In the development of knowledge theories, Polyani (1966) proposed the concept of tacit or implicit knowledge; this developed new ideas regarding the development of knowledge. These concepts (i.e. the notions of "tacit "and "explicit" knowledge) dominate the current knowledge management literature (Nonaka 1994) as they are considered to be the building blocks of knowledge.

Explicit knowledge can be articulated and captured in the form of texts, tables, diagrams, websites, intranets, databases, organisational business records and so on. The features of explicit knowledge are as follows: it is easily expressed and shared; it can also be stored, codified and transferred easily (Serban and Luan 2002, p.10). In contrast, tacit knowledge is embedded in people and cannot be easily articulated. It covers informal business processes and communications, personal experiences and understanding; it is, in effect, individual knowledge and is considered as the property of the knower; it can be difficult to formulise and capture (Dalkir 2005, p.8; Serban and Luan 2002, p.10). Comparing views of knowledge in organisations between authors from the west and those from the east, in terms of knowledge management approaches, Cohen (1998, p.24) claimed that the West focuses on explicit knowledge, the re-use of knowledge, the knowledge market and using knowledge to gain short-

term advantage. However, the East focuses on tacit knowledge, knowledge creation, knowledge cultures, knowledge communities and the long-term advantage of knowledge.

Furthermore, in the context of tacit and explicit knowledge, Whitehill (1997, p. 623) classified knowledge in organisations into six groups:

- Encoded knowledge (Know what?); knowledge that is related to written policies and procedures.
- Habitual knowledge (Know how?); this is related to every day routine activities.
- Scientific knowledge (Know why?), which is related to technological and technical knowledge.
- Collaboration knowledge (Know who?); this is related to the interactions among individuals and with problem solving.
- Process knowledge (Know when and where?); this relates to cross-functional teams.
- Communal knowledge (Care why?), which is related to the organisational culture.

However, the professional intellect, such as academic knowledge, can be considered a special form of knowledge as Quinn *et al.*, (1996, p. 71-80) asserted. According to their theoretical reasoning concerning professional work, they considered that the professional intellect of an organisation operates on four levels. These are presented below:

- Cognitive knowledge (know-what): the basic mastery of a discipline that professionals achieve through extensive training and certification.
- Advanced skills (know-how): related to the ability to apply the rules of a discipline to complex real-world problems. This is the most widespread, value-creating level of professional skills.
- System understanding (know-why): a deep knowledge of the web of cause- and-effect relationships underlying a discipline, as expressed in a highly trained institution.

- Self-motivated creativity (care-why): the will, motivation and adaptability for success. The care-why enables cognitive knowledge to be renewed and offers an understanding of the advanced skills and systems needed to compete in the rapidly changing knowledge context.

These four levels are embedded in the professional mind. However, the last one may be more strongly emphasised in the culture of the organisation (Quinn et al. 1996). These levels and types of tacit and explicit knowledge are considered in this research as they are more applicable to the higher education context of professional intellects.

For organisations that are adopting any knowledge-based strategies, it is important to know how the growing collective knowledge that is embedded in organisations (i.e. of know what, know who, know why, know how, know when and where, and care why) is created, captured, codified, disseminated and shared among individuals and groups to ensure the success of any knowledge initiative. This is because successful knowledge-based strategies can benefit an organisation by enabling employees to learn faster, thus saving the organisation cost while allowing it to increase its competitive knowledge and ability (Whitehill 1997, p 625).

#### Knowledge Management

The word 'management' is defined as the process of planning, organising, leading and controlling the use of resources to accomplish performance goals (Schermerhorn 2004, p. 10-11) while the term 'planning' is the process of "setting performance objectives and determining what actions should be taken to accomplish them" (Schermerhorn 2004, p. 10). 'Organising' is the process of "assigning tasks, allocating resources, and arranging and coordinating the activities of individuals and groups to implement plans" (Schermerhorn 2004, p. 11). 'Leading' is the process of "arousing people's enthusiasm to work hard to fulfil plans and accomplish activities" (Schermerhorn 2004, p. 11). The term 'control' in

management is: "the process of measuring work performance, comparing results to objectives, and taking the corrective action as needed" (Schermerhorn 2004, p. 11). However, the term 'control' in a knowledge context is debated by many as it is a complex issue. Some have argued that knowledge cannot be managed in the area of knowledge management while others have criticised the notion of managing knowledge, asserting that the tacit knowledge that exists within people is difficult to manage or control (Wilson 2002; Kontzer 2001; Haldin-Herrgard 2000; Mullins 1999). However, the concept of knowledge management is broadly used and is often defined without including the term control, as explained below.

There are many definitions of knowledge management, ranging from the simple to the more complex. Gamble and Blackwell (2001, p.13) provided a general definition of knowledge management as follows: "KM is not about managing knowledge as such in a mechanical sense. It is about extending the view of a process, looking at the components of embodied knowledge, that which the knower intrinsically knows. It refers to the undocumented information, the intuition, empathy and experience that enable us to make the right decisions at least most of the time".

Several definitions have described knowledge management as the means of acquiring, evaluating and sharing knowledge. Some of these are offered below:

- Munn (2001, p.159) explained that KM usually involves: "some distillation of the idea that the organization seeks to identify, capture, disseminate and exploit the knowledge it possesses for the benefit of both employees and clients. Knowledge guides actions and informs decisions - it is personal to an individual, based on their unique experiences and associations."
- Groff and Thomas (2003, p.2) explained KM as: "the tools, techniques and strategies to retain, analyze, organize, improve, and share business expertise". In this definition, business expertise can be seen as the equivalent of knowledge.

- From an interdisciplinary perspective, knowledge management can be defined as: "the effective learning processes associated with the exploration, exploitation, and sharing of human knowledge (tacit and explicit) that use appropriate technology and cultural environments to enhance an organization's intellectual capital and performance" (Jashapara 2004, p.12).

From all the above definitions, it can be seen that knowledge management is not just about managing knowledge assets that are embedded in individuals and within the organisation; it is also concerned with managing the processes that act upon these assets. The processes that are mentioned in most knowledge management definitions include identifying, acquiring, capturing and sharing knowledge. Knowledge management also involves the analysis, evaluation, recognition and identification of the required knowledge assets. Reflecting on the definitions of knowledge management mentioned above, the researcher has reached the following comprehensive definition of knowledge management: a concentrated effort to capture critical knowledge; to share knowledge throughout an organisation according to its goals and objectives; and a systematic process of capturing, creating, analysing and presenting knowledge in a way that improves the productivity and outcomes of a specific area of interest, leading most of the time to better organisational performance.

### **Importance of Knowledge Management**

Peter Drucker was one of the first thinkers to introduce the notion of a knowledge economy as he coined the term 'knowledge work' or 'knowledge worker' (Drucker 1959; Drucker 2002; Nonaka and Takeuchi 1995). This term has inspired many organisations trying to build systematic practices for managing self-transformation in the knowledge society (Drucker 1993; Nonaka and Takeuchi 1995) since

managing this transformation requires organisations to abandon knowledge that has become obsolete or out of date, and to create new ways to improve day-to-day activities. Drucker (2002, p. 164) suggested that the knowledge economy and 'knowledge work' have three main characteristics that are dominant groups in workforces. These are presented below:

- Borderlessness: because knowledge travels even more effortlessly than money.
- Upward mobility: available to everyone through easily acquired formal education.
- The potential for failure as well as success: anyone can acquire the "means of production", i.e., the knowledge required for the job, but not everyone can win.

Therefore, new applications need to be developed to achieve success and continuous innovation or even survival for some organisations in this global competitive market. (Drucker 1993; Nonaka and Takeuchi 1995). In this sense, managing knowledge in organisations, including higher education institutions, is a critical resource to achieve improvement or even survival in this knowledge economy (Kidwell *et al.*, 2000; Maponya 2005; Townley 2001; George 2006; Rowley 1996; Petrides and Nodine 2003). Organisations that have recognised the importance of using and managing both tacit and explicit knowledge to solve problems and achieve their goals; will eventually offer a major competitive advantage (Smith 2001, p. 319; Dalkir 2005; Yeh 2005). However, obtaining competitive advantage is not an easy task, as many organisations are becoming very complex and thus their knowledge is difficult to locate and share; this knowledge may even be redundant or not used (Zack 1998). As a result, organisations need to locate, create, capture and share their organisational knowledge effectively and efficiently to gain competitive advantage. This emphasis has resulted in the creation of different strategies or processes to address

knowledge management in many organisations (Nonaka and Takeuchi 1995; Skyrme 1999).

### **Knowledge Management Process**

Authors such as Awad and Ghaziri (2004), Stoddart (2001), and Shukla and Srinivasan (2002) put forward three views for managing knowledge management processes in an organisational context. These components or elements, which are interdependent, are mainly concerned with people, organisational processes and technology. Furthermore, Skryme and Amidon (1997, p. 27) proposed that, in order to achieve the effective management of knowledge, it is necessary to "embrace aspects of people management and organisational culture as well as technology infrastructure". The aspects that were suggested by Skryme and Amidon are critical since they influence the success of knowledge management, including the creation and sharing of knowledge in organisations (Jashapara 2004; Riege 2005; Davenport and Prusak 1998; Oliver and Kandadi 2006). The literature offers views concerning the management of knowledge through a variety of processes. According to Groff and Thomas (2003, p.16), there are six key actions in the knowledge management process: capture, corroborate, organise, secure, analyse and collaborate. Awad and Ghaziri (2004, p. 24) reduced these actions to four steps or processes in the knowledge management cycle: capturing, organising, refining and transfer. On the other hand, Armistead (1999, p.145) mentioned the following processes of knowledge management: knowledge creation, capture and codification, sharing and transfer, embedding and using, measuring and evaluating.

Having considered the different processes in the literature concerned with practising knowledge management, it can be said that these processes are linked together as the creation of knowledge occurs through a range of means such as scientific discovery or discussion and collaboration (Serban and Luan 2002, p.11-12). However, tacit knowledge can be easily lost because of its intangible

nature if it is not captured. Knowledge capture is " a process by which the expert's thoughts and experiences are captured" (Awad and Gaziri 2004, p. 123) and this can be achieved by many means, as Dalkir (2005, p.90) mentioned. Such means include, for example, ad hoc sessions where a professional network responds to members' calls for help. This can also be called knowledge acquisition, the process when new knowledge is acquired through "congenital learning, experiential learning, vicarious learning, and searching, and noticing" (Huber 1991, p.70). In such ad hoc sessions, which are usually conducted as face-to-face meetings or by using technologies such as e-mail, chat rooms and teleconferencing, employees usually practise brainstorming for not more than thirty minutes in order to solve problems. Capturing knowledge also can be achieved by devising "road maps" which are more formal in nature and would be created at a scheduled meeting, which tend to be facilitated, problem-solving sessions that follow an agenda. Their objectives are to solve day-to-day problems via a public discussion. However, the processes of knowledge capture and knowledge acquisition are linked with knowledge creation as both create new knowledge.

From a technological point of view, knowledge capture can be achieved through extracting, documenting, presenting and storing knowledge (Serban and Luan 2002); this is the process of knowledge codification. From a knowledge management point of view, codification is "converting tacit knowledge to explicit knowledge in a usable form for organizational members" as Awad and Ghaziri (2004, p.186) mentioned. Moreover, Dalkir (2005, p.96) stated that knowledge codification "serves the pivotal role of allowing what is collectively known to be shared and used". Knowledge should be codified in terms that can be understood, maintained and improved upon, as part of corporate memory. Furthermore, Davenport and Prusak (1998, p.69) believe that if organisations wish to codify knowledge successfully, they should keep in mind four principles: managers have to decide what business goals the codified knowledge

will serve; they must identify the existing knowledge that is in different forms and the appropriateness of these forms to reach the required goals; they have to evaluate the knowledge for its usefulness; and finally, they must identify the most appropriate medium to be used by codifiers for codification such as writing, recording and classifying them in databases or any convenient medium that the codifier chooses and distribute to others in the organisation.

Awad and Ghaziri (2004, p.97) explained that the interaction between people, collective knowledge and technology is the interface through which this knowledge is shared and transferred. This combination provides an effective and efficient system to manage the knowledge core of the organisation. Stoddart (2001, p. 19-29) argued that employees needs to learn from the organisation to change their attitudes towards sharing knowledge while Shukla and Srinivasan (2002, p. 45) considered that the implementation of knowledge management involves making decisions about, for example, “what implementation structures and technologies are used to manage the knowledge” and “how to create a culture of knowledge sharing and motivating people to contribute and disseminate and apply knowledge”.

### **Arguments Around Technology and People Based Approach**

One question that has been a source of debate is how essential technology is to the knowledge management process. So, there is debate concerning whether technology-driven approaches should be preferred or whether people-centred approaches and programmes can simply use IT as a tool (Dougherty 1999, p.265). Awad and Ghaziri (2004, p.100) emphasised the importance of the role of people, stating that it must be remembered that technology should be used to enable knowledge delivery and transfer, whereas people create the

knowledge. Moreover, it is more important that people's tacit knowledge should be shared than codified knowledge should be merely transferred. The researchers went on to stress that, when it comes to pooling knowledge, a very important factor is to focus on the real knowledge of people rather than using technology. On this point, it should be borne in mind that the nature of face-to-face human communication provides for a much more productive approach to the sharing of knowledge than communication through technology (Rehman 2005; Datta 2008). The reason behind the importance of face-to-face communication is that it has been empirically demonstrated that sharing tacit knowledge is critical factor to facilitate knowledge sharing within organisations (Swan *et al.*, 1999). Furthermore, face-to-face communication and social interaction can bring about changes in the organisation where a culture of knowledge and innovation can be developed that will benefit the organisation (Nonaka and Tekeuchi 1995).

On the other hand, Gamble and Blackwell's research (2001, p.93) pointed out that most knowledge management experts will acknowledge that technology contributes about 15 percent of the solution in delivering a knowledge-enabled enterprise. However, this is a very important 15 percent, according to Gamble and Blackwell, since the right technology is critical although it is not in itself sufficient. Furthermore, studies in knowledge management technology (e.g. Mohamed *et al.* 2006, p.105; Mohamed 2008, p. 169) stress that technology can ensure the availability, immediacy and transparency of information that, all together, offer "just in time" solutions to solve work-related issues in different geographically distributed organisations as is needed in this case. Technology may be considered as a factor in the success of any knowledge management initiative yet IT cannot be viewed as a magic wand that will guarantee the success of a knowledge management initiative. Instead, IT has to be part of a balanced set of components: individuals, the organisation and technology.

However, a larger framework exists to manage the processes of knowledge management in the Eastern world. The Japanese authors, Nonaka and Takeuchi (1995, p. 62), developed and introduced a comprehensive theory concerning knowledge conversion processes (the SECI model). This theory was based on empirical research studies carried out in Japanese organisations showing that knowledge is created through the interactions between tacit and explicit knowledge. This allowed the researchers to postulate four different modes of knowledge conversion: socialisation, externalisation, internalisation and combination. Details of these modes are shown in Figure 2.1.

	Tacit Knowledge	To	Explicit Knowledge
Tacit Knowledge	Socialisation		Externalisation
From			
Explicit Knowledge	Internalisation		Combination

**Figure 2.1:** The four modes of knowledge conversion (Nonaka and Takeuchi 1995, p.62)

The conversion of tacit knowledge to tacit knowledge is called socialisation; this is the process of sharing experiences in organisations. Regarding this, Nonaka (1999, p.66) claimed that the "key to acquiring tacit knowledge is experiencing, particularly some form of shared experience". This involves activities which include direct experience such as discussions, observations, brainstorming, training, informal meetings and sharing experiences in which people expose their tacit knowledge to others. This tacit knowledge can be exchanged through one-to-one, one-to many or many-to-many activities. Externalisation involves converting tacit knowledge to

explicit knowledge whereby the knowledge is stored on papers or computers or disks; when the tacit knowledge is codified then it would be clear for others to share and create new knowledge. Nonaka *et al.*, (2000, p.9) noted that: "the successful conversion of tacit knowledge into explicit knowledge depends on the sequential use of metaphor, analogy and model". Combination is the process that involves converting explicit knowledge into more complex explicit knowledge. This involves a transformation stage: the organisational information from meetings, telephone conversations and documents is collected and is then combined, categorised and stored to create a new knowledge that can be shared with others. This combination, which can also be supported by technology, is known as knowledge transfer. Finally, the fourth type of conversion is called internalisation in which explicit knowledge is converted into tacit knowledge. It involves obtaining explicit knowledge from others that becomes embodied into tacit knowledge; this then creates new knowledge. The internalisation process requires individuals to identify and increase relevant knowledge from the organisational base.

These modes show four different (SECI) perspectives of creating knowledge by people in organisations and although these modes probably occur in reality, people may not know whether or not they are involved in knowledge creation. Therefore, organisations need to support their employees to share and build up their collective knowledge as successful organisations in the knowledge age are those which take full advantage of both their tacit and explicit knowledge by creating a culture of managing this knowledge and making it the norm in an organisation (Plessis, 2006).

### **Conclusion**

In this research, the attention was on providing a theoretical review and analysis of knowledge management in general and to have a deep understanding of the term "KM", different definitions were presented for both concepts of knowledge and knowledge management.

Furthermore, the researcher reviewed the main key actions of KM processes from different perspectives.

**References:**

- Andriessen, D.**, 2006. On the metaphorical nature of intellectual capital: a textual analysis. *Journal of Intellectual Capital*, **7**(1), 93-110.
- Andriessen, D., & Boom, M.**, 2007. East is East, and West is West, and (n) ever its intellectual capital shall meet. *Journal of Intellectual Capital*, **8**(4), 641-652.
- Armistead, C.**, 1999. Knowledge management and process performance. *Journal of Knowledge Management*, **3**(2), 143-154.
- Arner, D., G.**, 1972. *Perception, reason & knowledge: an introduction to epistemology*. Glenview, IL: Scott, Foresman and Company.
- Awad, M. E. & Ghaziri, H. M.**, 2004. *Knowledge management*. Upper Saddle River, NJ: Pearson Education Inc.
- Bierly, P. E., Kessler, E. H. & Christensen, E. W.**, 2000. Organisational learning, knowledge and wisdom. *Journal of Organisational Change*, **13**(6), 595-618.
- Bunge, M.**, 1985. *Philosophy of science and technology*. Part II, Reidel, Dordrecht.
- Cohen, D.**, 1998. Towards a knowledge context: report on the first annual University of California Berkeley forum on knowledge and the firm. *California Management Review*, **40** (3), 22- 39.
- Dalkir, K.**, 2005. *Knowledge Management in theory and practice*. Amsterdam: Elsevier.
- Datta, R.** 2008. *Make KM fun*.  
<<http://www.ikmagazine.com/display.asp?articleid=9E253851-89BF-498D-B289-E644E72E1177>>, [ accessed 17-1-2018].
- Davenport, T. H. & Prusak, L.**, 1998. *Working knowledge: how organizations manage what they know*. Boston: Harvard Business School Press.
- Dougherty, V.**, 1999. Knowledge is about people, not databases. *Industrial and Commercial Training*, **31**(7), 262-266.

- Drucker, P., F.**, 1959. *The landmarks of tomorrow*. New York, NY: Harper and Row.
- Drucker, P., F.**, 1993. *Post-Capitalist society*. Oxford: Butterworth Heinemann.
- Drucker, P. F.**, 2002. *Managing in the next society*. Amsterdam: Elsevier.
- Gamble, P. & Blackwell, J.**, 2001, *Knowledge management: a state of the art guide*. London: Kogan Page.
- George, E.**, 2006. Positioning higher education for the knowledge based economy. *Higher Education*, **52**, 589-610.
- Glaserfeld, E. V.**, 2005. Introduction: aspects of constructivism. *In*: Fosnot, C. T., ed., 2nd ed., *Constructivism: theory, perspectives and practice*. New York: Teachers College, Columbia University.
- Groff, T. & Thomas J.**, 2003. *Introduction to knowledge management: KM in Business*. Amsterdam: Butterworth-Heinemann.
- Ha'iri Yazdi, M.**, 1992. *The principles of epistemology in Islamic philosophy: knowledge by presence*. New York: State University of New York.
- Haldin-Herrgard, T.**, 2000. Difficulties in diffusion of tacit knowledge in organisations. *Journal of Intellectual Capital*, **1**(4), 357-365.
- Hansen, M., T., Nohria, N. & Tierney, T.** 1999. What's your strategy for managing knowledge? *Harvard Business Review*, March-April, 106-116.
- Hjørland, B.** 1998. Theory and methodology of information science: a new interpretation. *Journal of Documentation*, **54** (5), 606-621.
- Huber, G. P.**, 1991. Organizational learning: the contributing processes and the literature. *Organization Sciences*, **2**, 88-115. As quoted by: Jashapara, A., 2004. *Knowledge management: an integrated approach*. Essex: Pearson Education Limited.
- Inati, S. C.**, 1998. *Epistemology in the Islamic philosophy*.

<<http://www.muslimphilosophy.com/ip/rep/H019.htm>>, [accessed 29.3.2019].

**Jashapara, A.**, 2004. *Knowledge management: an integrated approach*. Harlow, England: Financial Times Prentice Hall.

**Johannessen, J., Olaisen, J. & Olsen, B.**, 2002. Aspects of a systemic philosophy of knowledge: from social facts to data, information and knowledge. *Emerald*, **31**(7/8), 1099-1120.

**Kidwell, J., Linde, V. & Johnson, S.**, 2000. Applying corporate knowledge management practices in higher education: colleges and universities have significant opportunities to apply knowledge management practices to support every part of their mission. *Educause Quarterly*, **4**, 28-33.

**Knowledge Management Forum Discussion**, 1996. *Knowledge Vs Information*, <<http://www.km-forum.org/t000008.htm>>, [accessed 15.05.2019].

**Kontzer, T.**, 2001. *Management legend: Trust never goes out of style*. < <https://www.informationweek.com/management-legend-trust-never-goes-out-of-style/d/d-id/1010759> >, [accessed 23.2.2020].

**Mahapatra, P. & Chakrabarti, B.**, 2002. *Knowledge management in libraries*. New Delhi: Ess Ess Publications.

**Maponya, O.**, 2005. Fostering the culture of knowledge sharing in higher education. *SAJHE*, **19** (5), 900-911.

**Maynard, J.**, 1987. *Dictionary of data processing*. London: Butterworth.

**Meadows, J.**, 2001. *Understanding information*. Munchen: K.G. Saur Verlage GmbH.

**Mohamed, M.**, 2008. The "continuumization" of knowledge management technology. *The Journal of Information and Knowledge Management Systems*, **38**(2), 167-173.

**Mohamed, M., Stankosky, M. & Murry, A.**, 2006. Knowledge management and information technology: can they work in perfect harmony? *Journal of Knowledge Management*, **10**(3), 103-116.

**Mullins, C.**, 1999. What is knowledge and can it be managed.

- <<http://www.tdan.com/view-articles/5108/>>, [ accessed 2.2.2019].
- Munn, N.**, 2001. Knowledge management: working at the speed of 'e'. *In: Scammell, A., eds., Handbook of Information Management*, 8<sup>th</sup> ed. London: Aslib-IMI, 159-176.
- New World Encyclopaedia.** 2017. <<http://www.newworldencyclopedia.org/entry/Epistemology>>, [accessed 25.2.2019].
- Nonaka, I. & Takeuchi, H.**, 1995. *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York: Oxford University Press.
- Nonaka, I.**, 1994. A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1) 14-37.
- Nonaka, I.**, 1999. The dynamic of knowledge creation, *In: Ruggles, R., & Holtshouse, D., eds., The knowledge advantage*, Oxford: Capstone Publishing Limited, 64-87.
- Nonaka, I., Toyama, R. & Konno, N.**, 2000a. A dynamic theory of organizational knowledge creation. *In: Smith, D. E., ed., Knowledge Groupware and the Internet*, Butterworth-Heinemann, Oxford, UK, 3-42.
- Nonaka, I. & Takeuchi, H.**, 1995. *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York: Oxford University Press.
- O'Dell, C., Essaides, N. & Ostro N.** (contributor); 1998. **Grayson, C.** (preface). *If only we knew what we know: the transfer of internal knowledge and best practice*. New York: Free Press.
- Oliver, S. & Kandadi, K.R.**, 2006. How to develop knowledge culture in organizations? A multiple case study of large distributed organizations. *Journal of Knowledge Management*, 10 (4), 6-24.
- Selamat, M. et al.**, 2003. Strategies innovation: knowledge management perspective. *In: Abd.Rahman, M., et al. eds., Building a knowledge society: value creation through people. knowledge and ICT*, 378-386.

**Soanes, C. & Hawker, S., eds.,** 2005. *Compact Oxford English Dictionary of current English*. 3<sup>rd</sup> ed., Oxford: Oxford University Press.

**Petrides, L. & Nondine, T.,** 2003. *Knowledge management in education: defining the landscape*. The institute for the study of knowledge management in education.

< <https://www.iskme.org/publications/km-education-defining-landscape-0> >, [ accessed 4.10..2019].

**Plato,** 1960. *Plato's theory of knowledge: the theatetus and the sophist of Plato*. translated by Cornford, F., M., London: Routledge and Kegan Paul.

**Plessis, M.,** 2006. The impact of organizational culture on knowledge management. Oxford: Chandos Publishing (Oxford) Limited.

**Polanyi, M.,** 1966. *The tacit dimensions*. London: Rutledge and Kegan Paul Ltd.

**Quinn, J. B., Anderson, P. & Finkelstein, S.,** 1996. Managing professional intellect: making the most of the best. *Harvard Business Review*, **76**, 71-80.

**Rehman, Sajjad ur,** 2005. Effectiveness of communication channels for knowledge sharing: a study of Kuwaiti companies. *Journal of Information & Knowledge Management*, **4** (4), .213-227.

**Riege, A.,** 2005. Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management*, **9**(3), 18-35.

**Rowley, J.,** 1996. Motivation and academic staff in higher education. *Quality Assurance in Education*, **4**(3), 11-16.

**Russell, E., W.,** 1961. *Soil conditions and Plant Growth*. New York: Willey.

**Schermerhorn, J., R.,** 2004. *Core concepts of management*. United States of America: John Wiley& Sons,Inc.

**Serban, A. & Luan, J.,** 2002. Knowledge management: The "fifth face" of institutional research. *In: Serban, A, & Luan, J., ed., Knowledge management: building a competitive advantage in higher education*. New York: Wiley Company.

- Shukla, A. & Srinivasan, R.,** 2002. *Designing knowledge management architecture: how to implement successful knowledge management programs*. New Delhi: Response Books.
- Skyrme, D. J.,** 1999. *Knowledge Networking: Creating the Collaborative Enterprise*. Oxford: Butterworth-Heinemann.
- Skryme, D. & Amidon, D.,** 1997. The knowledge agenda. *Journal of Knowledge Management*, **1**(1), 27-37.
- Smith, E. A.,** 2001. The role of tacit and explicit knowledge in the workplace. *Journal of Knowledge Management*, **5**(4), 311-321.
- Stewart, T., A.,** 1997. *Intellectual capital: the new wealth of organizations*. New York: Doubleday.
- Stoddart, L.,** 2001. Managing intranets to encourage knowledge sharing: opportunities and constraints. *Information Review*, **25**(1), 19-29.
- Swan, J; Newell, S; Scarbrough, H. & Hislop, D.,** 1999. Knowledge management and innovation: Networks and networking. *Journal of Knowledge Management*, **(3)** (4), 262-275.
- Tingwei Gao, Y. & Yi Liu.,** 2018. A review of Knowledge management about theoretical conception and designing approaches. *International Journal of Crowd Science*, **2** (1), 42-51.
- Townley, C.,** 2001. *Knowledge management and academic libraries*. < <https://crl.acrl.org/index.php/crl/article/view/15420> >, [accessed 5.8.2019].
- Whitehill, M.,** 1997. Knowledge-based strategy to deliver sustained competitive advantage. *Long Range Planning*, **30**(4), 621-726.
- Wilson, T., D.,** 2002. The nonsense of 'knowledge management'. *Information Research*, **8**(1). <<http://informationr.net/ir/8-1/paper144.html>>, [ accessed 23.2.2020].
- Yeh, Yay Marry Chou,** 2005. The implementation of knowledge management system in Taiwan's higher education. *Journal of College Teaching & Learning*. September **2**(9), 35-42.

**Zack, M.**, 1998. Managing codified knowledge. *Sloan Management Review*, **40**(4), 45-58.

**Zack, M.**, 1999. Developing a knowledge strategy. *California Management Review*, **41** (3), Spring, 125-145.