

COURSE MANUAL

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# Introduction to Knowledge Management

LIS 212



University of Ibadan Distance Learning Centre  
Open and Distance Learning Course Series Development

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## **Vice-Chancellor's Message**

The Distance Learning Centre is building on a solid tradition of over two decades of service in the provision of External Studies Programme and now Distance Learning Education in Nigeria and beyond. The Distance Learning mode to which we are committed is providing access to many deserving Nigerians in having access to higher education especially those who by the nature of their engagement do not have the luxury of full time education. Recently, it is contributing in no small measure to providing places for teeming Nigerian youths who for one reason or the other could not get admission into the conventional universities.

These course materials have been written by writers specially trained in ODL course delivery. The writers have made great efforts to provide up to date information, knowledge and skills in the different disciplines and ensure that the materials are user-friendly.

In addition to provision of course materials in print and e-format, a lot of Information Technology input has also gone into the deployment of course materials. Most of them can be downloaded from the DLC website and are available in audio format which you can also download into your mobile phones, IPod, MP3 among other devices to allow you listen to the audio study sessions. Some of the study session materials have been scripted and are being broadcast on the university's Diamond Radio FM 101.1, while others have been delivered and captured in audio-visual format in a classroom environment for use by our students. Detailed information on availability and access is available on the website. We will continue in our efforts to provide and review course materials for our courses.

However, for you to take advantage of these formats, you will need to improve on your I.T. skills and develop requisite distance learning Culture. It is well known that, for efficient and effective provision of Distance learning education, availability of appropriate and relevant course materials is a *sine qua non*. So also, is the availability of multiple plat form for the convenience of our students. It is in fulfilment of this, that series of course materials are being written to enable our students study at their own pace and convenience.

It is our hope that you will put these course materials to the best use.



**Prof. Abel Idowu Olayinka**

Vice-Chancellor

## **Foreword**

As part of its vision of providing education for “Liberty and Development” for Nigerians and the International Community, the University of Ibadan, Distance Learning Centre has recently embarked on a vigorous repositioning agenda which aimed at embracing a holistic and all encompassing approach to the delivery of its Open Distance Learning (ODL) programmes. Thus we are committed to global best practices in distance learning provision. Apart from providing an efficient administrative and academic support for our students, we are committed to providing educational resource materials for the use of our students. We are convinced that, without an up-to-date, learner-friendly and distance learning compliant course materials, there cannot be any basis to lay claim to being a provider of distance learning education. Indeed, availability of appropriate course materials in multiple formats is the hub of any distance learning provision worldwide.

In view of the above, we are vigorously pursuing as a matter of priority, the provision of credible, learner-friendly and interactive course materials for all our courses. We commissioned the authoring of, and review of course materials to teams of experts and their outputs were subjected to rigorous peer review to ensure standard. The approach not only emphasizes cognitive knowledge, but also skills and humane values which are at the core of education, even in an ICT age.

The development of the materials which is on-going also had input from experienced editors and illustrators who have ensured that they are accurate, current and learner-friendly. They are specially written with distance learners in mind. This is very important because, distance learning involves non-residential students who can often feel isolated from the community of learners.

It is important to note that, for a distance learner to excel there is the need to source and read relevant materials apart from this course material. Therefore, adequate supplementary reading materials as well as other information sources are suggested in the course materials.

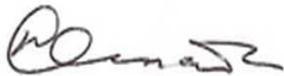
Apart from the responsibility for you to read this course material with others, you are also advised to seek assistance from your course facilitators especially academic advisors during your study even before the interactive session which is by design for revision. Your academic advisors will assist you using convenient technology including Google Hang Out, You Tube, Talk Fusion, etc. but you have to take advantage of these. It is also going to be of immense advantage if you complete assignments as at when due so as to have necessary feedbacks as a guide.

The implication of the above is that, a distance learner has a responsibility to develop requisite distance learning culture which includes diligent and disciplined self-study, seeking available administrative and academic support and acquisition of basic information technology skills. This is why you are encouraged to develop your computer skills by availing yourself the opportunity of training that the Centre’s provide and put these into use.

In conclusion, it is envisaged that the course materials would also be useful for the regular students of tertiary institutions in Nigeria who are faced with a dearth of high quality textbooks. We are therefore, delighted to present these titles to both our distance learning students and the university's regular students. We are confident that the materials will be an invaluable resource to all.

We would like to thank all our authors, reviewers and production staff for the high quality of work.

Best wishes.

A handwritten signature in black ink, appearing to read 'Bayo Okunade', written in a cursive style.

**Professor Bayo Okunade**

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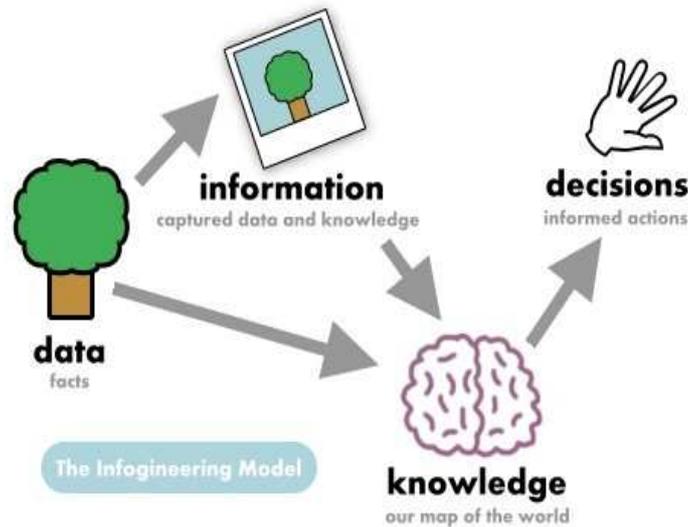
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## Study Session 1: Knowledge, Information and Data



*Source:* <http://www.infogineering.net/wp-content/uploads/2009/08/model.jpg>

### Introduction

In everyday language, the word “knowledge” is used all the time. Sometimes it could mean know-how, while other times it could mean wisdom. On many occasions it is being called information. The difficulty of defining knowledge arises from its relationship to two other concepts, namely data and information.

These two terms are often regarded as lower denominations of knowledge, but the exact relationship varies greatly from one example to another. In this study, you will examine the definition of knowledge, information data and the different types of knowledge.

### Learning Outcomes for Study Session 1

At the end of this study, you should be able to:

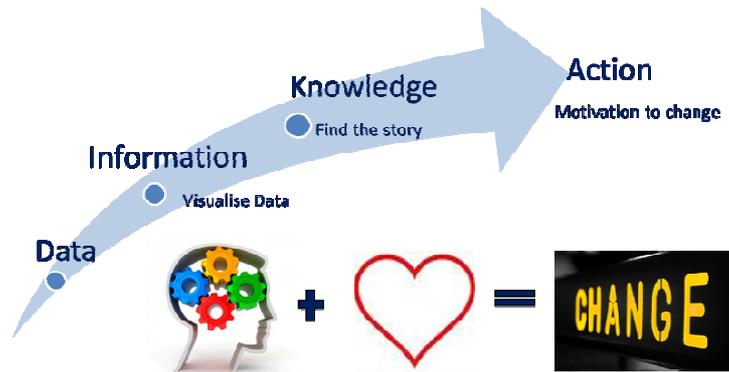
- 1.1 Define the terms ‘Knowledge, information and data’
- 1.2 Identify the different types of knowledge.

#### 1.1. Definition of Data, Information, and Knowledge

Before learning knowledge management (KM), you must start by clearly defining the meaning of the word "knowledge". It is important to understand what constitutes knowledge and what falls under the category of information or data. Within everyday

language, within specific fields, and even within the same disciplines, the word "knowledge" often takes on a variety of meanings.

Within more technologically oriented disciplines- particularly involving information systems, knowledge is often treated very similarly to information. It is seen as something one can codify and transmit. This is where Information Technology (IT) plays a pivotal role in knowledge sharing. For instance, the encyclopaedia at fact-archive.com defines it as: "information that has a purpose or use."



**Figure 1.1:** Data, Information & Action

**Source:** <https://dccstudio.files.wordpress.com/2013/06/turning-data-into-information.png>

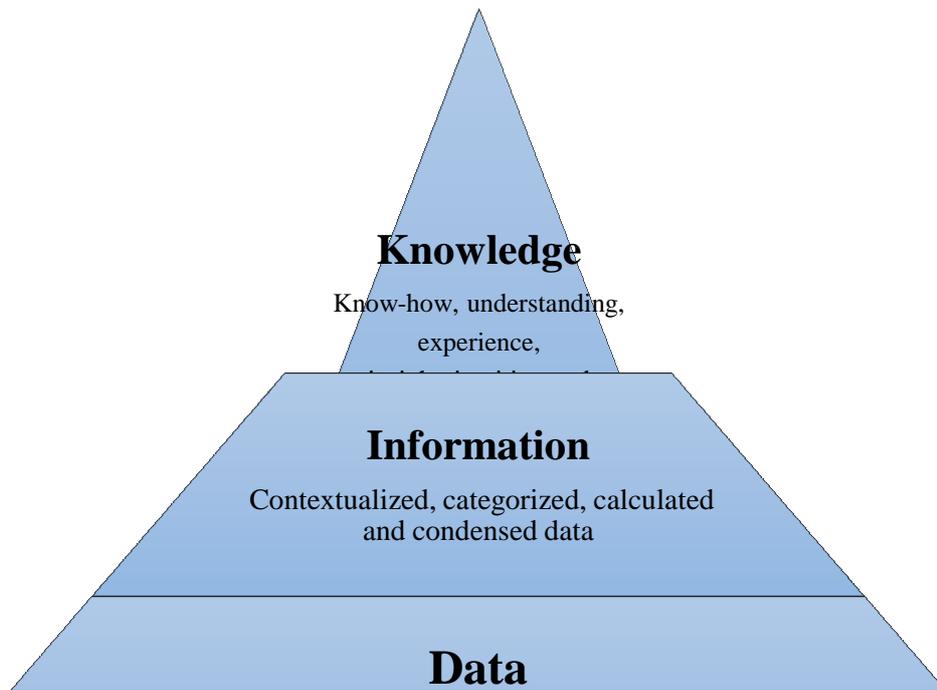
This kind of simplistic view of knowledge was particularly widespread during the 90s when information technology became increasingly more common. However even today, some KM systems are little more than information management systems using knowledge as a virtual synonym for information.

Knowledge is "information ". The three components are defined as follows: Data is the lowest point, an unstructured collection of facts and figures; information is the next level, and it is regarded as structured data.

The Longman online dictionary has one definition that begins to approach the way that knowledge is usually regarded within KM.

It states that knowledge is the information, skills, and understanding that you have gained through learning or experience. Although still closely associated with information, concepts like skills, understanding, and experience begin to surface.

Below, are the definitions that will be used throughout this study?



*Figure 1.2: Knowledge, Information & Data*

**Data:** Data represent facts and figures which relay something specific, but which are not organized in any way and which provide no further information regarding patterns, context, etc. Data are unstructured facts and figures that have the least impact on the typical manager. Data are unprocessed information from which inference can be made.

**Information:** For data to become information, it must be contextualized, categorized, calculated and condensed (Davenport & Prusak 2000). Information thus paints a bigger picture; it is data with relevance and purpose (Bali et al 2009). It may convey a trend in the environment, or perhaps indicate a pattern of sales for a given period of time. Essential information is found "in answers to questions that begin with such words as who, what, where, when, and how many".

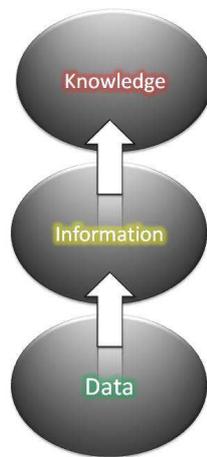
IT is usually invaluable in the capacity of turning data into information, particularly in larger firms that generate large amounts of data across multiple departments and functions. The human brain is mainly needed to assist in contextualization.

**Knowledge:** Knowledge is closely linked to doing and implies know-how and understanding. The knowledge possessed by each individual is a product of his experience, and encompasses the norms by which he evaluates new inputs from his surroundings (Davenport & Prusak 2000).

"Knowledge is a fluid mix of framed experience, values, contextual information, expert insight, and grounded intuition that provides an environment and framework

for evaluating and incorporating new experiences and information. It originates and is applied in the mind of the knower. In organizations it often becomes embedded not only in documents or repositories, but also in organizational routines, practices and norms."

In order for KM to succeed, one needs a deep understanding of what constitutes knowledge. Now that you know the clear boundaries between knowledge, information, and data, it is possible to go one step further and look at the forms in which knowledge exists and the different ways that it can be accessed, shared, and combined.



*Figure 1.3: Knowledge, Information & Data*

Knowledge is commonly distinguished from data and information. Data represent observations or facts out of context, and therefore not directly meaningful. Information results from placing data within some meaningful context, often in the form of a message. Knowledge is the value based on the meaningfully organized accumulation of information (messages) through experience, communication or inference.

Knowledge can be viewed both as a thing to be stored and manipulated and as a process of simultaneously knowing and acting - that is, applying expertise. As a practical matter, organizations need to manage knowledge both as object and process.

### **In-Text Question**

-----represent facts and figures which relay something specific

- a. Data

- b. Figure
- c. Knowledge
- d Information

### **In-Text Answer**

- a. Data

## **1.2 Types of Knowledge**

Understanding the different forms that knowledge can exist in, and thereby being able to distinguish between various types of knowledge, is an essential step for knowledge management (KM). For example, it should be fairly evident that the knowledge captured in a document would need to be managed (i.e. stored, retrieved, shared, changed, etc.) in a totally different way than that gathered over the years by an expert craftsman.

Over the centuries many attempts have been made to classify knowledge, and different fields have focused on different dimensions. This has resulted in numerous classifications and distinctions based in philosophy and even religion.

Within business and KM, two types of knowledge are usually defined, namely explicit and tacit knowledge. The former refers to codified knowledge, such as that found in documents, while the latter refers to non-codified and often personal/experience-based knowledge.

KM and organisational learning theory almost always take root in the interaction and relationship between these two types of knowledge. This concept has been introduced and developed by **Nonaka** in the 90's and remains a theoretical cornerstone of this discipline. **Botha** et al (2008) point out that tacit and explicit knowledge should be seen as a spectrum rather than as definitive points.

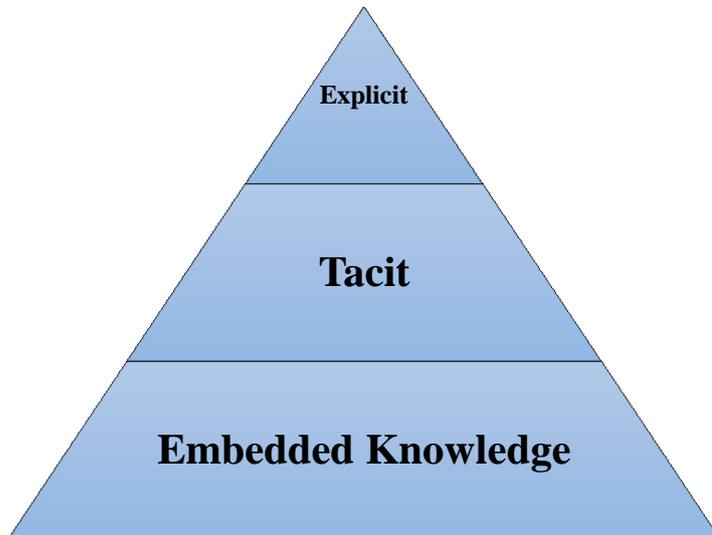
Therefore in practice, all knowledge is a mixture of tacit and explicit elements rather than being one or the other. However, in order to understand knowledge, it is important to define these theoretical opposites.

Some researchers make a further distinction and talk of embedded knowledge. This way, one differentiates between knowledge embodied in people and that embedded in processes, organizational culture, routines, etc. (Horvath 2000). **Gamble and Blackwell** (2001) use a scale consisting of represented-embodied-embedded knowledge, where the first two closely match the explicit-tacit.

Without question, the most important distinction within KM is between explicit and tacit knowledge. However, we find that the embedded dimension is a valuable addition, since the managerial requirements for this type of knowledge are quite

different. For this reason, the discussions in this study will, when relevant, use all three categorizations of knowledge but the focus will always be primarily on the explicit-tacit dimension.

Below is an overview of these three categories, as well as a short discussion on the way knowledge management systems (KMS) can/cannot be used to manage them.



*Figure 1.4: Three categories of knowledge*

### **Explicit Knowledge**

This type of knowledge is formalized and codified, and is sometimes referred to as know-what. It is therefore fairly easy to identify, store, and retrieve. This is the type of knowledge most easily handled by KMS, which are very effective at facilitating the storage, retrieval, and modification of documents and texts.

From a managerial perspective, the greatest challenge with explicit knowledge is similar to information. It involves ensuring that people have access to what they need; that important knowledge is stored; and that the knowledge is reviewed, updated, or discarded.

Many theoreticians regard explicit knowledge as being less important. It is considered simpler in nature and cannot contain the rich experience based know-how that can generate lasting competitive advantage.

Although this is changing to some limited degree, KM initiatives driven by technology have often had the flaw of focusing almost exclusively on this type of knowledge. As discussed previously, in fields such as IT there is often a lack of a more sophisticated definition.

This has therefore created many products labelled as KM systems, which in actual fact are/were nothing more than information and explicit knowledge management software. Explicit knowledge is found in: databases, memos, notes, documents, etc.

### **In-Text Question**

\_\_\_\_\_ type of knowledge is formalized and codified, and is sometimes referred to as know-what.

- a. Tacit Knowledge
- b. Explicit Knowledge
- c. Implicit Knowledge
- d. None of the above

### **In-Text Answer**

- b. Explicit Knowledge

### **Tacit Knowledge**

This type of knowledge was originally defined by **Polanyi** in 1966. It is sometimes referred to as know-how and refers to intuitive, hard to define knowledge that is largely experience based. Because of this, tacit knowledge is often context dependent and personal in nature. According to Nonaka (1994), it is hard to communicate and deeply rooted in action, commitment, and involvement.

Tacit knowledge is also regarded as being the most valuable source of knowledge, and the most likely to lead to breakthroughs in an organization. **Gamble and Blackwell** (2001) link the lack of focus on tacit knowledge directly to the reduced capability for innovation and sustained competitiveness.

KM staff has a very hard time handling this type of knowledge. An IT system relies on codification, which is something that is difficult/impossible for the tacit knowledge holder.

Using a reference by Polanyi (1966), imagine trying to write an article that would accurately convey how one reads facial expressions. It should be quite apparent that it would be near impossible to convey our intuitive understanding gathered from years of experience and practice.

Virtually all practitioners rely on this type of knowledge. An IT specialist for example will troubleshoot a problem based on his experience and intuition. It would be very difficult for him to codify his knowledge into a document that could convey his know-

how to a beginner. This is one reason why experience in a particular field is so highly regarded in the job market.

The exact extent to which IT systems can aid in the transfer and enhancement of tacit knowledge is a rather complicated discussion. For now, suffice it to say that successful KM initiatives must place a very strong emphasis on the tacit dimension, focusing primarily on the people involved, and they must understand the limitations imposed by computerized systems.

Tacit knowledge is found in: the minds of human stakeholders. It includes cultural beliefs, values, attitudes, mental models, etc. as well as skills, capabilities and expertise (Botha et al 2008).

### **In-Text Question**

KM staffs have a very hard time handling tacit type of knowledge. True or False

### **In-Text Answer**

True

### **Embedded Knowledge**

Embedded knowledge refers to the knowledge that is locked in processes, products, culture, routines, artefacts, or structures (Horvath 2000, Gamble & Blackwell 2001). Knowledge is embedded either formally, such as through a management initiative to formalize a certain beneficial routine, or informally as the organization uses and applies the other two knowledge types.

The challenges in managing embedded knowledge vary considerably and will often differ from embodied tacit knowledge. Culture and routines can be both difficult to understand and hard to change. Formalized routines on the other hand may be easier to implement and management can actively try to embed the fruits of lessons learned directly into procedures, routines, and products.

IT's role in this context is somewhat limited but it does have some useful applications. Broadly speaking, IT can be used to help map organizational knowledge areas; as a tool in reverse engineering of products (thus trying to uncover hidden embedded knowledge); or as a supporting mechanism for processes and cultures. However, it has also been argued that IT can have a disruptive influence on culture and processes, particularly if implemented improperly.

Due to the difficulty in effectively managing embedded knowledge, firms that succeed may enjoy a significant competitive advantage. Embedded knowledge is found in:

rules, processes, manuals, organizational culture, codes of conduct, ethics, products, etc.

It is important to note, that while embedded knowledge can exist in explicit sources (i.e. a rule can be written in a manual), the knowledge itself is not explicit, i.e. it is not immediately apparent why doing something this way is beneficial to the organization.

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**Activity 1.1: Data, Information and Knowledge**

**Time Allowed:** 1 hour

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Discuss with your colleague what you have learnt so far about knowledge, data and information; definitions and differences.

### Summary for Study Session 1

In study session 1, you have learnt that:

1. Data represent facts and figures which relay something specific, but which are not organized in any way and which provide no further information regarding patterns, context.
2. Knowledge is closely linked to doing and implies know-how and understanding.
3. Information is defined as contextualized, categorized, calculated and condensed data
4. Knowledge can be classified as Explicit, Tacit, and Embedded Knowledge
5. Explicit knowledge is formalized and codified, and is sometimes referred to as know-what.
6. Embedded knowledge refers to the knowledge that is locked in processes, products, culture, routines, artefacts, or structures
7. Tacit knowledge is regarded as being the most valuable source of knowledge, and the most likely to lead to breakthroughs in an organization.

### Self-Assessment Questions (SAQs) for Study Session 1

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study.

### **SAQ 1.1 (Testing Learning Outcomes 1.1)**

Define data, knowledge and information

### **SAQ 1.2 (Testing Learning Outcomes 1.2)**

Explain the term 'embedded knowledge'

## **Notes for Study Session 1**

### **SAQ 1.1**

Data represent facts and figures which relay something specific, but which are not organized in any way and which provide no further information regarding patterns, context.

Knowledge is closely linked to doing and implies know-how and understanding.

Information is data with relevance and purpose.

### **SAQ 1.2**

Embedded knowledge refers to the knowledge that is locked in processes, products, culture, routines, artefacts, or structures.

## **References**

Botha A, Kourie D, and Snyman R, (2008), *Coping with Continuous Change in the Business Environment*, Knowledge Management and Knowledge Management Technology, Chandice Publishing Ltd.

Botha et al. (2008): The book is in two parts. The first presents a very concise and in-depth overview of knowledge management (KM), organizational learning, organizational memory, organizational culture, and so on. The second part offers one of the most in-depth looks at knowledge management systems that I have ever seen in a KM book.

Davenport, T.H., and Prusak, L. (2000), *Working Knowledge: How Organizations Manage What They Know*, Harvard Business School Press, Boston, MA.

Gamble, P.R., and Blackwell, J. (2001), *Knowledge Management: A State of the Art Guide*, Kogan Page Ltd.

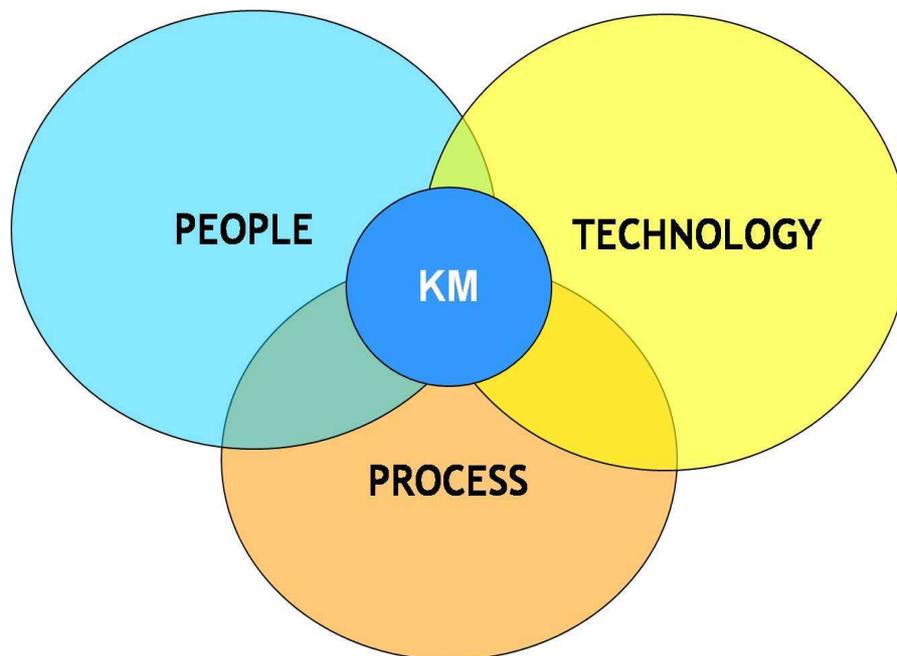
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## Study Session 2: Knowledge Management



*Source: <https://www.apqc.org/sites/default/files/images/km-elements.jpg>*

### Introduction

Knowledge Management (KM) is described as an established discipline, includes courses taught in the fields of business administration, information systems, management, and library and information sciences.

More recently, other fields have started contributing to KM research; these include information and media, computer science, public health, and public policy. In this study you will learn about history of knowledge management, definition of knowledge management (KM), aspects of KM, technologies and importance of KM.

### Learning Outcomes for Study Session 2

At the end of this study, you should be able to:

- 2.1 Discuss the history of knowledge management
- 2.2 Define Knowledge Management
- 2.3 Identify the aspects of knowledge management
- 2.4 Explain the motivations of Knowledge management
- 2.5 Identify KM technologies
- 2.6 Highlight the importance of Knowledge Management

## 2.1 History of Knowledge Management (KM)

With the introduction and increased use of computers in the second half of the 20th century, specific adaptations of terminologies such as knowledge bases, expert systems, knowledge repositories, group decision support systems, intranets, and computer-supported cooperative work have been introduced to further enhance generation and use of knowledge. Knowledge management (KM) emerged as a scientific discipline in the early 1990s.

It was initially supported solely by practitioners who started investigating KM. These practitioners were known as Chief Knowledge Officer. The world's first Chief Knowledge Officers (CKOs) were **Skandia hired Leif Edvinsson** of Sweden and **Hubert Saint-Onge** (formerly of CIBC, Canada),



*Figure 2.1: Skandia hired Leif Edvinsson of Sweden and Hubert Saint-Onge*  
*Source: <http://associationhub.com/images/expert-hubert-st-onge.png>*

The objective of CKOs is to manage and maximize the intangible assets of their organisations. Gradually, CKOs became interested in practical and theoretical aspects of KM, and the new research field was formed.

Hitherto, discussion of the KM idea has been taken up by academics, such as **Ikujiro Nonaka** (Hitotsubashi University), **Hiroataka Takeuchi** (Hitotsubashi University), Thomas H. **Davenport** (Babson College) and Baruch Lev (New York University). In 2001, **Thomas A. Stewart**, former editor at Fortune magazine and subsequently the editor of Harvard Business Review published a cover story highlighting the importance of intellectual capital in organisations. Since its establishment, the KM discipline has been gradually moving towards academic maturity.

Despite the fact that approaches to KM vary by author and school, a broad range of thoughts on the KM discipline exist. As the discipline matures, academic debates have

increased regarding both the theory and practice of KM, to include the following perspectives:



*Figure: 2.2: KM perspectives*

**Techno-centric:** with a focus on technology, ideally those that enhance knowledge sharing and creation.

**Organisational:** with a focus on how an organisation can be designed to best facilitate knowledge processes.

**Ecological:** with a focus on the interaction of people, identity, knowledge, and environmental factors as a complex adaptive system akin to a natural ecosystem.

Regardless of the school of thought, core components of KM include people, processes, technology (or) culture, structure, technology, depending on the specific perspective.

### **In-Text Question**

The objective of CKOs is to manage and maximize the tangible assets of their organisations. True or False

### **In-Text Answer**

False

## **2.2 Knowledge Management**

Knowledge Management (KM) is about making the right knowledge available to the right people. It is about making sure that an organization can learn, and that it will be able to retrieve and use its knowledge assets in current applications as they are needed. In the words of Peter Drucker, it is "the coordination and exploitation of organizational knowledge resources, in order to create benefit and competitive advantage".



*Figure 2.3: Peter Drucker*

*Source:* [http://www.cgu.edu/images/drucker/peter\\_drucker/images/PeterDrucker010.jpg](http://www.cgu.edu/images/drucker/peter_drucker/images/PeterDrucker010.jpg)

Where the disagreement sometimes occurs is in conjunction with the creation of new knowledge. Wellman (2009) limits the scope of KM to lessons learned and the techniques employed for the management of what is already known.

He argues that knowledge creation is often perceived as a separate discipline and generally falls under innovation management. Bukowitz and Williams (1999) link KM directly to tactical and strategic requirements.

Its focus is on the use and enhancement of knowledge based assets to enable the firm to respond to these issues. According to this view, the answer to the question "what is knowledge management" would be significantly broader.

**Knowledge management therefore**, is the systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical & strategic requirements; it consists of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge.

Knowledge management (KM) therefore implies a strong tie to organizational goals and strategy, and it involves the management of knowledge that is useful for some purpose and which creates value for the organization. Considering the previous knowledge management definition, KM involves the understanding of:

1. Where and in what forms knowledge exists
2. What the organization needs to know
- 3 How to promote a culture conducive to learning
- 4 Sharing, and knowledge creation

5. How to make the right knowledge available to the right people at the right time;
- 6 How to best generate or acquire new relevant knowledge
- 7 How to manage all of these factors so as to enhance performance in light of the organization's strategic goals and short term opportunities and threats.

KM must therefore create/provide the right tools, people, knowledge, structures (teams, etc.), culture, etc. so as to enhance learning; it must understand the value and applications of the new knowledge created; it must store this knowledge and make it readily available for the right people at the right time; and it must continuously assess, apply, refine, and improve organizational knowledge in conjunction with concrete long and short term factors.

From this definition, we can see that knowledge management depends on management of the organization's knowledge creation and conversion mechanisms; organizational memory and retrieval facilities; organizational learning; and organizational culture. These concepts will be explored in more detail in the following sections.

**Knowledge management (KM)** is the process of capturing, developing, sharing, and effectively using organisational knowledge. It refers to a multi-disciplined approach to achieving organisational objectives by making the best use of knowledge. Knowledge management is essentially about getting the right knowledge to the right person at the right time.

This in itself may not seem so complex, but it implies a strong tie to corporate strategy, understanding of where and in what forms knowledge exists, creating processes that span organizational functions, and ensuring that initiatives are accepted and supported by organizational members. Knowledge management may also include new knowledge creation, or it may solely focus on knowledge sharing, storage, and refinement.

A similarly broad definition is presented by **Davenport & Prusak (2000)**, which states that KM "is managing the corporation's knowledge through a systematically and organizationally specified process for acquiring, organizing, sustaining, applying, sharing and renewing both the tacit and explicit knowledge of employees to enhance organizational performance and create value."

#### **Box 2.1 Definition of Knowledge Management**

Knowledge management (KM) is the process of capturing, developing, sharing, and effectively using organisational knowledge.

Knowledge management in the broader perspective encompassed not just the exploitation and management of existing knowledge assets, but also the initiatives involved in the creation and acquisition of new knowledge.

### **In-Text Question**

KM involves the understanding of the following except

- a. Where and in what forms knowledge exists
- b. What the organization needs to know
- c. What the ruling class need to know
- d. How to promote a culture conducive to learning

### **In-Text Answer**

- c. What the ruling class needs to know

## **2.3 Aspects of Knowledge management**

It is important to remember that knowledge management is not about managing knowledge for knowledge's sake. The overall objective is to create value and to leverage, improve, and refine the firm's competences and knowledge assets to meet organizational goals and targets.

Effective implementation of knowledge management thus has several aspects including:

**KM Strategy:** Knowledge management strategy must be dependent on corporate strategy. The objective is to manage, share, and create relevant knowledge assets that will help meet tactical and strategic requirements.

Knowledge may be accessed at three stages: before, during, or after KM-related activities. Organisations have tried knowledge capture incentives, including making content submission mandatory and incorporating rewards into performance measurement plans. Considerable controversy exists over whether incentives work or not in this field. However, no consensus has emerged.

One strategy to KM involves actively managing knowledge (push strategy). In such an instance, individuals strive to explicitly encode their knowledge into a shared knowledge repository, such as a database, as well as retrieving the knowledge they need that other individuals have provided to the repository. This is commonly known as the Codification approach to KM.

Another strategy to KM involves individuals making knowledge requests of experts associated with a particular subject on an ad hoc basis (pull strategy). In such an instance, expert individual(s) can provide their insights to the particular person or people needing this (Snowden 2002).

This is commonly known as the Personalisation approach to KM. **Hansen** et al. proposes a simple framework, distinguishing two opposing KM strategies: codification and personalization.

Codification focuses on collecting and storing codified knowledge in previously designed electronic databases to make it accessible to the organisation. Codification can therefore refer to both tacit and explicit knowledge.

In contrast, the personalization strategy aims at encouraging individuals to share their knowledge directly. Information technology plays a less important role, as it is only supposed to facilitate communication and knowledge sharing among members of an organisation.

Other organizational knowledge management strategies and instruments for companies include:

- 1 Knowledge Sharing (fostering a culture that encourages the sharing of information, based on the concept that knowledge is not irrevocable and should be shared and updated to remain relevant)
2. Storytelling (as a means of transferring tacit knowledge)
3. Cross-project learning
- 4 After action reviews
- 5 Knowledge mapping (a map of knowledge repositories within a company accessible by all).
6. Communities of practice
- 7 Expert directories (to enable knowledge seeker to reach to the experts)
8. Best practice transfer
9. Knowledge fairs
10. Competence management (systematic evaluation and planning of competences of individual organisation members)
11. Proximity & architecture (the physical situation of employees can be either conducive or obstructive to knowledge sharing)
12. Master-apprentice relationship
13. Collaborative technologies (groupware, etc.)
14. Knowledge repositories (databases, bookmarking engines, etc.)

15. Measuring and reporting intellectual capital (a way of making explicit knowledge for companies)
16. Knowledge brokers (some organisational members take on responsibility for a specific "field" and act as first reference on whom to talk about a specific subject)
17. Social software (wikis, social bookmarking, blogs, etc.)
18. Inter-project knowledge transfer

**Organizational Culture:** The organizational culture influences the way people interact, the context within which knowledge is created, the resistance they will have towards certain changes, and ultimately the way they share (or the way they do not share) knowledge.

**Organizational Processes:** This involves creating right processes, environments, and systems that enable KM to be implemented in the organization.

**Management & Leadership:** KM requires competent and experienced leadership at all levels. There are a wide variety of KM-related roles that an organization may or may not need to implement, including a CKO, knowledge managers, knowledge brokers and so on. More on this, is in the section on KM positions and roles.

**Technology:** The systems, tools, and technologies that fit the organization's requirements - properly designed and implemented.

**Politics:** The long-term support to implement and sustain initiatives that involve virtually all organizational functions, which may be costly to implement (both from the perspective of time and money), and which often do not have a directly visible return on investment.



**Figure 2.4** KM tools

**Source:** <http://www.knowledge-management-tools.net/images/Front%20page%20new.png>

Typically, failed initiatives have often placed an undue focus on knowledge management tools and systems while neglecting the other aspects. This study examines the first five dimensions of knowledge management. Originally, the political dimension is deemed to be beyond the scope of this study, since it is not something that is commonly tackled in KM literature.

Knowledge management efforts are typically focused on organisational objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration and continuous improvement of the organisation.

KM efforts overlap with organisational learning and may be distinguished from that by a greater focus on the management of knowledge as a strategic asset and a focus on encouraging the sharing of knowledge. It is an enabler of organisational learning

### **In-Text Question**

Knowledge management strategy mustn't be dependent on corporate strategy. True or False

### **In-Text Answer**

False

## 2.4 Motivations of KM

There are a number of claims as to the motivation leading organisations to undertake a KM effort. Typical considerations driving a KM effort include:

- Making available increased knowledge content in the development and provision of products and services
- Achieving shorter new product development cycles.
- Facilitating and managing innovation and organisational learning
- Leveraging the expertise of people across the organisation.
- Increasing network connectivity between internal and external individuals
- Managing business environments and allowing employees to obtain relevant insights and ideas appropriate to their work
- Solving intractable or wicked problems
- Managing intellectual capital and intellectual assets in the workforce (such as the expertise and know-how possessed by key individuals)

Debate exists whether KM is more than a passing fad, though increasing amount of research in this field may help to answer this question.

Knowledge sharing remains a challenging issue for knowledge management, while there is no clear agreement, barriers may include time issues for knowledge works, the level of trust, lack of effective support technologies and culture.

### In-Text Question

Knowledge sharing could be overlooked in knowledge management. True or False

### In-Text Answer

False

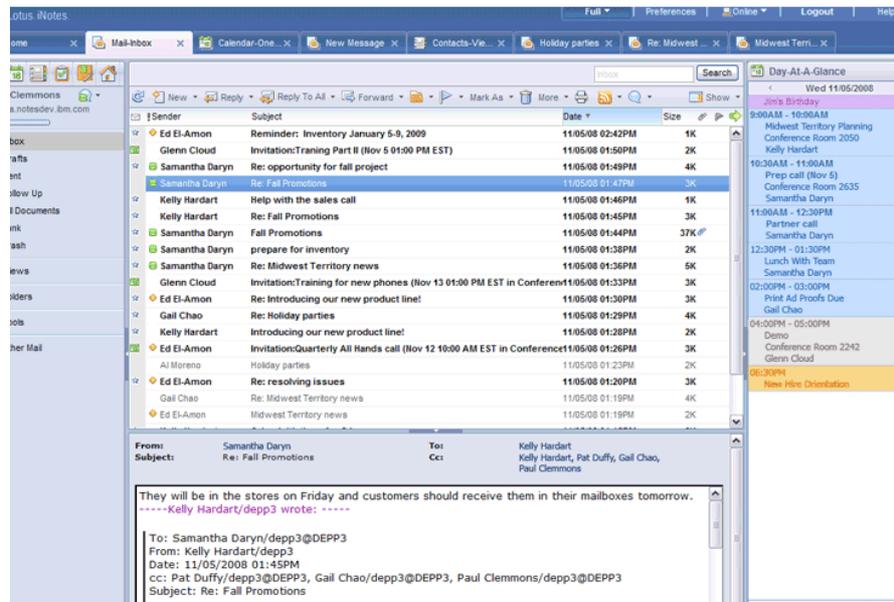
## 2.5 KM Technologies

Knowledge Management (KM) technology can be divided into the following general categories:

1. Groupware
2. Workflow
- 3 Content/Document Management
- 4 Enterprise Portals
5. E-Learning
- 6 Scheduling and planning
- 7 Tele presence

## Groupware

Groupware refers to technologies that facilitate collaboration and sharing of organizational information. One of the earliest very successful products in this category was Lotus Notes. Notes provided tools for threaded discussions, sharing of documents, organization wide uniform email, etc.



*Figure 2.5: Lotus notes*

*Source: [http://cdn.ttgtmedia.com/digitalguide/images/Misc/inotes\\_1.gif](http://cdn.ttgtmedia.com/digitalguide/images/Misc/inotes_1.gif)*

## Workflow

Workflow tools allow the representation of processes associated with the creation, use, and maintenance of organizational knowledge. For example the process to create and utilize forms and documents within an organization. For example, a workflow system can do things such as send notifications to appropriate supervisors when a new document has been produced and is waiting their approval.

## Content/Document

Content/Document Management systems are systems designed to automate the process of creating web content and/or documents within an organization. The various roles required such as editors, graphic designers, writers, and producers can be explicitly modelled along with the various tasks in the process and validation criteria for moving from one step to another.

All this information can be used to automate and control the process. Commercial vendors of these tools started either as tools to primarily support documents (e.g., Documentum) or as tools designed to support web content (e.g., Interwoven) but as the Internet grew these functions merged and most vendors now perform both functions, management of web content and of documents.

### **Enterprise Portals**

Enterprise Portals are web sites that aggregate information across the entire organization or for groups within the organization such as project teams.

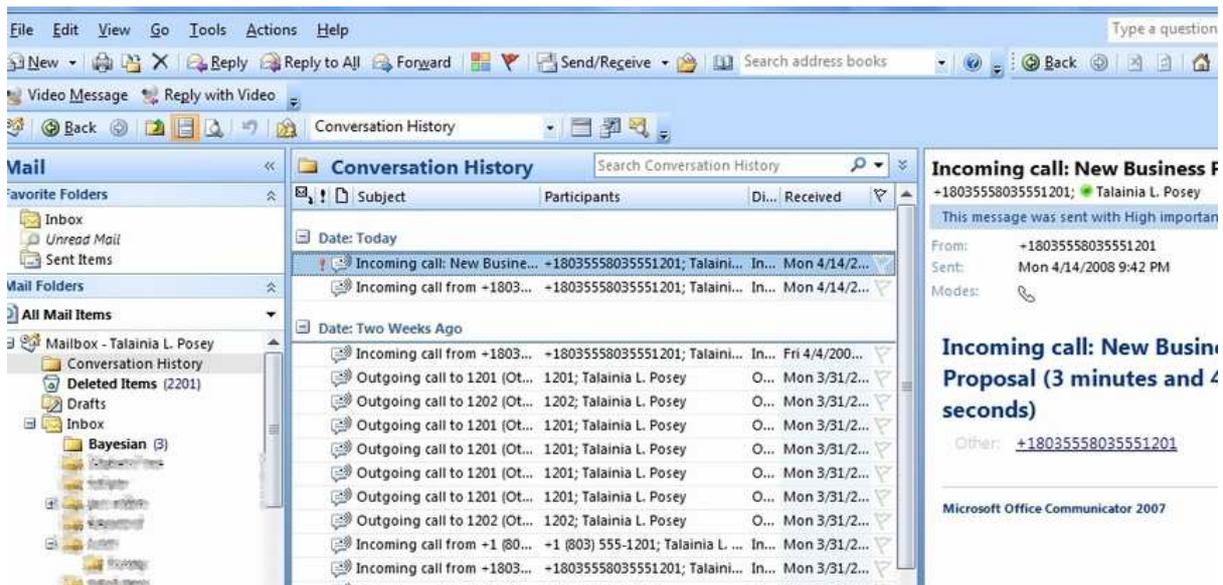
### **E-Learning**

E-learning technology enables organizations to create customized training and education software. This can include lesson plans, monitoring progress against learning goals, online classes, etc. e-Learning technology enables organizations to significantly reduce the cost of training and educating their members.

As with most KM technology in the business world this was most useful for companies that employ knowledge workers; highly trained staff with areas of deep expertise such as the staff of a consulting firm. Such firms spend a significant amount on the continuing education of their employees and even have their own internal full-time schools and internal education staff.

### **Scheduling and planning**

Scheduling and planning tools automate the creation and maintenance of an organization's schedule: scheduling meetings, notifying people of a meeting, etc. An example of a well-known scheduling tool is Microsoft Outlook.



**Figure 2.6: Microsoft Outlook**

*Source: [http://cdn.ttgtmedia.com/digitalguide/images/Misc/ocs\\_9.jpg](http://cdn.ttgtmedia.com/digitalguide/images/Misc/ocs_9.jpg)*

The planning aspect can integrate with project management tools such as Microsoft Project. Some of the earliest successful uses of KM technology in the business world were the development of these types of tools, for example online versions of corporate "yellow pages" with listing of contact info and relevant knowledge and work history.

### **Telepresence**

Telepresence technology enables individuals to have virtual meetings rather than having to be in the same place. Videoconferencing is the most obvious example. These categories are neither rigidly defined nor exhaustive.



**Figure 2.7: Telepresence**

*Source: <https://i.ytimg.com/vi/kV-6ZrlEgrQ/maxresdefault.jpg>*

Workflow for example is a significant aspect of a content or document management system and most content and document management systems have tools for developing enterprise portals.

One of the most important trends in KM technology was the adoption of Internet standards. Original KM technology products such as Lotus Notes defined their own proprietary formats for email, documents, forms, etc. The explosive growth of the Internet drove most vendors to abandon proprietary formats and adopt Internet formats such as HTML, HTTP, and XML.

In addition, open source and freeware tools for the creation of blogs and wikis now enable capabilities that used to require expensive commercial tools to be available for little or no cost.

One of the most important ongoing developments in KM technology is adoption of tools that enable organizations to work at the semantic level. Many of these tools are being developed as part of the Semantic Web. These include:

1. Knowledge community
2. Knowledge ecosystem
3. Knowledge engineering
4. Knowledge management software
5. Knowledge transfer
6. Knowledge Cafe
7. Ignorance management
8. Legal case management
9. Knowledge modelling
10. Customer knowledge

### **In-Text Question**

\_\_\_\_\_refers to technologies that facilitate collaboration and sharing of organizational information.

- a. Workflow
- b. ELearning
- c. Groupware
- d. Telepresence

### **In-Text Question**

- a. Workflow

## 2.6 The Importance of knowledge management KM

1. It is useful because it places a focus on knowledge as an actual asset, rather than as something intangible. In so doing, it enables the firm to better protect and exploit what it knows, and to improve and focus its knowledge development efforts to match its needs. In other words:

1. It helps firms learn from past mistakes and successes.
2. It better exploits existing knowledge assets by re-deploying them in areas
3. where the firm stands to gain something, e.g. using knowledge from one department to improve or create a product in another department, modifying knowledge from a past process to create a new solution, etc.
4. It promotes a long term focus on developing the right competencies and skills and removing obsolete knowledge.
5. It enhances the firm's ability to innovate.
6. It enhances the firm's ability to protect its key knowledge and competencies from being lost or copied.

Unfortunately, KM is an area in which companies are often reluctant to invest because it can be expensive to implement properly, and it is extremely difficult to determine a specific return on investment (ROI).

Moreover, as a concept, its definition has not been universally accepted. For example within IT one often sees a much shallower, information-oriented approach. Particularly in the early days, this has led to many "KM" failures and these have tarnished the reputation of the subject as a whole.

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### Activity 2.1: Motivations of knowledge Management

**Time Allowed:**30 Minutes

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Check out some eLearning platforms and enterprise portals

### Summary for Study Session 2

In study session 2, you have learnt that:

1. Knowledge management (KM) is the systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical & strategic requirements.

2. Knowledge management consists of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge.
3. Knowledge sharing remains a challenging issue for knowledge management.
4. Groupware refers to technologies that facilitate collaboration and sharing of organizational information.

### **Self-Assessment Questions (SAQs) for Study Session 2**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. You can check your answers with the Notes on the Self-Assessment questions at the end of this study

#### **SAQ 2.1 (Testing Learning Outcomes 2.1)**

Discuss the history of history of knowledge management

#### **SAQ 2.2 (Testing Learning Outcomes 2.2)**

Define knowledge management

#### **SAQ 2.3 (Testing Learning Outcomes 2.3)**

What are the Aspects of Knowledge Management?

#### **SAQ 2.4 (Testing Learning Outcomes 2.4)**

What are the motivations leading organizations to undertake KM?

#### **SAQ 2.5 (Testing Learning Outcomes 2.5)**

What are the technologies of KM?

#### **SAQ 2.6 (Testing Learning Outcomes 2.6)**

Mention three importance of knowledge management

### **Notes for Study Session 2**

#### **SAQ 2.1**

Knowledge management (KM) emerged as a scientific discipline in the early 1990s. It was initially supported solely by practitioners who started investigating KM. These practitioners were known as Chief Knowledge Officer. The world's first Chief Knowledge Officers (CKOs) were Skandia hired Leif Edvinsson of Sweden and Hubert Saint-Onge (formerly of CIBC, Canada),

#### **SAQ 2.2**

Knowledge Management is the coordination and exploitation of organizational knowledge resources, in order to create benefit and competitive advantage

### SAQ 2.3

1. Knowledge mapping (a map of knowledge repositories within a company accessible by all)
2. 2 Communities of practice
3. Expert directories (to enable knowledge seeker to reach to the experts)
4. Best practice transfer
5. Knowledge fairs
6. Competence management (systematic evaluation and planning of competences of individual organisation members)
7. 7 Proximity & architecture (the physical situation of employees can be either conducive or obstructive to knowledge sharing)

### SAQ 2.4

- Making available increased knowledge content in the development and provision of products and services
- Achieving shorter new product development cycles.
- Facilitating and managing innovation and organisational learning
- Leveraging the expertise of people across the organisation.
- Increasing network connectivity between internal and external individuals

### SAQ 2.5

1. Groupware
2. Workflow
2. Content/Document Management
3. Enterprise Portals
4. E-Learning
5. Scheduling and planning

### SAQ 2.6

1. It helps firms learn from past mistakes and successes.
2. It better exploits existing knowledge assets by re-deploying them in areas where the firm stands to gain something, e.g. using knowledge from one department to improve or create a product in another department, modifying knowledge from a past process to create a new solution, etc.
3. It promotes a long term focus on developing the right competencies and skills and removing obsolete knowledge.

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## Study Session 3 Information Management and Knowledge Management



*Source: <http://www.x4consulting.co.nz/Images/KM-IM%20small.png>*

### Introduction

Knowledge and information are used interchangeably by so many people to the extent that it is becoming difficult to imagine the difference between the two concepts. In this study, you will understand and examine the difference between information and knowledge as well as Information Management (IM) and Knowledge Management (KM). These will enable you understand the focus of IM and KM in various disciplines where they have occurred.

### Learning Outcomes for Study Session 3

At the end of this study, you should be able to:

- 3.1 Define the term 'Information'
- 3.2 Discuss the difference between information and knowledge Management

### 3.1 Information

Information is news; it a gathered fact. It has been broadly defined as an occurrence or a set of occurrences which carries messages and which when perceived by the

recipient through any of the senses, increases his state of knowledge. It has also been defined as idea that is communicated.

Information increases the state of knowledge of the recipient, resolves uncertainty and is highly valued in decision making. Other definitions of information are:

- ✚ A physical surrogate of knowledge
- ✚ All published and unpublished knowledge about any given subject
- ✚ Body of knowledge

**Buckland** (1991) has discussed the ambiguities of information which he characterised as:

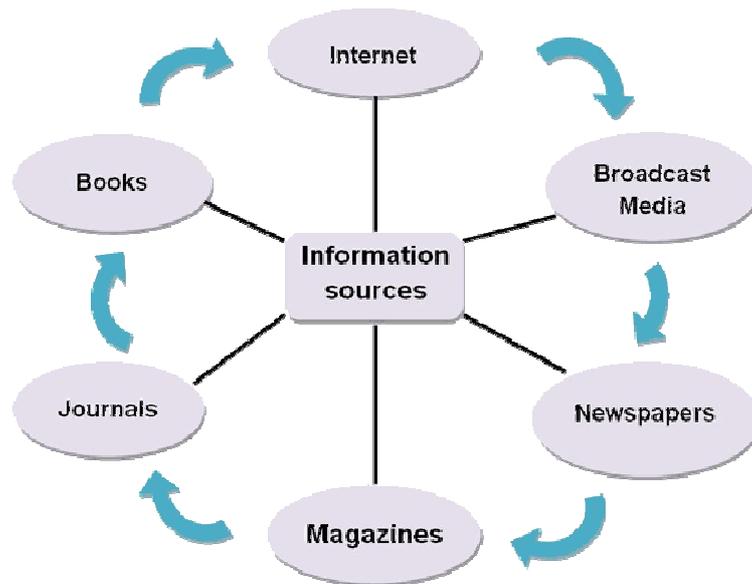
- a. Information - as – process
- b. Information – as – Knowledge
- c. Information – as – thing

Information is a process when it is performing the function of informing, which involves transmitting information from a source to a recipient. It is knowledge when it is performing the role of imparting knowledge to an individual. Where it reduces uncertainty under both circumstances, information is intangible.

### **Box 3.1: Definition of Information**

Information is news; it a gathered fact.

It becomes tangible when it is a thing or physical objects such as data or documents. Although there is no exact definition of information, apparently there is a connection between data, information and knowledge. **Aina** (2004) quoting **Rubin** (1998) has provided a relationship between data, information, knowledge and wisdom as follows: Data are raw and unprocessed, information is a processed data from which meaning arises and it is communicated, and knowledge is further processed information that is organized and interrelated and more broadly understood and applied. Wisdom is knowledge applied to the benefit of humanity.



**Figure 3.1: Information**

*Source :[http://www.library.dmu.ac.uk/Images/information\\_cycle.gif](http://www.library.dmu.ac.uk/Images/information_cycle.gif)*

Data → Information → Knowledge → Wisdom

Knowledge is facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject. It is awareness or familiarity gained by experience of a fact or situation. Knowledge as a basic form of capital can either be codified or written down, or tacit and in people's heads (World Bank, 1998d), accumulation of which Economic growth is driven.

Information Management (IM) and Knowledge Management (KM) and as well as knowledge and Information, are often used interchangeably. In this study you will examine the difference.

**Information management (IM)** is the collection, processing and organization of information from one or more sources and the distribution of that information to one or more audiences. This sometimes involves those who have a stake in, or a right to that information.

**Box 3.2: Information Management**

Information management (IM) is the collection, processing and organization of information from one or more sources and the distribution of that information to one or more audiences

Management means the organization of and control over the planning, structure and organisation, controlling, processing, evaluating and reporting of information activities in order to meet client objectives and to enable corporate functions in the delivery of information.

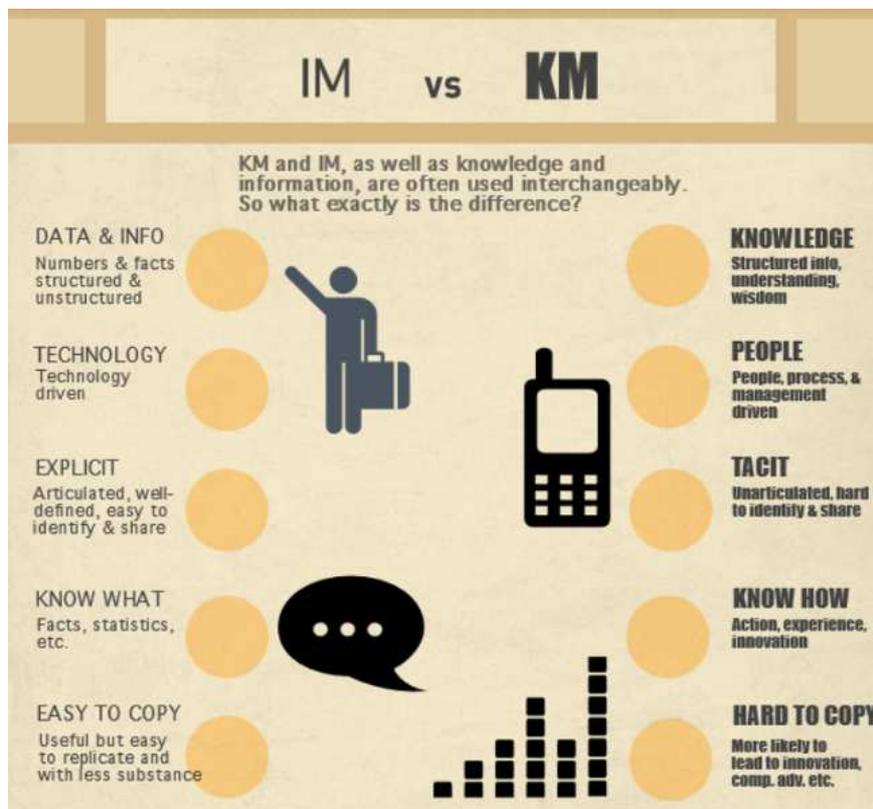
### In-Text Question

Data is unprocessed while information is processed. True or False

### In-Text Answer

True

## 3.2 The difference between Information management (IM) and Knowledge management (KM)



As shown in the previous sections, knowledge and information are actually quite different, as is tacit and explicit knowledge. So, while information and data management are certainly very useful, particularly as information sources are growing at exponential rates and with the new focus on big data, it is not synonymous with KM. So what exactly is the difference?

**Information Management (IM):** The following are the characteristics.

- It Focuses on data and information
- It deals with unstructured and structured facts and figures.
- It benefits greatly from technology, since the information being conveyed is already codified and in an easily transferrable form.
- It focuses on organizing, analysing, and retrieving - again due to the codified nature of the information.
- Is largely about know-what, i.e. it offers a fact that you can then use to help create useful knowledge, but in itself that
- Its fact does not convey a course of action (e.g. sales of product x are up 25% last quarter).
- Is easy to copy - due to its codified and easily transferrable nature.

**Knowledge Management (KM):** It has the following characteristics

- It focuses on knowledge, understanding, and wisdom
- It deals with both codified and uncoded knowledge. Uncoded knowledge - the most valuable type of knowledge - is found in the minds of practitioners and is unarticulated, context-based, and experience-based.
- Technology is useful, but KM's focus is on people and processes. The most valuable knowledge cannot effectively be (directly) transferred with technology, it must be passed on directly from person to person.
- It focuses on locating, understanding, enabling, and encouraging - by creating environments, cultures, processes, etc. where knowledge is shared and created.
- It is largely about know-how, know-why, and know-who
- It is hard to copy - at least regarding the tacit elements. The connection to experience and context makes tacit knowledge extremely difficult to copy. This is why universities cannot produce seasoned practitioners - there are some things (the most important things) that you simply cannot teach from a textbook (or other codified source of information/explicit knowledge).  
These are learnt in the field and understood on an intuitive level. You cannot easily copy or even understand this intuition without the right experience, context, etc. - and it is this intuition that represents the most valuable organizational knowledge.

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**Activity 3.1:** Differences between Information Management and Knowledge Management**Time Allowed:** 1 hour

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Do further reading on the differences between information management and knowledge Management

**Summary for Study Session 3**

In study session 3, you have learnt that:

1. Information is idea that is communicated for useful purposes.
2. Information increases the state of knowledge of the recipient, resolves uncertainty and is highly valued in decision making.
3. Knowledge is facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject. It is awareness or familiarity gained by experience of a fact or situation.
4. Knowledge Management focuses on locating, understanding, enabling, and encouraging - by creating environments, cultures, processes, etc. where knowledge is shared and created.

**Self-Assessment Questions (SAQs) for Study Session 3**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

**SAQ 3.1 (Testing Learning Outcomes 3.1)**

What is information management IM?

**SAQ 3.2 (Testing Learning Outcomes 3.2)**

Highlight the characteristics of knowledge management KM?

**Notes for Study Session 3****SAQ 3.1**

Information management (IM) is the collection, processing and organization of information from one or more sources and the distribution of that information to one or more audiences.

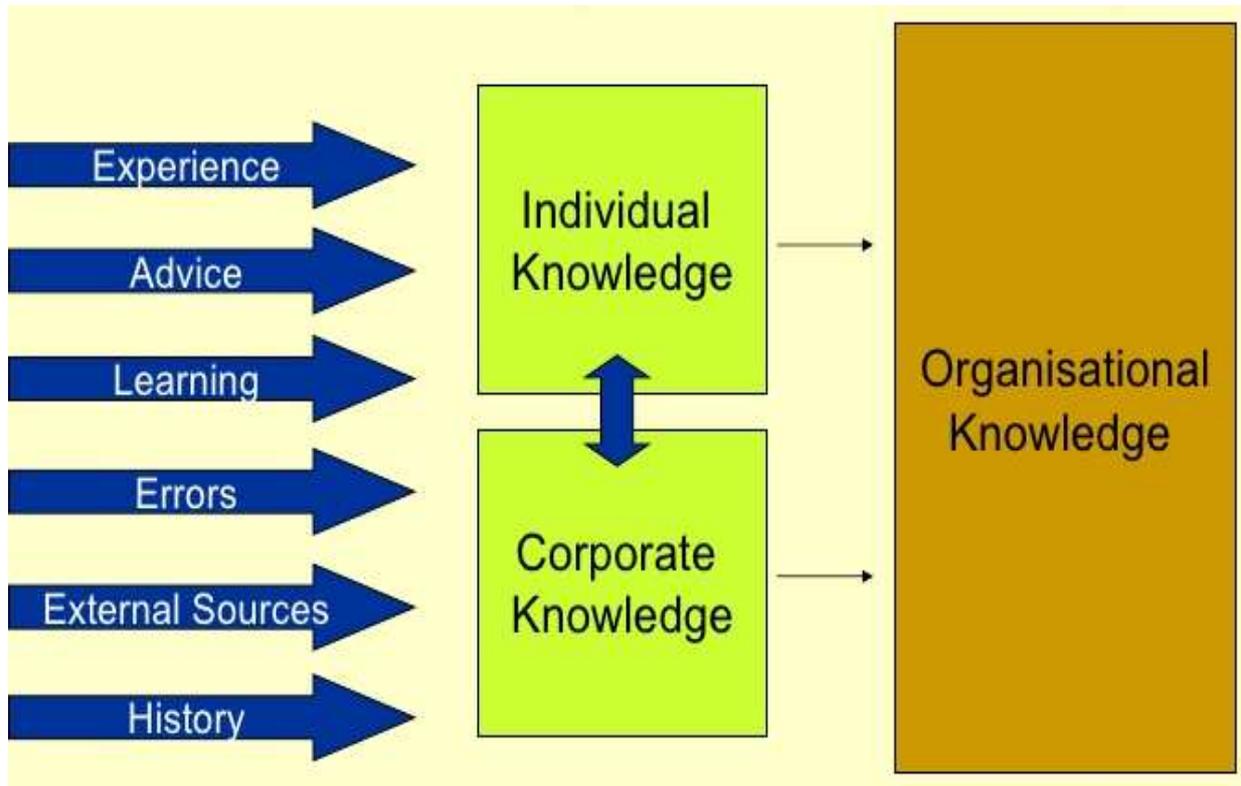
### **SAQ 3.2**

- It focuses on knowledge, understanding, and wisdom
- It deals with both codified and uncoded knowledge. Uncoded knowledge - the most valuable type of knowledge - is found in the minds of practitioners and is unarticulated, context-based, and experience-based.
- Technology is useful, but KM's focus is on people and processes. The most valuable knowledge cannot effectively be (directly) transferred with technology, it must be passed on directly from person to person.
- It focuses on locating, understanding, enabling, and encouraging - by creating environments, cultures, processes, etc. where knowledge is shared and created.
- It is largely about know-how, know-why, and know-who
- It is hard to copy - at least regarding the tacit elements. The connection to experience and context makes tacit knowledge extremely difficult to copy. This is why universities cannot produce seasoned practitioners - there are some things (the most important things) that you simply cannot teach from a textbook (or other codified source of information/explicit knowledge).

### **Reference**

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## Study Session 4: Organizational Knowledge



*Source:*<http://image.slidesharecdn.com/chapter1-theknowledgecontext-120421015803-phpapp02/95/chapter-1-the-knowledge-context-25-728.jpg?cb=1334973544>

### Introduction

The concept of treating organizational knowledge as a valuable strategic asset has been popularized by leading management and organization theorists. Therefore to remain competitive, organizations are being advised to efficiently and effectively create, locate, capture, and share their organization's knowledge and expertise, and have the ability to bring that knowledge to bear on problems and opportunities.

This increasingly requires making the organization's knowledge explicit and recording it for easier distribution and reuse. This explains why firms are showing tremendous interest in implementing knowledge management processes and technologies, and are even beginning to adopt knowledge management as part of their overall business strategies.

In previous studies you have identified the three different types of knowledge that can exist in an organization. In this study, you are going to learn about organizational knowledge, its resources, knowledge dimension and its significance to the knowledge management (KM) process.

## Learning Outcomes for Study Session 4

At the end of this study, you should be able to:

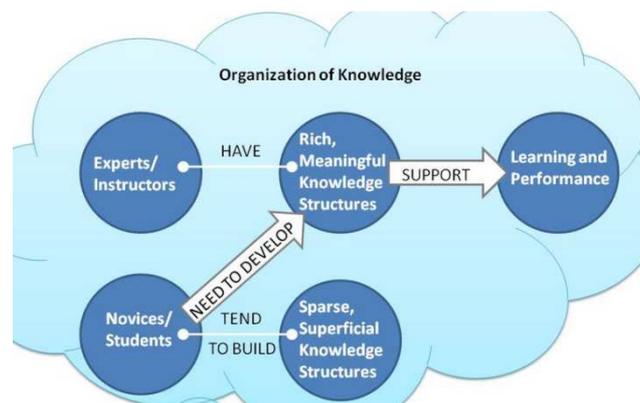
- 4.1 Define organizational knowledge
- 4.2 Identify the resources of organisational knowledge
- 4.3 Discuss the implication of knowledge Management
- 4.4 Explain knowledge dimension frameworks

### 4.1 Organizational Knowledge

The definition of organizational knowledge is yet another concept that has very little consensus within literature. Variations include the extent to which the knowledge is spread within the organization, as well as the actual make-up of this knowledge. Hatch (2010) defines it as: "When group knowledge from several subunits or groups is combined and used to create new knowledge, the resulting tacit and explicit knowledge can be called organizational knowledge."

Others present a broader perspective: "individual knowledge, shared knowledge, and objectified knowledge are different aspects or views of organizational knowledge" (Ekinge & Lennartsson 2000).

As always, texts emphasizing an IT based outlook once again offer shallower, information-based definitions, e.g. Virvou & Nakamura 2008, defined organizational knowledge as "Information internalized by means of research, study or experience that has value to the organization."



**Figure 4.1:** Organization knowledge

**Source:** [http://learningwithkristin.weebly.com/uploads/1/3/4/9/13499732/1764873\\_orig.jpg](http://learningwithkristin.weebly.com/uploads/1/3/4/9/13499732/1764873_orig.jpg)

For the purpose of this study, you will learn the broad, knowledge-based perspective. Organizational knowledge is therefore defined as: all the knowledge resources within an organization that can be realistically tapped by that organization in order to improve performance. This knowledge resides in individuals and groups, or exists at the organizational level.

### Box 4.1: Definition of Organizational knowledge

Organizational knowledge is therefore defined as: all the knowledge resources within an organization that can be realistically tapped by that organization in order to improve performance.

#### In-Text Question

Organisational knowledge can lead to tacit knowledge. True or False

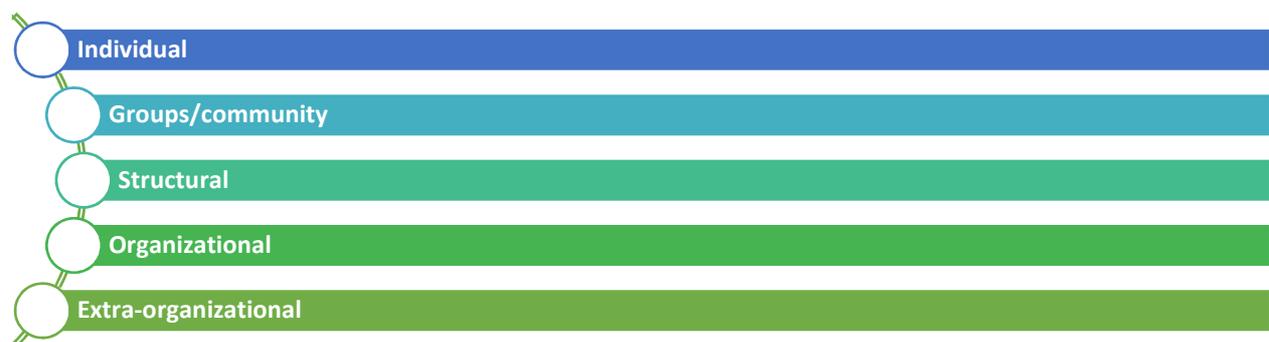
#### In-Text Answer

True

## 4.2 Resources of Organizational Knowledge

Although knowledge management is becoming widely accepted, few organizations today are fully capable of developing and leveraging critical organizational knowledge to improve their performance.

Many organizations have become so complex that their knowledge is fragmented, difficult to locate and share, and therefore redundant, inconsistent or not used at all. For organizational knowledge to be located, captured and utilized, organizational resources in which knowledge is held must be identified. Organizational or business knowledge can exist on several different levels:



*Figure 4.2: Organizational knowledge levels*

**Individual:** Personal, often tacit knowledge/know-how of some sort. It can also be explicit, but it must be individual in nature, e.g. a private notebook.

**Groups/community:** This is knowledge held in groups but not shared with the rest of the organization. Companies usually consist of communities (most often informally created) which are linked together by common practice. These communities of practice (Lave & Wenger 1991) may share common values, language, procedures,

know-how, etc. They are a source of learning and a repository for tacit, explicit, and embedded knowledge.

**Structural:** This refers to embedded knowledge found in processes, culture, etc. This may be understood by many or very few members of the organization. E.g. the knowledge embedded in the routines used by the army may not be known by the soldiers who follow these routines. At times, structural knowledge may be the remnant of past, otherwise long forgotten lessons, where the knowledge of this lesson exists exclusively in the process itself.

**Organizational:** It refers to group knowledge from several subunits or groups. It is combined and used to create new knowledge, the resulting tacit and explicit knowledge can be called organizational knowledge

**Extra-organizational:** This the knowledge resources existing outside the organization which could be used to enhance the performance of the organization. They include explicit elements like publications, as well as tacit elements found in communities of practice that span beyond the organization's borders.

### **In-Text Question**

The knowledge held in groups but not shared with the rest of the organization is called\_\_\_\_\_

- a. . Community Knowledge
- b. Individual knowledge
- c. Organizational knowledge
- d. Extra –organizational Knowledge

### **In-Text Answer**

A. Community Knowledge

## **4.3 Implication for Knowledge Management (KM)**

In order to enhance organisational knowledge, KM must therefore be involved across the entire knowledge spectrum. It must help knowledge development at all levels and facilitate and promote its diffusion to individuals, groups, and/or across the entire firm, in accordance with the organization's requirements.

KM must manage organizational knowledge storage and retrieval capabilities, and create an environment conducive to learning and share knowledge. Similarly it must

be involved in tapping external sources of knowledge whenever these are necessary for the development of the organizational knowledge resources.

To a large degree, KM is therefore dependent on the understanding and management of organizational learning, organizational memory, knowledge sharing, knowledge creation, and organizational culture.

### **In-Text Question**

It is compulsory for knowledge Management to cater for organizational knowledge storage. True or False

### **In-Text Answer**

True

## **4.4 Knowledge Dimension frameworks**

Knowledge dimension frameworks distinguish between different 'types of' knowledge that exist. One proposed framework for categorizing the dimensions of knowledge distinguishes between tacit knowledge and explicit knowledge.

Tacit knowledge represents internalized knowledge that an individual may not be consciously aware of, such as how he or she accomplishes particular tasks. At the opposite end of the spectrum, explicit knowledge represents knowledge that the individual holds consciously in mental focus, in a form that can easily be communicated to others.

**Hayes and Walsham** (2003) describe content and relational perspectives of knowledge and knowledge management as two fundamentally different epistemological perspectives.

The content perspective suggest that knowledge is easily stored because it may be codified, while the relational perspective recognizes the contextual and relational aspects of knowledge which can make knowledge difficult to share outside of the specific location where the knowledge is developed.

Arguably the most important contributor to this subject has been Ikujiro Nonaka. He worked extensively with the concepts of explicit knowledge and tacit knowledge, and drew attention to the way Western firms tend to focus too much on the former. This sentiment has since been echoed throughout organisational learning and knowledge management (KM) literature.

### **In-Text Question**

Internalized knowledge that an individual may not be consciously aware can be referred to as \_\_\_\_\_

- a. Tacit Knowledge
- b. Model Knowledge
- c. Organisational Knowledge
- d. None of the above

### **In-Text Answer**

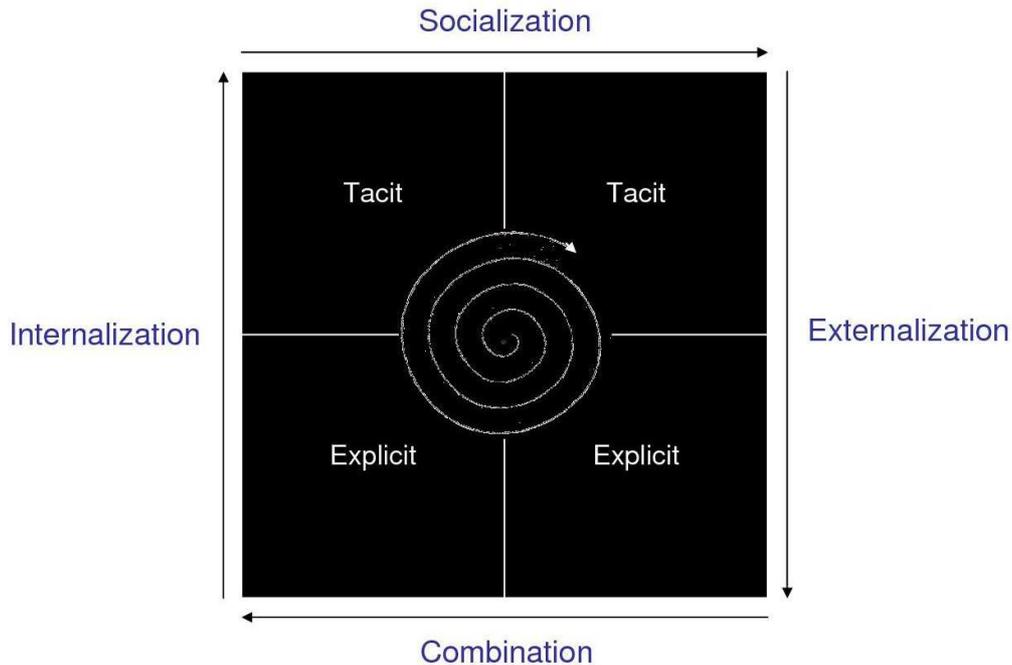
A. Tacit Knowledge

## **4.5 Model and Knowledge Conversion**

**Nonaka and Takeuchi** introduced the SECI model (Nonaka & Takeuchi 1996) which has become the cornerstone of knowledge creation and transfer theory. They proposed four ways that knowledge types can be combined and converted, showing how knowledge is shared and created in the organization. The model is based on the two types of knowledge outlined above.

SECI Model:

- **Socialization:** Tacit to tacit. Knowledge is passed on through practice, guidance, imitation, and observation.
- **Externalization:** Tacit to explicit. This is deemed as a particularly difficult and often particularly important conversion mechanism. Tacit knowledge is codified into documents, manuals, etc. so that it can spread more easily through the organization. Since tacit knowledge can be virtually impossible to codify, the extent of this knowledge conversion mechanism is debatable. The use of metaphor is cited as an important externalization mechanism.
- **Combination:** Explicit to explicit. This is the simplest form. Codified knowledge sources (e.g. documents) are combined to create new knowledge.
- **Internalization:** Explicit to tacit. As explicit sources are used and learned, the knowledge is internalized, modifying the user's existing tacit knowledge.



**Figure 4.3:** *The Knowledge Spiral as described by Nonaka & Takeuchi (1996)*

In this model, knowledge is continuously converted and created as users practice and learn. The process should be seen as a continuous, dynamic, swirl of knowledge. Early research suggested that a successful KM effort needs to convert internalized tacit knowledge into explicit knowledge to share it, and the same effort must permit individuals to internalize and make personally meaningful any codified knowledge retrieved from the KM effort.

Subsequent research into KM suggested that a distinction between tacit knowledge and explicit knowledge represented an oversimplification and that the notion of explicit knowledge is self-contradictory. Specifically, for knowledge to be made explicit, it must be translated into information (i.e., symbols outside of our heads).

Ikujiro Nonaka proposed a model (SECI for Socialization, Externalization, Combination, and Internalization) which considers a spiralling knowledge process interaction between explicit knowledge and tacit knowledge (Nonaka & Takeuchi 1995). In this model, knowledge follows a cycle in which implicit knowledge is 'extracted' to become explicit knowledge, and explicit knowledge is re-internalized' into implicit knowledge.

A second proposed framework for categorizing the dimensions of knowledge distinguishes between embedded knowledge of a system outside of a human individual (e.g., an information system may have knowledge embedded into its

design) and embodied knowledge representing a learned capability of a human body's nervous and endocrine systems (Sensky 2002).

A third proposed framework for categorizing the dimensions of knowledge distinguishes between the exploratory creation of "new knowledge" (i.e., innovation) vs. the transfer or exploitation of "established knowledge" within a group, organisation, or community. Collaborative environments such as communities of practice or the use of social computing tools can be used for both knowledge creation and transfer.

A great deal of effort has been put into investigating its practical applicability (with mixed results), but in recent years the applicability of the model has been linked strongly to culture, both organizational and national. The issue of culture as a limiting factor for KM models is an issue that needs to be discussed in subsequent study.

However, the SECI model remains at the core of knowledge conversion theory within KM, and the most universal attraction to the model is that some aspects of it appeal to virtually all cultures.

### **In-Text Question**

The SECI model remains at the core of knowledge conversion theory within KM.  
True or False

### **In-Text Answer**

True

### **Summary for Study Session 4**

In study session 4, you have learnt that:

1. Organizational knowledge refers to all the knowledge resources within an organization that can be realistically tapped by that organization in order to improve performance. This knowledge resides in individuals and groups, or exists at the organizational level.
2. For organizational knowledge to be located, captured and utilized, organizational resources in which knowledge is held must be identified.
3. KM must manage organizational knowledge storage and retrieval capabilities, and create an environment conducive to learning and share knowledge.
4. Tacit knowledge represents internalized knowledge that an individual may not be consciously aware of, such as how he or she accomplishes particular tasks.

## Self-Assessment Questions (SAQs) for Study Session 4

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

### SAQ 4.1 (Testing Learning Outcomes 4.1)

Define organizational knowledge

### SAQ 4.2 (Testing Learning Outcomes 4.2)

Highlight the different levels of organizational knowledge

### SAQ 4.3 (Testing Learning Outcomes 4.3)

Explain the implication of knowledge management

### SAQ 4.4 (Testing Learning Outcomes 4.4)

Differentiate between explicit knowledge and tacit knowledge

### SAQ 4.5 (Testing Learning Outcomes 4.5)

Identify the four ways knowledge types can be combined and converted

## Notes for Study Session 4

### SAQ 4.1

Organizational Knowledge can be defined as: ‘When group knowledge from several subunits or groups is combined and used to create new knowledge, resulting in tacit and explicit knowledge’

### SAQ 4.2

**Individual:** Personal, often tacit knowledge/know-how of some sort. It can also be explicit, but it must be individual in nature, e.g. a private notebook.

**Groups/community:** Knowledge held in groups but not shared with the rest of the organization. Companies usually consist of communities (most often informally created) which are linked together by common practice.

**Structural:** Embedded knowledge found in processes, culture, etc. This may be understood by many or very few members of the organization. E.g. the knowledge embedded in the routines used by the army may not be known by the soldiers who follow these routines.

**Organizational:** It refers to group knowledge from several subunits or groups. It is combined and used to create new knowledge, the resulting tacit and explicit knowledge can be called organizational knowledge

**Extra-organizational:** This the knowledge resources existing outside the organization which could be used to enhance the performance of the organization. They include explicit elements like publications, as well as tacit elements found in communities of practice that span beyond the organization's borders.

### SAQ 4.3

In order to enhance organisational knowledge, KM must therefore be involved across the entire knowledge spectrum. It must help knowledge development at all levels and facilitate and promote its diffusion to individuals, groups, and/or across the entire firm, in accordance with the organization's requirements.

KM must manage organizational knowledge storage and retrieval capabilities, and create an environment conducive to learning and share knowledge. Similarly it must be involved in tapping external sources of knowledge whenever these are necessary for the development of the organizational knowledge resources.

### SAQ 4.4

Tacit knowledge represents internalized knowledge that an individual may not be consciously aware of, such as how he or she accomplishes particular tasks. At the opposite end of the spectrum, explicit knowledge represents knowledge that the individual holds consciously in mental focus, in a form that can easily be communicated to others.

### SAQ 4.5

- **Socialization:** Tacit to tacit. Knowledge is passed on through practice, guidance, imitation, and observation.
- **Externalization:** Tacit to explicit. This is deemed as a particularly difficult and often particularly important conversion mechanism. Tacit knowledge is codified into documents, manuals, etc. so that it can spread more easily through the organization. Since tacit knowledge can be virtually impossible to codify, the extent of this knowledge conversion mechanism is debatable. The use of metaphor is cited as an important externalization mechanism.
- **Combination:** Explicit to explicit. This is the simplest form. Codified knowledge sources (e.g. documents) are combined to create new knowledge.

Internalization: Explicit to tacit. As explicit sources are used and learned, the knowledge is internalized, modifying the user's existing tacit knowledge

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## Study Session 5: Organizational Memory and Knowledge Repositories



*Source:* <https://blog.law.cornell.edu/voxpath/files/2009/12/org-memory.jpg>

### Introduction

In the last study, you learnt that, to remain competitive, organizations need to efficiently and effectively create, locate, capture, and share their organization's knowledge and expertise, and have the ability to bring that knowledge to bear on problems and opportunities. In this study, you will learn about organizational knowledge memory and knowledge repositories. This is to familiarize you with different stages of organizational memory process and retention facilities.

### Learning outcomes for Study Session 5

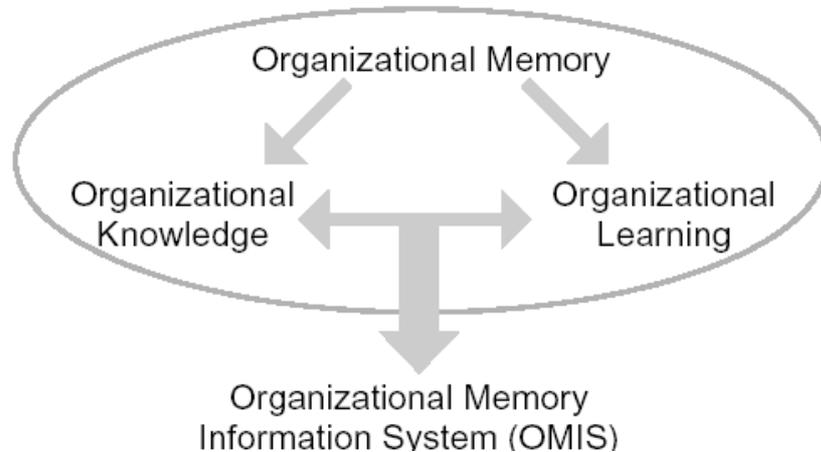
At the end of this study, you should be able to:

- 5.1 Define organizational memory
- 5.2 Outline the different retention facilities

### 5.1 Organizational Memory

Traditional memory is associated with the individual's ability to acquire, retain, and retrieve knowledge. Within organization, this concept is extended beyond the

individual. Organizational memory therefore refers to the collective ability to generate, store and retrieve knowledge and information.



**Figure 5.1:** Organizational memory

Walsh and Ungson (1991) offer some deeper insight into the workings of organizational memory. They looked at how and organization's history can influence current decision making. They examine how shared understandings evolve, becoming part of an organizational whole which may remain constant even after key individuals have left the firm.

This is done through the formation of collective interpretations regarding the outcome of decision making. The information defining the decision's stimulus and response is stored in information, and it affects present decisions when it is retrieved.

### **In-Text Question**

The collective ability to generate, store and retrieve knowledge and information is called \_\_\_\_

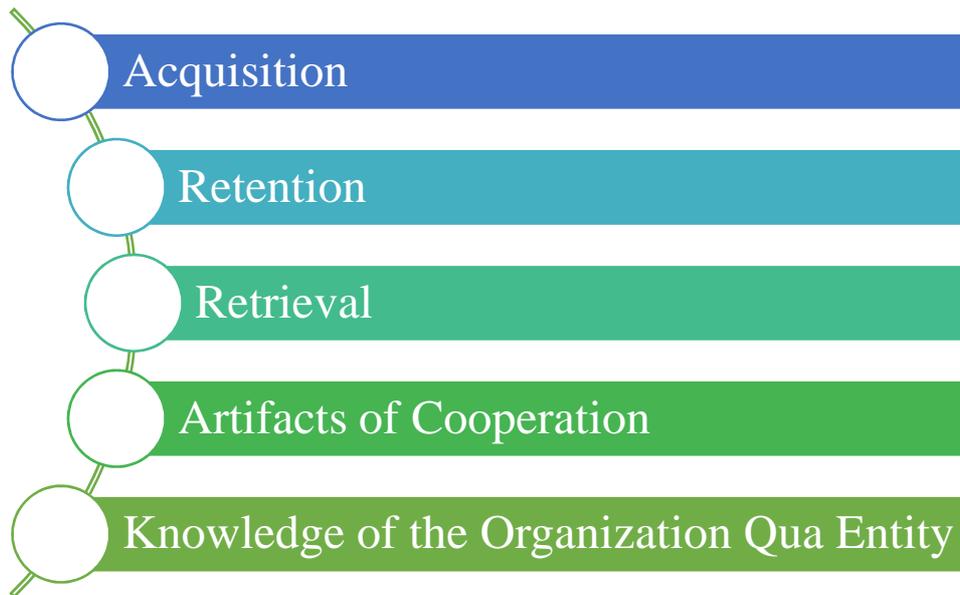
- a. Explicit Memory
- b. Organizational memory
- c. Organizational memory
- d. Tacit Knowledge

### **In-Text Answer**

- b. Organizational memory

## **5.2 Knowledge retention facilities**

**Walsh and Ungson** (1991) define a number of stages in the organizational memory process and outline five retention facilities:



*Figure 5.2: Knowledge Retention Facilities*

**Acquisition:** Organizational memory consists of the accumulated information regarding past decisions. This information is not centrally stored, but rather it is split across different retention facilities. Each time a decision is made and the consequences are evaluated, some information is added to the organizational memory.

**Retention:** Past experiences can be retained in any of the five different repositories:

- ✚ Individuals
- ✚ Culture: The language and frameworks that exist within an organization and form shared interpretations.
- ✚ Transformations: The procedures and formalized systems that the organization employs. These systems reflect the firm's past experiences and are repositories for embedded knowledge.
- ✚ Structures: These link the individual to other individuals and to the environment. Social interaction is conditioned by mutual expectations between individuals based on their roles within the organization. The interaction sequences form a pattern over time and begin to extend to an organizational level. This can take place both through formal and informal structure and it constitutes a social memory which stores information about an organization's perception of the environment.
- ✚ External activities: The surroundings of the organization where knowledge and information can be stored. E.g. former employees, government bodies, competitors, etc.

**Retrieval:** This can either be controlled or automatic. The latter refers to the intuitive and essentially effortless process of accessing organizational memory, usually as part of an established sequence of action. Controlled refers to the deliberate attempt to access stored knowledge.

As one can see, the three stages presented here are essential to the learning process of the firm. Much like an individual, the firm must be able to access and use past experiences so as to avoid repeating mistakes and to exploit valuable knowledge. Unlike an individual however, OM is not centrally stored and resides throughout the firm and even beyond it.

The process of retrieving knowledge/information will inevitably vary depending on the retention facility that one is trying to access. For example, written documentation may be accessed through IT while cultural memory is accessed through the understanding and/or application of the norms and procedures of the working environment.

A further distinction regarding the type of knowledge retained in the organization is offered by Ramage and Reif (1996). They separate the documented aspects from the more subtle knowledge that belongs to individuals as a result of their role as members of the organization:

**Artifacts of Cooperation:** These are the hard indicators which are visible and examinable. They include products, records of collaboration, and ideas. The latter refers to minutes of meetings, reports, FAQs, and other items that record common knowledge. These are easily storable and presumably also more easily accessible.

**Knowledge of the Organization Qua Entity:** This type of knowledge cannot be stored in the same way as the artifacts of cooperation. It includes knowledge of the political system, of the culture, and of how things are normally done within the firm.

It can include the knowledge of who is an expert, of where a particular person is, and on who to contact for a specific problem.

This definition is useful as a way of understanding the knowledge categories and the potential management challenge that organizational memory, and ultimately knowledge management (KM) would pose.

Furthermore, as is the case with many KM related disciplines, one finds a distinct difference in the way organizational memory is perceived between IT practitioners and business theoreticians. In the words of **Wellman** (2009): "The IT path emphasizes

the acquisition and storage of organizational knowledge including data warehousing, document management, and search tools.

The organization development (OD) path emphasizes tacit knowledge, coaching, social interactions, and encouraging ad hoc knowledge exchange." IT based models thus tend to focus on more concrete, definable memory and less on people, culture, and informal structures. Essentially, they focus more on artefacts of cooperation.

Since this deals with organizational memory within the context of KM, it is not necessary to arrive at a specific definition or model. Instead it is important to understand the scope of organizational memory, its varied and often complex retention facilities, and the types of knowledge available. In later sections, you will learn more closely the specific role that IT can have in supporting, promoting, and enhancing organizational memory.

### **In-Text Question**

All the following are retention facilities except

- a. Acquisition
- b. Retrieval
- c. Quittance
- d. Retention

### **In-Text Answer**

- c. Quittance

### **Summary for Study Session 5**

In this study, you have learnt that:

1. Organizational memory therefore refers to the collective ability to generate, store and retrieve knowledge and information. It involves the processes of acquisition, retention and retrieval.
2. Organizational memory consists of the accumulated information regarding past decisions.
3. A further distinction regarding the type of knowledge retained in the organization is offered by **Ramage and Reif** (1996). They separate the documented aspects from the more subtle knowledge that belongs to individuals as a result of their role as members of the organization.

## Self-Assessment Questions (SAQs) for Study Session 5

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

### SAQ 5.1 (Testing Learning Outcomes 5.1)

What is organizational memory?

### SAQ 5.2(Testing Learning Outcomes 5.1)

Outline the knowledge facilities

## Notes for Study Session 5

### SAQ 5.1

Organizational memory therefore refers to the collective ability to generate, store and retrieve knowledge and information.

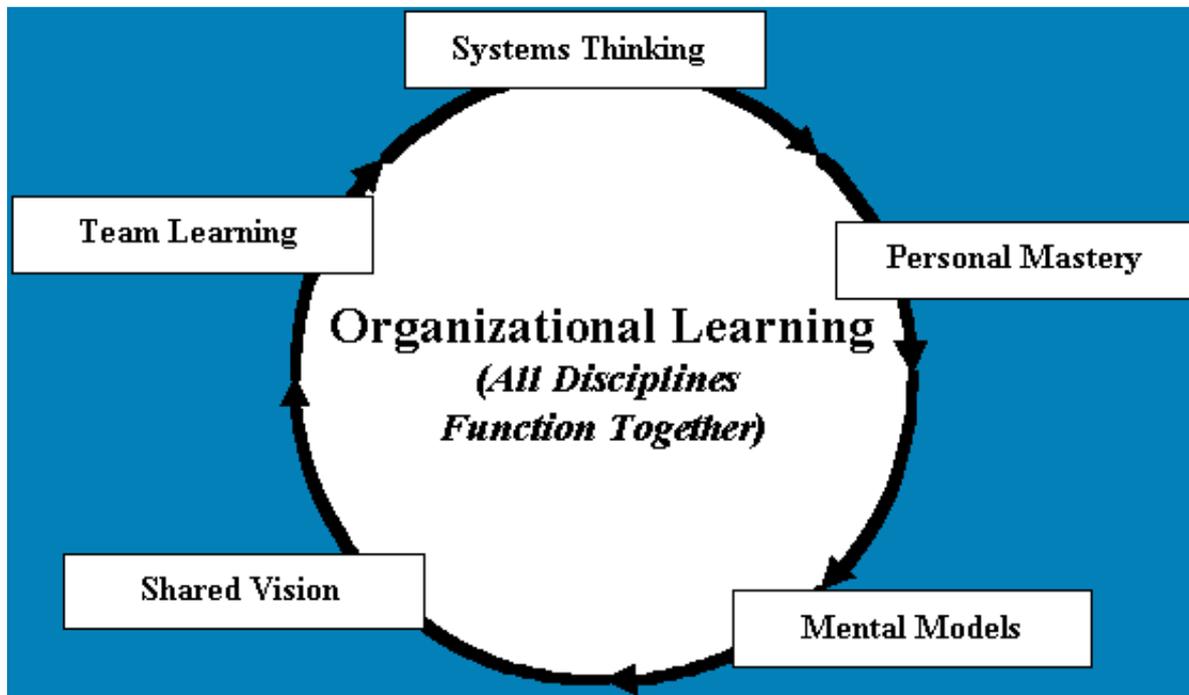
### SAQ 5.2

- ✚ Acquisition
- ✚ Retention
- ✚ Retrieval
- ✚ Artifacts of Cooperation
- ✚ Knowledge of the Organization Qua Entity

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## Study Session 6: Organizational Learning



Source: <https://techknowtools.files.wordpress.com/2012/04/screenshot-1.gif>

### Introduction

In order to enhance organisational knowledge it has been said that KM must help knowledge development at all levels and facilitate and promote its diffusion to individuals, groups, and across the entire firm, in accordance with the organization's requirements. KM must manage organizational knowledge storage and retrieval capabilities, and create an environment conducive to learning and share knowledge.

Similarly it must be involved in tapping external sources of knowledge whenever these are necessary for the development of the organizational knowledge resources. To a large extent,

KM is dependent on the understanding and management of organizational knowledge creation, organizational memory, knowledge sharing, organizational learning, and organizational culture. In this study, you will learn about organizational learning with greater emphasis on units of learning.

## Learning Outcomes for Study Session 6

At the end of this study, you should be able to:

- 6.1 Define organizational Learning
- 6.2 Identify the units of learning
- 6.3 Explain the organizational learning pitfalls

### 6.1 Organizational learning

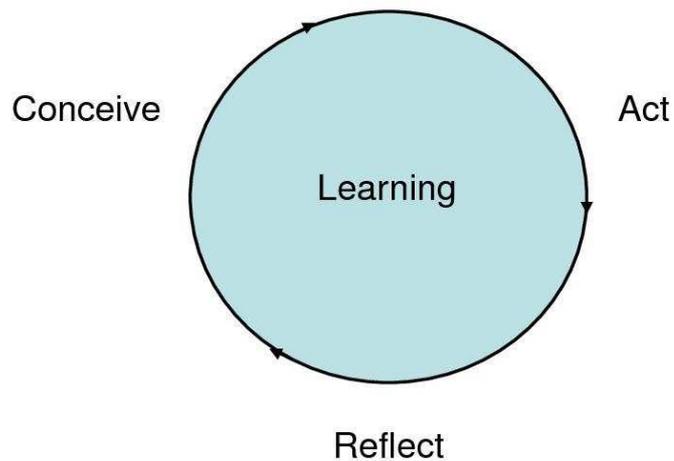
Organizational learning is the process of creating, retaining, and transferring knowledge within an organization. An organization improves over time as it gains experience. From this experience, it is able to create knowledge. This knowledge is broad, covering any topic that could better an organization.

Examples may include ways to increase production efficiency or to develop beneficial investor relations. Knowledge is created at four different units: individual, group, organizational, and inter-organizational. An organization learns successfully when it is able to retain this knowledge and transfer it to, or spread it throughout, the various divisions within an organization.

#### Box 6.1: Defining Organizational Learning

Organizational learning is the process of creating, retaining, and transferring knowledge within an organization.

Knowledge and learning are crucial to building a solid and enduring competitive foundation for business organizations. Learning has been defined as the way we create new knowledge and improve ourselves. Although there is ample debate regarding the mechanisms and scope of learning, in its simplest form this is no different for organizations. Botha et al. describe the organizational learning process as follows:



*Figure 6.1: Organizational learning*

Organizational learning is based on applying knowledge for a purpose and learning from the process and from the outcome. **Brown and Duguid** (1991) describe organisational learning as "the bridge between working and innovating." This once again links learning to action, but it also implies useful improvement.

Organizational learning is an aspect of organizations and a subfield of organizational studies. As an aspect of an organization, organizational learning is the process of creating, retaining, and transferring knowledge. Knowledge creation, knowledge retention, and knowledge transfer can be seen as adaptive processes that are functions of experience.

Experience is the knowledge that contributes to the procedural understanding of a subject through involvement or exposure. Research within organizational learning specifically applies to the attributes and behaviour of this knowledge and how it can produce changes in the cognition, routines, and behaviours of an organization and its individuals.

Individuals are predominantly seen as the functional mechanisms for organizational learning by creating knowledge through experience. However, individuals' knowledge only facilitates learning within the organization as a whole if it is transferred. Individuals may withhold their knowledge or exit the organization.

Knowledge that is embedded into the organization, in addition to its individuals, can be retained. Methods to embed knowledge extend beyond retaining individuals to using knowledge repositories such as communication tools, processes, routines, networks, and transitive memory systems.

As a subfield, organizational learning is the study of experience, knowledge, and the effects of knowledge within an organizational context. The study of organizational learning directly contributes to the applied science of knowledge management (KM) and the concept of the learning organization.

Organizational learning is related to the studies of organizational theory, organizational communication, organizational behaviour, organizational psychology, and organizational development. Organizational learning has received contributions from the fields of educational psychology, sociology, economics, anthropology, political science, and management science.

### **In-Text Question**

Organizational learning is an aspect of organizations and a subfield of organizational studies. True or False

### **In-Text Answer**

True

## **6.2 Units of Learning**

Organizational learning is one of the four organizational units of learning:



***Figure 6.2: Units of learning***

Organizational learning "involves the process through which organizational units (e.g. groups, departments, and divisions) change as a result of experience." An example of organizational learning is a hospital surgical team learning to use new technology that will increase efficiency.

- **Individual Learning** is the smallest unit at which learning can occur. An individual learns new skills or ideas, and his productivity at work may increase as he gains expertise. The individual can decide whether or not to share his knowledge with the rest of the group.

If the individual leaves the group and doesn't share his knowledge before leaving, the group loses this knowledge. In their study of software development, **Boh Slaughter** and **Espinosa** (2007) found that individuals were more productive the more specialized experience they had with a certain system.

- **Group Learning** is the next largest unit at which learning can occur. Group learning happens when individuals within a group "acquire, share, and combine knowledge through experience with one another".

There are conflicting definitions of group learning among researchers studying it. One belief is that group learning is a process in which a group takes action, gets feedback, and uses this feedback to modify their future action.

Another belief is that group learning happens when a member shares his or her individual knowledge with other group members. Once this happens, individual learning turns into group learning. Reagans, Argote, and Brooks (2005) studied group learning by examining joint-replacement surgery in teaching hospitals.

They concluded that "increased experience working together in a team promoted better coordination and teamwork." Working together in a team also allowed members to share their knowledge with others and learn from other members.

- **Organizational Learning** is the way in which an organization creates and organizes knowledge relating to their functions and culture. Organizational learning happens in all of the organization's activities, and it happens in different speeds. The goal of organizational learning is to successfully adapt to changing environments, to adjust under uncertain conditions, and to increase efficiency.

According to **Argote** (1993), managers in manufacturing plants saw organization learning occur when they found ways to make individual workers more proficient, improve the organization's "technology, tooling, and layout,"

improve the organization's structure, and determine the organization's strengths.

- **Inter-organizational Learning** is the way in which different organizations in an alliance collaborate, share knowledge, and learn from one another. An organization is able to improve their “processes and products by integrating new insights and knowledge” from another organization.

By learning from another organization, an organization is able to cut time costs, decrease the risks associated with problem solving, and learn faster. Learning from another organization can mean either applying the same ideas used by that organization or modifying these ideas, thereby creating innovation.

Inter-organizational learning occurs frequently in fixed business models, such as franchising. The franchisee looking to use the franchisor's brand has to learn how to use the organization's business model before starting a franchise.

The implications to knowledge management are three-fold:

- One must understand how to create the ideal organizational learning environment
- One must be aware of how and why something has been learned.
- One must try to ensure that the learning that takes place is useful to the organization

### **In-Text Question**

\_\_\_\_\_ the smallest unit at which learning can occur

- a. Group learning
- b. Individual learning
- c. Inter-organizational learning
- d. Learning module

### **In-Text Answer**

- b. Individual learning

## **6.3 Organizational Learning pitfalls**

**Senge** (1990) argues that often it is failure that provides the richest learning experience, which is something that organizations need to understand and use more effectively. He criticizes the way we reward success and look down upon failure as something that can be detrimental to the long term health of the organization.

**Levitt and March** (1996) further argue that success is ambiguous and depends on how it is interpreted. This interpretation may not only vary significantly between different groups within the organization, but may change over time as success indicators and levels of aspiration change.

**Levitt and March** (1996) also discuss superstitious learning. This occurs when positive or negative results are associated with the wrong actions. Success and failure can both generate superstitious learning. If a firm does well, the routines that they followed are linked to this success and are subsequently reinforced.

The opposite is true for failure. In such cases, the organization thinks that it has learned when in fact it has not. Real organizational learning would have resulted from the examination of the information generated from their actions rather than from relatively arbitrary success or failure criteria.

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**Activity 6.1:** organizational Pitfall

**Time Allowed:** 30minutes

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Write down some other organisational learning pitfalls not mention in this study in your note book and go through them.

### **Summary for Study Session 6**

In this study, you have learnt that:

1. As a subfield, organizational learning is the study of experience, knowledge, and the effects of knowledge within an organizational context.
2. Organizational learning is the process of creating, retaining, and transferring knowledge within an organization.
3. An organization improves over time as it gains experience. From this experience, it is able to create knowledge. Individuals are predominantly seen as the functional mechanisms for organizational learning by creating knowledge through experience.

### **Self-Assessment Questions (SAQs) for Study Session 6**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

### **SAQ 6.1 (Testing Learning Outcomes 6.1)**

Define organizational learning

### **SAQ 6.2 (Testing Learning Outcomes 6.2)**

Discuss the units of organizational learning.

### **SAQ 6.3 (Testing Learning Outcomes 6.3)**

Identify the organizational learning pitfalls

## **Notes for Study Session 6**

### **SAQ 6.1**

Organizational learning is the process of creating, retaining, and transferring knowledge within an organization.

### **SAQ 6.2**

**Individual Learning** is the smallest unit at which learning can occur.

**Group Learning** is the next largest unit at which learning can occur.

**Organizational Learning** is the way in which an organization creates and organizes knowledge relating to their functions and culture.

**Inter-organizational Learning** is the way in which different organizations in an alliance collaborate, share knowledge, and learn from one another

### **SAQ 6.3**

Senge (1990) argues that often it is failure that provides the richest learning experience, which is something that organizations need to understand and use more effectively. He criticizes the way we reward success and look down upon failure as something that can be detrimental to the long term health of the organization.

Levitt and March (1996) further argue that success is ambiguous and depends on how it is interpreted. This interpretation may not only vary significantly between different groups within the organization, but may change over time as success indicators and levels of aspiration change.

## **References**

Brown, J. S. Duguid, P., (1991) Organizational Learning and Communities of Practice. Toward a Unified View of Working, *Organization Science* vol.2, no.1, pp. 40-57.

## **Study Session 7: Approaches to Organizational Learning**

### **Introduction**

Organizational learning has been defined as the process of creating, retaining, and transferring knowledge. In this study you will understand the approaches to organizational learning and examine organizational learning theories from a company-wide perspective; types of learning; Communities of Practice and the Implications of organizational learning to Knowledge management (KM)

### **Learning Outcomes for Study Session 7**

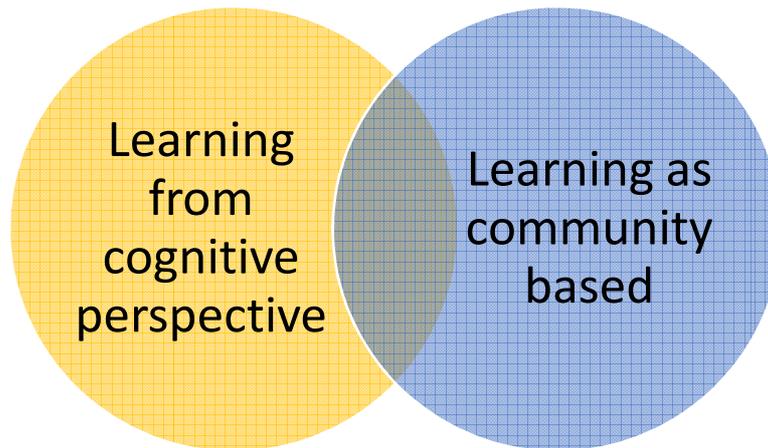
At the end of this study, you should be able to:

- 7.1 Discuss the approaches to organizational learning
- 7.2 Explain organizational learning theory from a companywide perspective
- 7.3 Discuss organizational learning theory with respect to the three types of learning.
- 7.4 Explain organizational learning and communities of practice
- 7.5 Discuss learning within communities of practice
- 7.6 Explain the implications to knowledge management

### **7.1 Approaches to organizational learning**

Generally speaking, there are two approaches to organisational learning. The first approach looks at the firm as a whole and examines learning from a cognitive perspective. In a way, the firm is treated like a large brain composed of the individual members of the organization.

The second approach looks at learning as community based, where the firm's practitioners create knowledge in their own networks called communities of practice (**Lave & Wenger 1991**). The two approaches are summarized as:



*Figure 7.1: Approaches to organizational learning*

These views should be seen as complementary rather than contradictory. The next two sub-sections will examine organizational learning theory from these two perspectives.

### **In-Text Question**

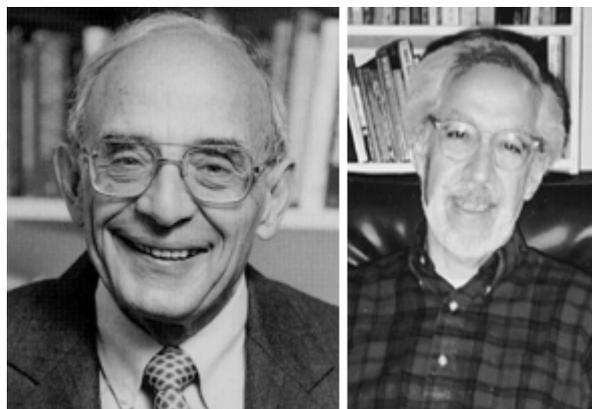
Community of practice is community centred learning. True or False

### **In-Text Answer**

True

## **7.2 Organizational Learning Theory from a Company-Wide Perspective**

Two of the most noteworthy contributors to the field of organizational learning theory have been **Chris Argyris** and **Donald Schon**. Organizational learning (OL), according to **Argyris & Schon** is a product of organizational inquiry.

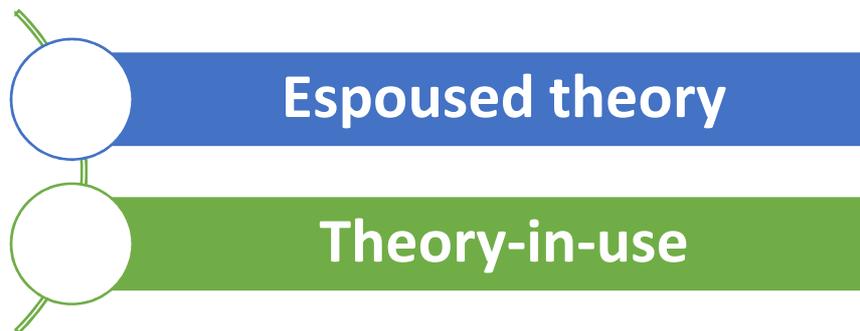


*Figure 7.2: Chris Argyris and Donald Schon*

*Source: <http://tech.mit.edu/V1117/N43/schon.43.gif>*

This means that whenever expected outcome differs from actual outcome, an individual (or group) will engage in inquiry to understand and, if necessary, solve this inconsistency. In the process of organizational inquiry, the individual will interact with other members of the organization and learning will take place. Learning is therefore a direct product of this interaction.

Argyris and Schon emphasize that this interaction often goes well beyond defined organizational rules and procedures. Their approach to organizational learning theory is based on the understanding of two (often conflicting) modes of operation:



*Figure 7.3: Organization learning theory*

**Espoused theory:** This refers to the formalized part of the organization. Every firm will tend to have various instructions regarding the way employees should conduct themselves in order to carry out their jobs (e.g. problem solving). These instructions are often specific and narrow in focus, confining the individual to a set path. An example of espoused theory might be "if the computer does not work, try rebooting it and then contact the IT department."

**Theory-in-use:** This is the actual way things are done. Individuals will rarely follow espoused theory and will rely on interaction and brainstorming to solve a problem. Theory in use refers to the loose, flowing, and social way that employees solve problems and learn. An example of this might be the way someone actually solves a problem with their computer by troubleshooting solutions, researching on forums, asking co-workers for opinions, etc.

The fact that there is a mismatch between these two approaches means it is potentially problematic if the company enforces its espoused theory. In order to create an environment conducive to learning, firms are encouraged to accept theory in use, and make it easy for the individual to interact with his working environment in an undefined and unstructured way.

Essentially they should provide the right environment for organizational inquiry to take place, unconstrained by formal procedures.

**Levitt and March** (1996) expand further on the dynamics of organizational learning theory. Their view presents the organization as routine-based, history dependent, and target oriented. While lessons from history are stored in the organizational memory, the event itself is often lost.

They note that past lessons are captured by routines "in a way that makes the lessons, but not the history, accessible to organizations and organizational members." The problem most organizations face is that it is usually better to have the event rather than the interpretation.

However, this is often too costly (both financially and time-wise) to be feasible. OL is transmitted through socialization, education, imitation and so on, and can change over time as a result of interpretations of history.

### **In-Text Question**

\_\_\_\_\_ refers to the loose, flowing, and social way that employees solve problems and learn.

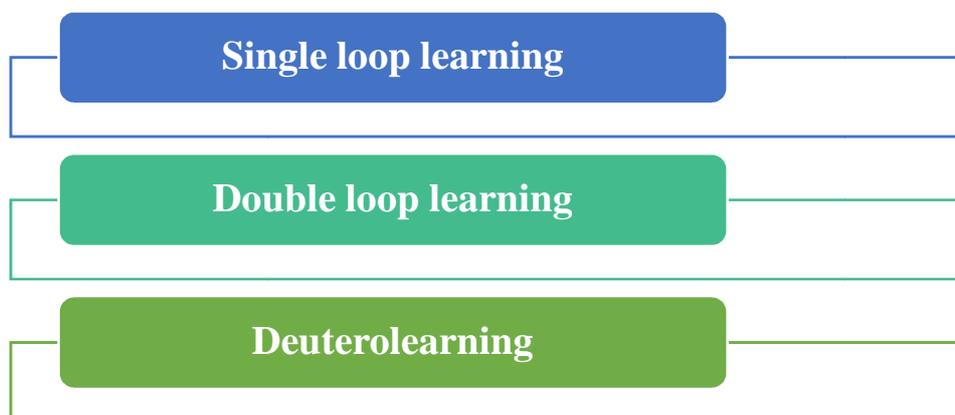
- a. Theory of Work
- b. Theory-in-use
- c. Espoused theory
- d Theory of employability

### **In-Text Answer**

- b. Theory –in use

## **7.3 Organizational Learning Theory: The Three Types of Learning**

Argyris and Schon (1996) identify three levels of learning which may be present in the organization:



*Figure 7.4: Types of learning*

- **Single loop learning:** Consists of one feedback loop when strategy is modified in response to an unexpected result (error correction). E.g. when sales are down, marketing managers inquire into the cause, and tweak the strategy to try to bring sales back on track.
- **Double loop learning:** Learning that results in a change in theory-in-use. The values, strategies, and assumptions that govern action are changed to create a more efficient environment. In the above example, managers might rethink the entire marketing or sales process so that there will be no (or fewer) such fluctuations in the future.
- **Deuterolearning:** Learning about improving the learning system itself. This is composed of structural and behavioural components which determine how learning takes place. Essentially deuterolearning is therefore "learning how to learn."

This can be closely linked to Senge's concept of the learning organization, particularly in regards to improving learning processes and understanding/modifying mental models. Effective learning must therefore include all three, continuously improving the organization at all levels. However, while any organization will employ single loop learning, double loop and particularly deuterolearning are a far greater challenge. From organizational learning theory we can infer the following issues which may affect knowledge management and knowledge management systems:

- OL is dependent on allowing organizational inquiry to take place according to theory-in-use, not espoused theory.
- OL is a complex mechanism, resulting often in the storage of interpretations of past events, rather than the events themselves.
- OL can take place on three different levels. While single loop learning comes natural to any individual/organization, special attention must be paid to the double-loop and deuterolearning.

### **In-Text Question**

\_\_\_\_\_consists of one feedback loop when strategy is modified in response to an unexpected result

- a. Double loop learning
- b. Deutero learning
- c. Single loop learning
- d. Hetero learning

## In-Text Answer

c. Single loop learning

### 7.4 Organizational Learning and Communities of Practice

Communities of practice is a term originally developed by Lave and Wenger (1991). It describes a learning theory with a strong relationship to the social construction of knowledge. The community of practice (sometimes incorrectly referred to as "communities of practices") consists of members who interact with each other for their pursuit of a common practice.

It is therefore this collective social practice that links individuals together across official organizational boundaries and departments, and makes up the community.

It is important to note that these are not teams. A community of practice can be defined as "a group of professionals informally bound to one another through exposure to a common class of problems, common pursuit of solutions, and thereby themselves embodying a store of knowledge" (Stewart 2001 in Botha et al 2008).

### 7.5 Learning within Communities of Practice

Learning is seen as deriving from the social process of becoming a practitioner, as it gives the individual a social context of being an integrated part of a community. The social construction of identity shapes each person's view and interpretation of the world. Learning and the creation of new knowledge can then take place within the context dependent forum of the community, and can be shared through social practice.

**Lave and Wenger** (1991) introduce the concept of legitimate peripheral learning (LPP). LPP links learning to participation within a community of practice. The objective is not to acquire any specific knowledge, but instead to be granted access to the community and its culture and language. As a newcomer learns the formal and informal culture and values of the community, he becomes a legitimate member. Essentially he moves from peripheral to full participation.

**Brown and Duguid** (1991) further investigate organizational learning from a community perspective. They refer to canonical and non-canonical practice- which are concepts similar to espoused theory and theory-in-use described in the previous section.

Canonical practice refers to adherence to formal rules and procedures, while non-canonical refers to the informal routines that dominate day to day procedures. Brown and Duguid warn against strict canonical focus as it inhibits the problem solving

capabilities of the organization. They stress that it is unstructured dialogue, particularly through storytelling, that leads to innovation and problem solving.

### **Box 7.1** Difference between canonical practice and non-canonical practice

Canonical practice refers to adherence to formal rules and procedures, while non-canonical refers to the informal routines that dominate day to day procedures.

Storytelling functions as a wisdom repository and is instrumental in the creation of new knowledge. This is closely linked to Levitt and March's concept of history dependent learning where the interpretations of events (rather than the actual events) are remembered and passed on. It is also somewhat reminiscent of Nonaka's externalization process, when tacit knowledge is made explicit often through the use of metaphor.

#### **In-Text Question**

LPP didn't entirely link learning to participation within a community of practice. True or False

#### **In-Text Answer**

False

## **7.6 The Implications to Knowledge management (KM)**

Botha et al (2008) summarize the key factors regarding communities of practice as follows:

- Learning is a social phenomenon
- Knowledge is integrated into the culture, values, and language of the community
- Learning and community membership are inseparable
- We learn by doing and therefore knowledge and practice are inseparable.
- Empowerment is a key to learning: The best learning environments are created when there are real consequences to the individual and his community of practice.

Management must understand the advantages, disadvantages, and limitations of communities of practice. For example, because they are so loosely defined it may be

very hard to identify them when a problem needs to be solved- to resolve this some companies today are mapping their communities of practice (Botha 2008).

Another issue could be the problem of transferring and combining knowledge across the firm. Due to the close ties to "doing" as well as the cultural elements, this may require innovative solutions- e.g. using temporary cross functional project teams that can leverage knowledge from different areas, apply it, learn, and the redistribute the new knowledge back into the individual members' communities.

All this should underline the importance of recognizing and supporting communities of practice. Knowledge management (KM) initiatives and systems must therefore be supportive, non-disruptive, and must not enforce canonical practice.

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### Activity 7.1: Approaches to organizational learning

Time Allowed: 2hours

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Highlight the main points in this study in your study notes and make sure there you understand the entire study. If there is any part you don't understand, seek clarification.

### **Summary of Study Session 7**

In this study, you have learn that:

1. There are two approaches to organisational learning
2. Espoused theory refers to the formalized part of the organization.
3. Theory in use refers to the loose, flowing, and social way that employees solve problems and learn.
4. Single loop learning consists of one feedback loop when strategy is modified in response to an unexpected result (error correction).
5. Learning is seen as deriving from the social process of becoming a practitioner, as it gives the individual a social context of being an integrated part of a community.

### **Self-Assessment Questions (SAQs) for Study Session 7**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. You can check your answers with the Notes on the Self-Assessment questions at the end of this study

### **SAQ 7.1 (Testing Learning Outcomes 7.1)**

Identify the two approaches to organizational learning

### **SAQ 7.2 (Testing Learning Outcomes 7.2)**

Explain theory-in-use

### **SAQ 7.3 (Testing Learning Outcomes 7.3)**

Outline some outcomes of organizational learning theory

### **SAQ 7.4 (Testing Learning Outcomes 7.4)**

Define 'a community of practice

### **SAQ 7.5 (Testing Learning Outcomes 7.5)**

Define canonical practice

### **SAQ 7.6 (Testing Learning Outcomes 7.5)**

Highlight the key factors regarding community practice

## **Notes on Study Session 7**

### **SAQ 7.1**

The first approach looks at the firm as a whole and examines learning from a cognitive perspective. In a way, the firm is treated like a large brain composed of the individual members of the organization.

The second approach looks at learning as community based, where the firm's practitioners create knowledge in their own networks called communities of practice (Lave & Wenger)

### **SAQ 7.2**

Theory in use refers to the loose, flowing, and social way that employees solve problems and learn

### **SAQ 7.3**

- OL is dependent on allowing organizational inquiry to take place according to theory-in-use, not espoused theory.
- OL is a complex mechanism, resulting often in the storage of interpretations of past events, rather than the events themselves.
- OL can take place on three different levels. While single loop learning comes natural to any individual/organization, special attention must be paid to the double-loop and deuterolearning

#### SAQ 7.4

The community of practice (sometimes incorrectly referred to as "communities of practices") consists of members who interact with each other for their pursuit of a common practice.

#### SAQ 7.5

Canonical practice refers to adherence to formal rules and procedures

#### SAQ 7.6

- Learning is a social phenomenon
- Knowledge is integrated into the culture, values, and language of the community
- Learning and community membership are inseparable
- We learn by doing and therefore knowledge and practice are inseparable.
- Empowerment is a key to learning: The best learning environments are created when there are real consequences to the individual and his community of practice.

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## Study Session 8: Organizational Culture



*Source: <http://thecorporategreenhouse.com/wp-content/uploads/2011/02/triangleofservices.gif>*

### Introduction

The term corporate culture became widely known in the business world in the late 1980s and by early 1990s corporate culture was already used by managers, sociologists, and organizational theorists. In this study, you will learn the meaning and levels of organizational culture; organizational culture and knowledge sharing; the problems associated with managing organizational culture; dimension of learning organization and the role of leadership in learning organization.

### Learning Outcomes for Study Session 8

At the end of this study, you should be able to:

- 8.1 Explain organizational culture
- 8.2 Outline the levels of organizational culture
- 8.3 Explain organizational learning and knowledge sharing
- 8.4 Highlight the problems of managing organisation culture
- 8.5 Explain the term 'leadership and learning organisation'
- 8.6 Outline the dimensions of learning organisations
- 8.7 Explain the role of leadership

## 8.1 Organizational culture

Organizational culture is the behaviour of humans within an organization and the meaning that people attach to those behaviours. According to Needle (2004), organizational culture represents the collective values, beliefs and principles of organizational members and is a product of such factors as history, product, market, technology, and strategy, type of employees, management style, and national culture. Culture includes the organization's vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits. Ravasi and Schultz (2006) wrote that organizational culture is a set of shared assumptions that guide what happens in organizations by defining appropriate behaviour for various situations.

### **Box 8.1: Definition of Organizational culture**

Organizational culture is the behaviour of humans within an organization

It is also the pattern of such collective behaviours and assumptions that are taught to new organizational members as a way of perceiving and, even, thinking and feeling. Thus, organizational culture affects the way people and groups interact with each other, with clients, and with stakeholders. In addition, organizational culture may affect how much employees identify with an organization.

Organizational culture refers to culture in any type of organization including that of schools, universities, not-for-profit groups, government agencies, or business entities. In business, terms such as corporate culture and company culture are sometimes used to refer to a similar concept.



**Figure 8.1:** Organizational structure

**Source:** <http://coolconversationslive.com/wp-content/uploads/2013/09/orgcult.jpg>

The social elements of knowledge that have been underlined in previous sections are at least partially dependent on organizational and community culture. Organizational culture determines values and beliefs which are an integral part of what one chooses to see and absorb. It includes a shared perception of reality, regarding how things are and how things should be.

Furthermore, community and group culture determine the willingness and conditions for knowledge sharing with other members of the organization. Knowledge, and knowledge sharing, are thus inseparable from organisational culture.

Wellman (2009) essentially describes culture as "the way it is around here." To illustrate the perseverance of organizational culture he presents an interesting allegory that is summarized below:

Put five apes in a cage. Then dangle a banana from the ceiling of that cage and place a ladder under it. Whenever an ape attempts to climb the ladder to reach the banana, spray all of them with cold water. After a few times, the apes will associate climbing the ladder with being sprayed with cold water. One can now turn off the cold water.

Then, replace one of the original apes with a new one. This new ape will undoubtedly try to get to the banana, but if he tries he will be attacked by the others. He will have no idea why this is so, but will soon learn that he must not climb the ladder. Next replace yet another ape. When he approaches the ladder, all the apes will attack him.

One of these apes has no idea why he may not climb the ladder, but he participates in the punishment enthusiastically. Soon the new ape will also learn not to climb the

ladder. In this way, one can continue until all the original apes are replaced. At this stage, none of them know why they must not climb the ladder, but none will do so, and all will attack anyone that tries. All of this because "that's the way it has always been around here."

Strange as it may seem, this kind of cultural learning can be identified time and again in real world organizations. Wellman points out that at times this can be beneficial and detrimental. Hard wiring a reaction can push the organization into action quickly against a perceived threat. The problem is that this "instinctive response may be inappropriate for the current environment but may be triggered nonetheless" (Wellman 2009).

### In-Text Question

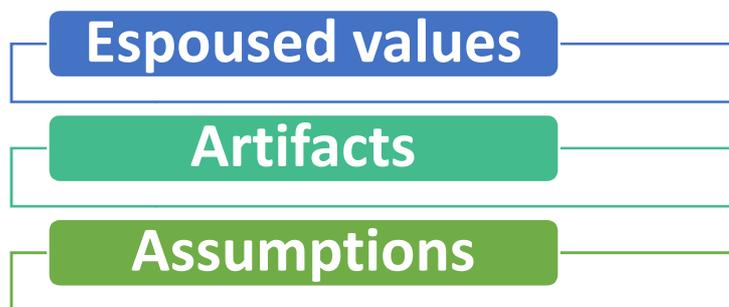
Organizational culture includes a shared perception of reality, regarding how things are and how things should be. True or False

### In-Text Answer

True

## 8.2 Level of Organizational Culture

All in all, organizational culture can be split into levels (Schein 1992):



*Figure 8.2: Levels of organization*

- **Artifacts:** These represent the visible elements such as processes, structures, goals, climate, dress codes, furniture, etc. An outsider can see them but may not understand why things are the way things are.
- **Espoused values:** The values espoused by the leaders. They are mostly grounded in shared assumptions of how the company should be run. If there is a significant mismatch between the leadership espoused values and this perception, the organization may be in trouble.

- **Assumptions:** These are the actual values of the culture. They refer to the (often tacit) views of the world itself (e.g. human nature). Again, these assumptions should need to correlate at least to a certain degree to the espoused leadership values for the organization to function smoothly.

### **In-Text Question**

The following are organizational culture levels except

- a. Artifacts
- b. Espoused values
- c. Assumptions
- d Leadership level

### **In-Text Answer**

- d. Leadership level

## **8.3 Organizational Culture and Knowledge Sharing**

The importance of a knowledge sharing culture as an enabler for the transfer and creation of knowledge is directly addressed by such authors as **Bukowitz & Williams** (1999), **Davenport and Prusak** (2000), and Gamble and Blackwell (2001). In order to make knowledge management initiatives work in practice, the employees within the firm must be willing to share their knowledge with others.

Leaders must understand the culture both on an organisational and community level. While culture often exists on an organizational level, each community may have its own norms, perspectives, and collective understandings. Their willingness to share and to seek knowledge will be influenced by these collective views.

One major influence to a culture's knowledge sharing willingness is the issue of reciprocity (Davenport & Prusak 2000). This refers to the individual's need to perceive a current or future return on the knowledge he chooses to share.

This could be in the form of direct compensation of some kind; it could be something intangible like enhancing the individual's reputation; but it can also be the knowledge that the favour will be returned the next time he requires assistance. Finally, internal competition is yet another aspect of organizational culture that may interfere with the knowledge sharing and knowledge creation process.

### **In-Text Question**

One major influence to a culture's knowledge sharing willingness is the issue of reciprocity. True or False

### **In-Text Answer**

True

## **8.4 The Problems with Managing Organizational Culture**

The problems with managing culture can be summed up as follows:

- Culture reaffirms itself by rejecting misfits and promoting those that adhere to the norms of the organization (Gamble & Blackwell 2001).
- Culture often consists of learned responses that are hard wired into the organization. The actual events that sparked this "lesson" may be long forgotten (Wellman 2009). This is very similar to the concept of organizational learning according to Levitt and March (1996) which indicates that organizations are far more likely to remember interpretations of events rather than the event itself.
- Culture contains falsehoods. Past lessons are applied often without understanding them and their reasons for being.

### **In-Text Question**

One of the problems with managing culture is that culture contains falsehood. True or False

### **In-Text Answer**

True

## **8.5 Leadership and the Learning Organization**

According to New Growth Economics, organization's capacity to take advantage of the knowledge economy depends on how quickly it can become a "learning organization". In the "learning organization" individuals, firms, and countries will be able to create wealth in proportion to their capacity to learn and share innovation (Foray and Lundvall, 1996; Lundvall and Johnson, 1994).

The term "learning organization", not to be confused with organizational learning, was popularized by Peter Senge. It describes an organization with an ideal learning environment, perfectly in tune with the organization's goals.

Such an organization is a place "where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole (reality) together." (Senge 1992).

### **Box 8.1: Definition of Learning organization**

The term "learning organization", not to be confused with organizational learning is a place "where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole (reality) together.

This subsection will focus largely on the work of Peter Senge, and it will serve as a basis for understanding:

1. The ideal organizational environment for learning, knowledge management (KM), innovation, etc., as described through the term "the learning organization".
2. The leadership qualities necessary for promoting and encouraging this ideal environment.

### **In-Text Question**

The term "learning organization", is the same as the term 'organizational learning'  
True or False

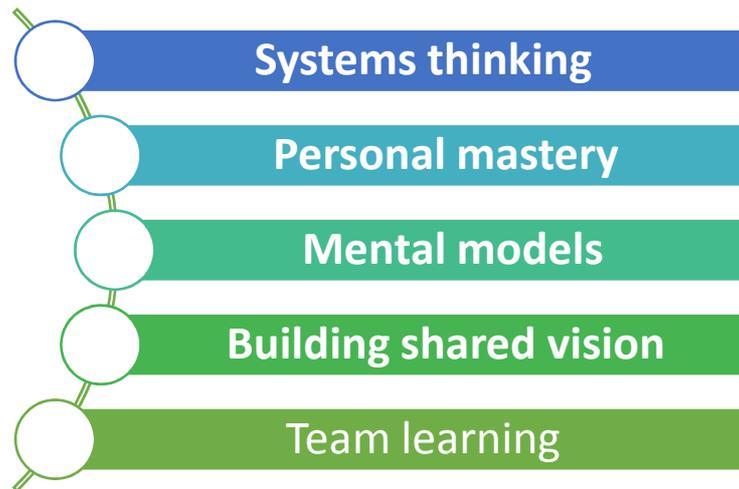
### **In-Text Answer**

False

## **8.6 Dimensions of Learning Organization**

According to Senge, the learning organization depends upon the mastery of five dimensions:

They are:



*Figure 8.3: Dimensions of learning organisation*

**Systems thinking:** The notion of treating the organization as a complex system composed of smaller (often complex) systems. This requires an understanding of the whole, as well as the components, not unlike the way a doctor should understand the human body.

Some of the key elements here are recognizing the complexity of the organization and having a long-term focus. Senge advocates the use of system maps that show how systems connect.

**Personal mastery:** Senge describes this as a process where an individual strives to enhance his vision and focus his energy, and to be in a constant state of learning.

**Mental models:** "Deeply ingrained assumptions, generalizations, or even pictures and images that influence how we understand the world and how we take action" (Senge 1990). These must be recognized and challenged so as to allow for new ideas and changes.

**Building shared vision:** Shared vision is a powerful motivator. A leader's vision does not necessarily become shared by those below him. The key here is to pass on a picture of the future. To influence using dialogue, commitment, and enthusiasm, rather than to try to dictate. Storytelling is one possible tool that can be used here.

**Team learning:** The state where team members think together to achieve common goals. It builds on shared vision, adding the element of collaboration.

### **In-Text Question**

The learning organization depends upon the mastery of the following dimensions except \_\_\_\_

- a. Systems thinking

- b. Personal mastery
- c. Team methods
- d. Mental models

### **In-Text Answer**

- c. Team methods

## **8.7 The Role of Leadership**

Senge emphasized the role of the leader in the creation of this learning organization. He defined three leadership roles (1990) that would reshape the old-fashioned approach to being the boss. These are:

**Leader as Designer:** Senge likens this to being the designer of a ship rather than its captain. He defined it in three ways:

- Creating a common vision with shared values and purpose.
- Determining the "policies, strategies, and structures that translate guiding ideas into business decisions."
- Creating effective learning processes which will allow for continuous improvement of the policies, strategies, and structures.

**Leader as Teacher:** The leader here is seen as a coach that works with the mental models present in the organization. He must understand the (usually tacit) concepts of reality and restructure these views "to see beyond the superficial conditions and events [and] into the underlying causes of the problems."

**Leader as Steward:** This is the vaguest of the three and refers largely to the attitude of the leader. He emphasizes the importance of a leader that feels he is part of something greater; whose desire is first and foremost not to lead, but to serve this greater purpose of building better organizations and reshaping the way businesses operate. The first two roles outlined by Senge shed a lot of light into the requirements of effective KM and organizational learning.

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### **Activity 8.1: Organizational culture**

**Time Allowed:** 24hours

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Make a visit to an organisation and find out about their culture. Document your findings and compare it with what you learnt in your study.

## **Summary for Study Session 8**

In study session 8, you have that:

1. Organizational culture is the behaviour of humans within an organization and the meaning that people attach to those behaviours. It represents the collective values, beliefs and principles of organizational members and is a product of such factors as history, product, market, technology, and strategy, type of employees, management style, and national culture.
2. In order to make knowledge management initiatives work in practice, the employees within the firm must be willing to share their knowledge with others.
3. Culture often consists of learned responses that are hard wired into the organization.
4. In the "learning organization" individuals, firms, and countries will be able to create wealth in proportion to their capacity to learn and share innovation.
5. According to Senge, the learning organization depends upon the mastery of five dimensions.

## **Self-Assessment Questions (SAQs) for Study Session 8**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

### **SAQ 8.1 (Testing Learning Outcomes 8.1)**

Explain organization culture

### **SAQ 8.2 (Testing Learning Outcomes 8.2)**

Discuss the level of organizational culture.

### **SAQ 8.3 (Testing Learning Outcomes 8.3)**

Explain organizational culture and knowledge sharing

### **SAQ 8.4 (Testing Learning Outcomes 8.4)**

What are the problems associated with managing organizational culture?

### **SAQ 8.5 (Testing Learning Outcomes 8.5)**

Explain the term 'learning organization'

### SAQ 8.6 (Testing Learning Outcomes 8.6)

What are the dimension of organizational learning?

### SAQ 8.7 (Testing Learning Outcomes 8.6)

Explain the role of leadership

## Notes for Study Session 8

### SAQ 8.1

Organizational culture is the behaviour of humans within an organization and the meaning that people attach to those behaviours. According to Needle (2004), organizational culture represents the collective values, beliefs and principles of organizational members and is a product of such factors as history, product, market, technology, and strategy, type of employees, management style, and national culture.

### SAQ 8.2

- **Artifacts:** These represent the visible elements such as processes, structures, goals, climate, dress codes, furniture, etc.
- **Espoused values:** The values espoused by the leaders. They are mostly grounded in shared assumptions of how the company should be run.
- **Assumptions:** These are the actual values of the culture. They refer to the (often tacit) views of the world itself (e.g. human nature).

### SAQ 8.3

The importance of a knowledge sharing culture as an enabler for the transfer and creation of knowledge is directly addressed by such authors as Bukowitz & Williams (1999). In order to make knowledge management initiatives work in practice, the employees within the firm must be willing to share their knowledge with others.

### SAQ 8.4

The problems with managing culture can be summed up as follows:

- Culture reaffirms itself by rejecting misfits and promoting those that adhere to the norms of the organization (Gamble & Blackwell 2001).
- Culture often consists of learned responses that are hard wired into the organization. The actual events that sparked this "lesson" may be long forgotten (Wellman 2009). This is very similar to the concept of organizational learning according to Levitt and March (1996) which indicates that

organizations are far more likely to remember interpretations of events rather than the event itself.

- Culture contains falsehoods. Past lessons are applied often without understanding them and their reasons for being.

### SAQ 8.5

The term "learning organization", describes an organization with an ideal learning environment, perfectly in tune with the organization's goals.

### SAQ 8.6

**Systems thinking:** The notion of treating the organization as a complex system composed of smaller (often complex) systems.

**Personal mastery:** Senge describes this as a process where an individual strives to enhance his vision and focus his energy, and to be in a constant state of learning.

**Mental models:** "Deeply ingrained assumptions, generalizations, or even pictures and images that influence how we understand the world and how we take action" (Senge 1990).

**Building shared vision:** Shared vision is a powerful motivator. A leader's vision does not necessarily become shared by those below him.

**Team learning:** The state where team members think together to achieve common goals. It builds on shared vision, adding the element of collaboration.

### SAQ 8.7

**Leader as Designer:** Senge likens this to being the designer of a ship rather than its captain

**Leader as Teacher:** The leader here is seen as a coach that works with the mental models present in the organization.

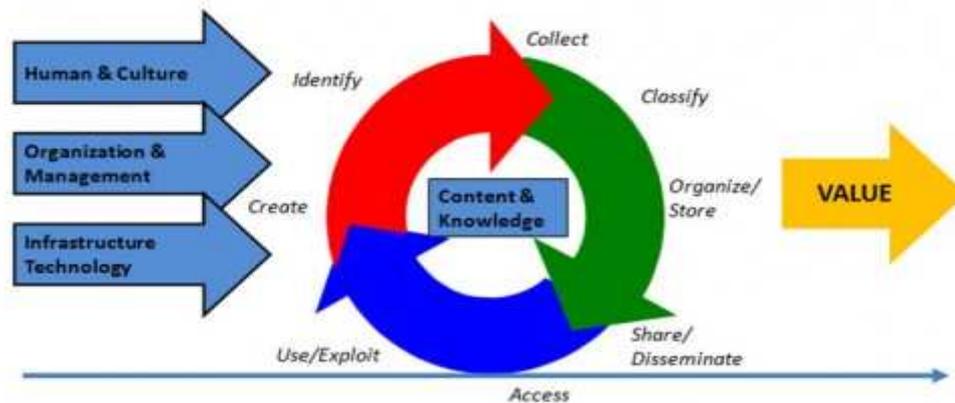
**Leader as Steward:** This is the vaguest of the three and refers largely to the attitude of the leader.

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## Study Session 9: Building Knowledge Management Frameworks and Models

### Knowledge Management Framework



*Source:* <http://multiforma.co.id/wp-content/uploads/2013/04/KMFramework-e13887562039921.jpg>

### Introduction

The old saying that a picture paints a thousand words is very much applicable in this case. A good model can integrate various elements and show relationships in a way that is much harder to do in writing. In this study, you will learn about knowledge management frameworks and models.

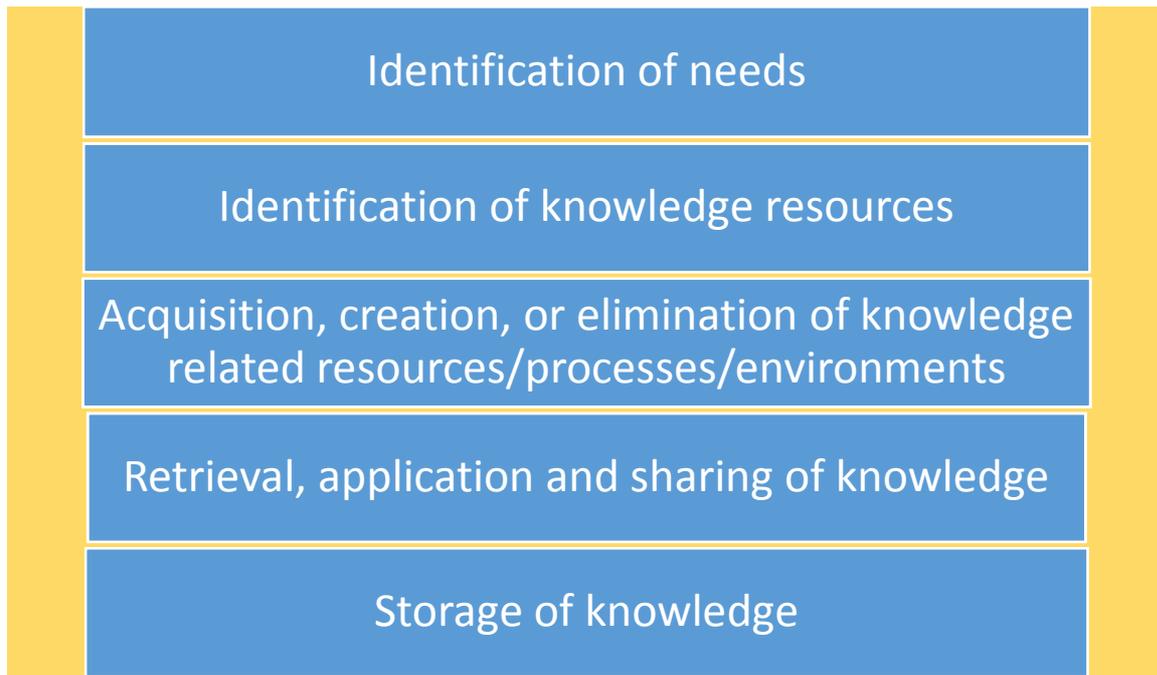
### Learning outcomes for Study Session 9

At the end of this study, you should be able to:

- 9.1 Explain knowledge management steps
- 9.2 Explain the KM Matrix
- 9.3 Discuss the knowledge management process model

### 9.1 KM Steps

At the most basic level, KM consists of the following steps:



*Figure 9.1: KM steps*

It is important to note that none of these processes are independent and all of them are affected by countless factors. This is why knowledge management frameworks are typically very different and can be presented in a wide variety of ways.

For instance, some models are sequential (as above), and seek to provide a better overview at the expense of "realism". Other models display overlapping processes in an attempt to simulate what actually occurs inside an organization. The problem with the latter is that they are often hard to grasp and can only convey limited information so as not to become incomprehensible.

Since KM is closely related or dependant on other disciplines (such as strategy, information management, project management, etc.) and it is enabled by a wide range of processes and systems, a model can become very complex indeed.

This is why there is no such thing as an integrated and fully detailed knowledge management framework, i.e. one that captures all relevant aspects with appropriate detail. Each model must choose its focus and origin, as well as its limitations. There are essentially three questions that a knowledge management framework may choose to answer.

They are:

- What/How
- Why
- When

"What/how" refers to the actual processes of knowledge management. "Why" refers to an indication of the reasons behind using one method or the other. "When" refers to the timing for using one method or another, and is very closely related to "why".

The latter two questions are usually tackled in more strategic oriented models that take a broader perspective. What/how is usually dealt with in process oriented models that focus on an understanding of the tools available to the manager. These kinds of models are generally more common particularly since the role of knowledge management can be defined far more narrowly.

In the following section you will learn a few solid KM models dealing with all the aspects you have learnt above.

**Table 9.1:** Knowledge Management broad categories as outlines by Botha et al (2008)

You don't know	Knowledge Discovery	Explore, Research, Create
You know	Knowledge Repository (Knowledge Base)	Knowledge Sharing and Transfer
	Knowledge you have	Knowledge you don't have

Here, you can see the role of knowledge management from a broad perspective, i.e. which includes more than just knowledge sharing/access/etc., but also new knowledge creation. These categories provide a solid overview of the components of any knowledge management framework focusing on the what/how question.

**In-Text Question**

The most basic KM consists of the following except

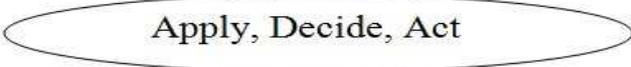
- a. Identification of needs
- b Identification of knowledge resources
- c Storage of knowledge
- d. Needs requisition

**In-Text Answer**

D Needs requisition

## 9.2 The KM Matrix by Gamble and Blackwell (2001)

Table 9.2: KM Matrix

<b>Approach \ Type</b>	<b>Embodied</b>	<b>Represented</b>	<b>Embedded</b>
<b>Sense</b>	Observe	Gather	Hypothesize
<b>Organize</b>	Contextualize	Categorize	Map
<b>Socialize</b>	Share	Disseminate	Simulate
<b>Internalize</b>	 Apply, Decide, Act		

This KM model presents a general theoretical framework, as well as specific guidelines for implementation.

The KM process is split into four stages. Firstly management must locate the sources of knowledge. Then they must organize this knowledge so as to assess the firm's strengths and weaknesses and determine its relevance and reusability. This is followed by socialization, where various techniques are used to help share and disseminate it to whomever needs it in the organization. Finally, the knowledge is internalized through use.

As all sequential models, the steps are not to be taken literally, because they do provide an excellent overview of the role of the KM manager. However, one limitation of this model is its focus. First of all, the overall strategic role outline by Bukowitz and Williams is not included.

Secondly, KM's role here is limited to knowledge sharing, omitting the processes of knowledge acquisition/creation and divestment. This is a perfectly legitimate approach to KM where the focus is on the sharing and retrieval of existing knowledge, but it does not fulfil the scope of the knowledge management definition outlined in this lecture.

### In-Text Question

The KM process is split into \_\_\_\_\_

- a. Five Stages
- b Four stages

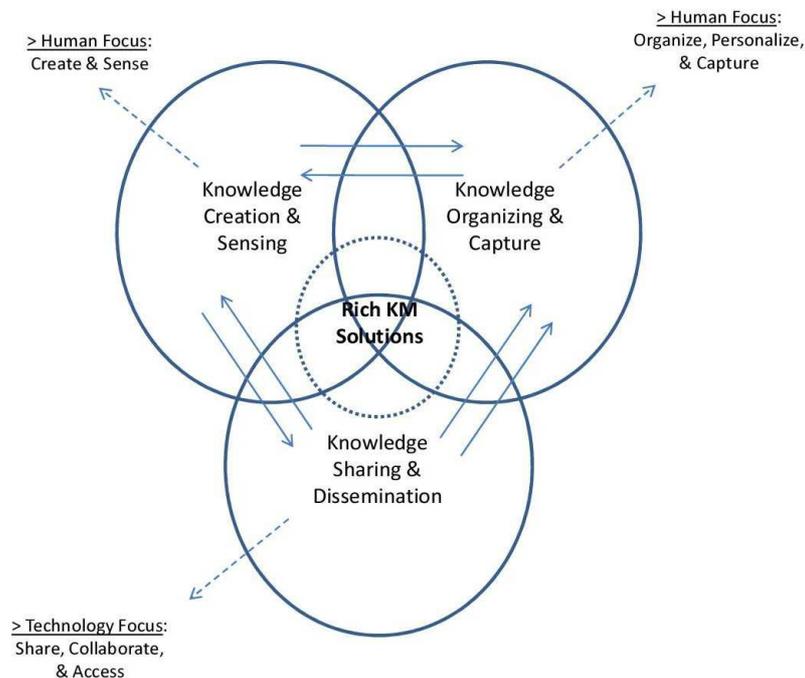
- c. Six stages
- d. Two Stages

**In-Text Answer**

- b. Four Stages

**9.3 The Knowledge Management Process Model by Botha et al (2008)**

This model attempts to offer a more realistic overview of the KM process.



**Figure 9.2: Knowledge Management Process Model**

The three broad categories overlap and interact with one another. Like Gamble & Blackwell, the focus is on managerial initiatives. Here too the strategic focus (the "when" and the "why" as opposed to the "what") is omitted. It is noteworthy that this model does include the creation of new knowledge as a specific KM initiative.

The model further shows which of the three categories are more people oriented and which are more technology focused. Whether or not knowledge sharing should be largely technology focused is certainly debatable and it is something that I will address in future sections. However, for better or for worse, this is largely how organizations tend to approach the issue i.e. as a technological rather than organizational and social challenge.

You have learnt the three models that take very different approaches to KM. There is one other important aspect relating to KM that has not been directly dealt with by

these models. I am referring now to the measurement of effects that lets management know whether the implemented initiatives are achieving the desired results. This is dependent upon data and information management, but is paramount for future KM initiatives. Below is a version of an integrated knowledge management model.

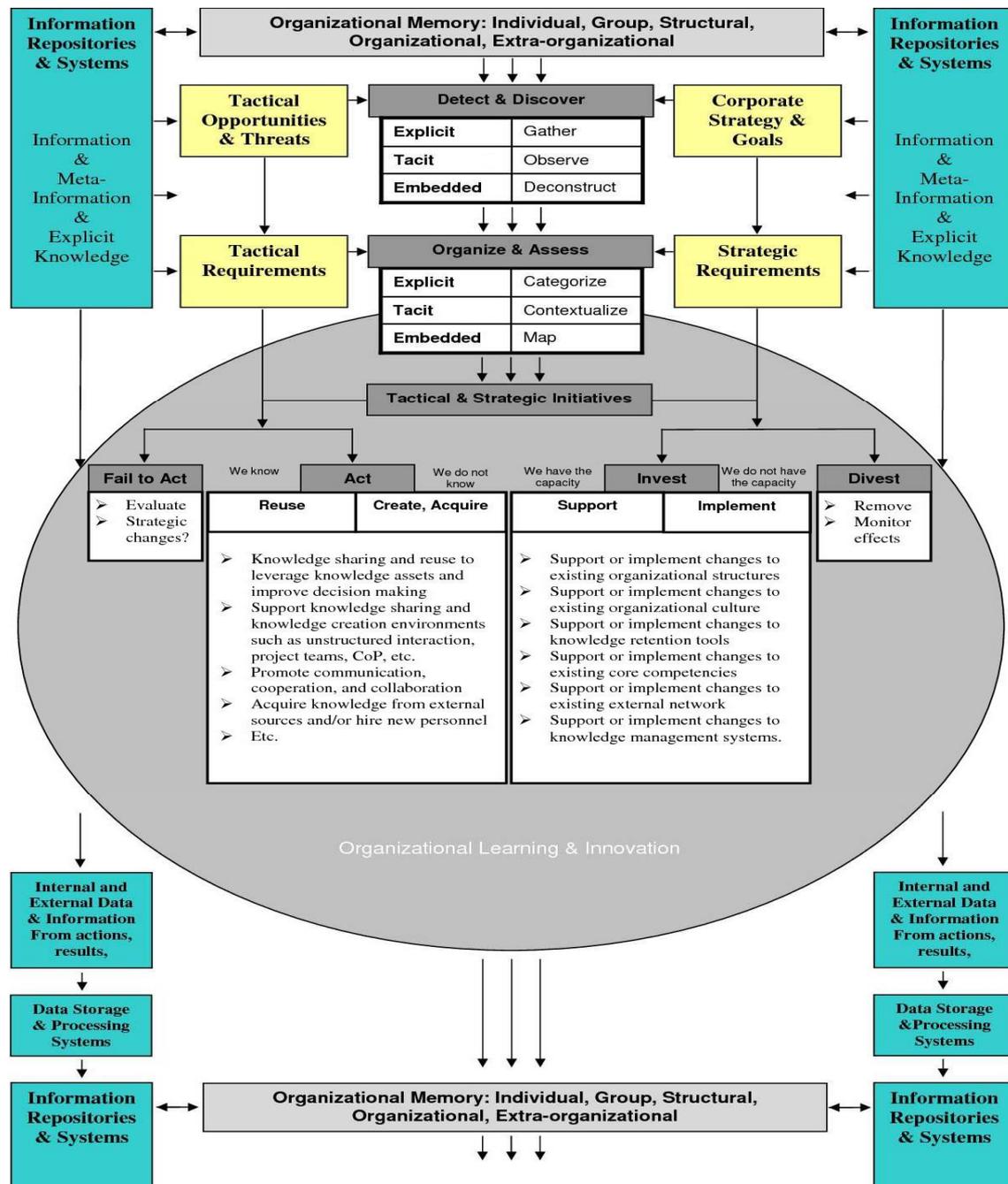


Figure 9.3: Integrated knowledge management model

The integrated knowledge management model draws upon elements presented by **Bukowitz & Williams, Gamble & Blackwell**, Botha et al, and Nonaka & Takeuchi. It also includes the concept of organizational memory as defined earlier.

The dark gray elements represent KM initiatives; the yellow boxes represent corporate strategy, while the teal boxes depict data and information systems and repositories. The process is initiated from the tactical and strategic considerations, illustrating the way KM strategy goes hand in hand with corporate strategy.

The non-bolded elements in the gray oval indicate the knowledge related processes that go on within the organization as it operates, and which management affects/enhances through its initiatives.

The integrated knowledge management model is sequential, offering a simplified view for ease of understanding. The steps are as follows:

- **Detect & Discover:** Search for existing knowledge as well as hidden knowledge within information and data.
- **Organize & Assess:** Organization and assessment of knowledge assets. Knowledge is categorized, evaluated, and made easier to access (by providing maps etc.).
- KM Tactical initiatives:
  - **Act - Reuse:** If the firm can use existing knowledge to meet a tactical opportunity or threat, the role of KM is to identify this knowledge and enable it to be used. This means that if it is required by a different person/group, then KM is responsible for making it available to all relevant parties. Knowledge reuse thus combines the previous points on detection and organization with a new aspect: knowledge sharing.
  - **Act - Create/acquire:** If the right knowledge resources do not exist, the firm may create or acquire them, assuming the right processes and systems are in place to support this. For example, the knowledge may be acquired from partners if the right relationships are in place. Knowledge creation depends on the right internal environments that allow for combination and conversion of knowledge assets.
  - **Failure to act:** This is not really a KM initiative in itself, but it does have some implications. In the event that a firm fails to act there is still a lesson to be learned. Management must evaluate if this is something that needs to be addressed in the future. This decision is fed back into the loop, affecting future strategic choices.
- KM Strategic Initiatives:
  - **Invest:** Support or implement. this refer to the organizational structures, culture, knowledge retention, competencies, external network, and systems that direct, affect, and/or enable the KM initiatives discussed

above in the long term. Strategic initiatives may, for example, involve creating a knowledge sharing culture, restructuring the firm, establishing a beneficial partnership, or implementing a new IT system.

If the right environment, system, etc. is already in place, management must make sure to continuously support it. It is important to note that some of these do not fall solely within KM, and they are all fields of study in their own right. However in this case, we are interested solely in the way these broader strategic initiatives shape the focus and direction of KM in the long term.

- **Divest:** When knowledge assets become obsolete they need to be removed. KM is responsible for maintaining relevant knowledge assets.

The differentiation between tactical and strategic initiatives should not be seen as categorical, and in reality projects and initiatives will often have mixed goals. The integrated knowledge management model itself should be seen as continuously looping, with new or modified knowledge and information being fed into organizational memory and information repositories each time.

All processes are thus supported by information systems. They play an important role in tracking progress and feeding that information back into the system. This way, each time the integrated knowledge management model is run, it is based on different information, understanding, knowledge, and circumstances than the last time. As with all sequential models, none of this should be taken absolutely literally.

Although this is called an "integrated" knowledge management model, it is not intended to be all-encompassing. Since KM is such a broad discipline, one can continue to add elements until the model becomes too complex that it has no meaning.

### **Summary for Study Session 9**

At the end of study session 9, you have learnt:

1. The constituents of a knowledge management framework.
2. The three essential questions that a knowledge management framework may choose to answer.
3. The KM Tactical initiatives
4. KM is responsible for maintaining relevant knowledge assets.

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Activity 9.1:

Time Allowed:

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Do further reading on building knowledge management frameworks and models

### **Self-Assessment Questions (SAQs) for Study Session 9**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

#### **SAQ 9.1 (Testing Learning Outcomes 9.1)**

What are the steps in building a knowledge management frame work?

#### **SAQ 9.2 (Testing Learning Outcomes 9.2)**

Identify two limitations of knowledge Management model

#### **SAQ 9.3 (Testing Learning Outcomes 9.3)**

Identify the knowledge management KM strategic initiatives

### **Notes for Study Session 9**

#### **SAQ 9.1**

- Identification of needs
- Identification of knowledge resources
- Acquisition, creation, or elimination of knowledge related resources/processes/environments
- Retrieval, application and sharing of knowledge
- Storage of knowledge

#### **SAQ 9.2**

One limitation of this model is its focus. First of all, the overall strategic role outline by Bukowitz and Williams is not included.

Secondly, KM's role here is limited to knowledge sharing, omitting the processes of knowledge acquisition/creation and divestment.

### SAQ 9.3

**Invest:** Support or implement. this refer to the organizational structures, culture, knowledge retention, competencies, external network, and systems that direct, affect, and/or enable the KM initiatives discussed above in the long term.

**Divest:** When knowledge assets become obsolete they need to be removed

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## Study Session 10: Knowledge Management Processes



*Source:* <http://image.slidesharecdn.com/hoglundkmpro09-14-04-100215195204-phapp01/95/km-as-the-engine-of-business-process-improvement-16-728.jpg?cb=1266264666>

### Introduction

KM involves processes that facilitate the application and development of organizational knowledge and aims to create value and to increase/sustain competitive advantage for the organization. So far, an introduction to knowledge management as well as several frameworks has been presented.

Under the initiative referred to as "act", the integrated model outlines a series of knowledge management processes. These are:

- Knowledge Discovery & Detection
- Knowledge Organization & Assessment
- Knowledge Sharing
- Knowledge Reuse
- Knowledge Creation
- Knowledge Acquisition

In this study, you will consider the different knowledge management KM processes and initiatives based on the layout of the integrated knowledge management model presented in the last study. You will learn knowledge discovering and detection, knowledge organization & assessment and Knowledge sharing.

## Learning Outcomes for Study Session 10

At the end of this study, you should be able to:

- 10.1 Explain knowledge discovery and detection
- 10.2 Explain how to facilitate Knowledge Discovery and Detection

### 10.1 Knowledge Discovery and Detection

This step deals with discovering the knowledge that a firm possesses all over the organization, as well as the patterns in the information available that hide previously undetected pockets of knowledge. Once knowledge is created, it exists within the organization. However, before it can be reused or shared it must be properly recognized and categorized. This subsection deals with the former aspect, while the following subsection deals with the latter.

**Explicit Knowledge:** Discovering explicit knowledge involves a process of sorting through documents and other records, as well as discovering knowledge within existing data and knowledge repositories.

For the latter, IT can be used to uncover hidden knowledge by looking at patterns and relationships within data and text. The main tools/practices in this case include intelligence gathering, data mining (finding patterns in large bodies of data and information), and text mining (text analysis to search for knowledge, insights, etc.).

Intelligence gathering is closely linked to expert systems (Bali et al 2009) where the system tries to capture the knowledge of an expert, though the extent to which they are competent for this task is questionable (Botha et al 2008).

**Tacit knowledge:** Discovering and detecting tacit knowledge is a lot more complex and often it is up to the management in each firm to gain an understanding of what their company's experts actually know. Since tacit knowledge is considered as the most valuable in relation to sustained competitive advantage, this is a crucial step, a step that often simply involves observation and awareness.

There are several qualitative and quantitative tools/practices that can help in the process; these include knowledge surveys, questionnaires, individual interviews, group interviews, focus groups, network analysis, and observation. IT can be used to help identify experts and communities.

Groupware systems and other social/professional networks as well as expert finders can point to people who are considered experts, and may also give an indication of the knowledge these people/groups possess.

**Embedded knowledge:** Discovering embedded knowledge implies an examination and identification of the knowledge trapped inside organizational routines, processes,

products etc., which has not already been made explicit. Management must essentially ask "why do we do something a certain way?" This type of knowledge discovery involves observation and analysis, and the use of reverse engineering and modelling tools.

It is important to note that the sources of knowledge that a firm has access to may extend well outside the organization. This type of knowledge, which was introduced in the previous study on "Understanding Organizational Knowledge" is called extra-organizational knowledge. This can exist in both formal and informal settings.

The former refers to management driven initiatives like partnerships, while the latter refers to the informal networks of individual members. The interest of this study is in the former, which can be located and managed at least to some degree. Gamble and Blackwell identify several such sources:

- Alliances
- Suppliers
- Customers

At this stage, we are still only discussing knowledge discovery and detection, so these relationships will not be explored in detail (see knowledge acquisition and external knowledge networks for more). Knowledge from alliances and partners can exist in joint projects, shared knowledge/experts operational data and so on.

Suppliers and customers can provide product feedback, trends, developments, etc. Within their respective limitations, similar tools as the ones mentioned above can be used to identify the knowledge and/or knowledge sources.

IT can be used in this context both as a means of feedback, communication, and cooperation between partners, and also as a way to gather, analyse, and "mine" data and information.

### **In-Text Question**

Once knowledge is created, it exists within the organization. True or False

### **In-Text Answer**

True

## **10.2 Facilitating Knowledge Discovery and Detection**

Useful to this process is the adoption of practices that make knowledge easier to detect. For example, teams could be asked to document aspects of their work with a certain language and presentation standard.

Generalists could be used to help organize this process, as well as to document the expertise of the individual team members (which can be used later to promote tacit knowledge socialization). A rundown of how management should prepare knowledge in specific situations is presented in the final segment of the Knowledge Reuse subsection.

### **Knowledge Organization and Assessment**

In order to determine what resources they have at their disposal and to pin point strengths and weaknesses, management needs to organize the knowledge into something manageable. Knowledge organization involves activities that "classify, map, index, and categorize knowledge for navigation, storage, and retrieval" (Botha et al. 2008). Markus (2001) assigns the role of preparing, sanitizing, and organizing this knowledge to a "knowledge intermediary".

This may be a knowledge manager or it may also be the actual producer of the knowledge. The point is, that in order for knowledge to be shared (either for reuse in a business situation or as a tool for knowledge creation), it must be prepared in such a way that it can be identified, retrieved, and understood by the knowledge user.

**Explicit knowledge organization:** It is generally encouraged as a means of organizing and retrieving knowledge. IT based systems use taxonomies and ontologies to classify and organize knowledge and information. These are categorization methods that create a logical, hierarchical knowledge map, allowing the user to navigate by category. However, taxonomies are very expensive to create.

It is relevant to note here that although explicit knowledge is not considered as valuable as tacit knowledge, due to its sheer volume, an effective method of classification and retrieval is often essential. Other tools include libraries and data marts.

**Tacit knowledge organization:** Use of focus groups, expertise guides, social network analysis, and knowledge coordinators. The role of the latter is to understand in which context the tacit knowledge was created.

Expertise locators, such as corporate yellow pages, social network analysis and other knowledge maps can be used to pinpoint the location and categorize the valuable expertise of tacit knowledge sources (a.k.a. experts). They can also shed light into how widespread certain tacit knowledge is, enabling the firm to plan ahead for the retirement of key employees.

**Embedded knowledge organization:** Job/workplace design, workflow analyses and performance measures (**Gamble & Blackwell 2001**) can be used to organize and assess embedded knowledge. Mapping is also useful here, and knowledge maps outlining embedded knowledge can be formulated under the guidance of knowledge brokers (**Horvath 2000**).

Liebowitz emphasizes the determination of how important certain knowledge is to the organization. The two key factors to examine are knowledge severity or criticality and knowledge availability. The more critical the knowledge and the more unavailable it is (e.g. if only one or a few experts exist and/or if they are near retirement age), the more attention this knowledge deserves.

Knowledge organization and assessment can seem like an expensive endeavour, particularly since the return on investment is indirect. In other words, there is little visible gain from meticulously classifying and organizing knowledge assets. However, it is an important step in the knowledge management and reuse process.

As discussed in the subsection on knowledge detection, the organization can put systems in place that facilitate the detection and organization of knowledge. These depend on the situation within which the knowledge was created, and the possible recipients. A closer look at this specific aspect is presented in the recommendations segment of the knowledge reuse subsection.

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**Activity 10.1:** Knowledge Management process

**Time Allowed:** 1 hour

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Do further reading on the knowledge management process

## Summary for Study Session 10

In study session 10, you have learnt:

- 1 The processes leading to knowledge discovery and detection.
- 2 That discovering explicit knowledge involves a process of sorting through documents and other records, as well as discovering knowledge within existing data and knowledge repositories.
- 3 Tacit knowledge organization involves the use of focus groups, expertise guides, social network analysis, and knowledge coordinators.

## Self-Assessment Questions (SAQs) for Study Session 10

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

### SAQ 10.1 (Testing Learning Outcomes 10.1)

Discuss knowledge discovering processes

### SAQ 10.2 (Testing Learning Outcomes 10.2)

Explain knowledge Organization and Assessment

## Notes for Study Session 10

### SAQ 10.1

**Explicit Knowledge:** Discovering explicit knowledge involves a process of sorting through documents and other records, as well as discovering knowledge within existing data and knowledge repositories.

**Tacit knowledge:** Discovering and detecting tacit knowledge is a lot more complex and often it is up to the management in each firm to gain an understanding of what their company's experts actually know.

**Embedded knowledge:** Discovering embedded knowledge implies an examination and identification of the knowledge trapped inside organizational routines, processes, products etc, which has not already been made explicit.

### SAQ 10.2

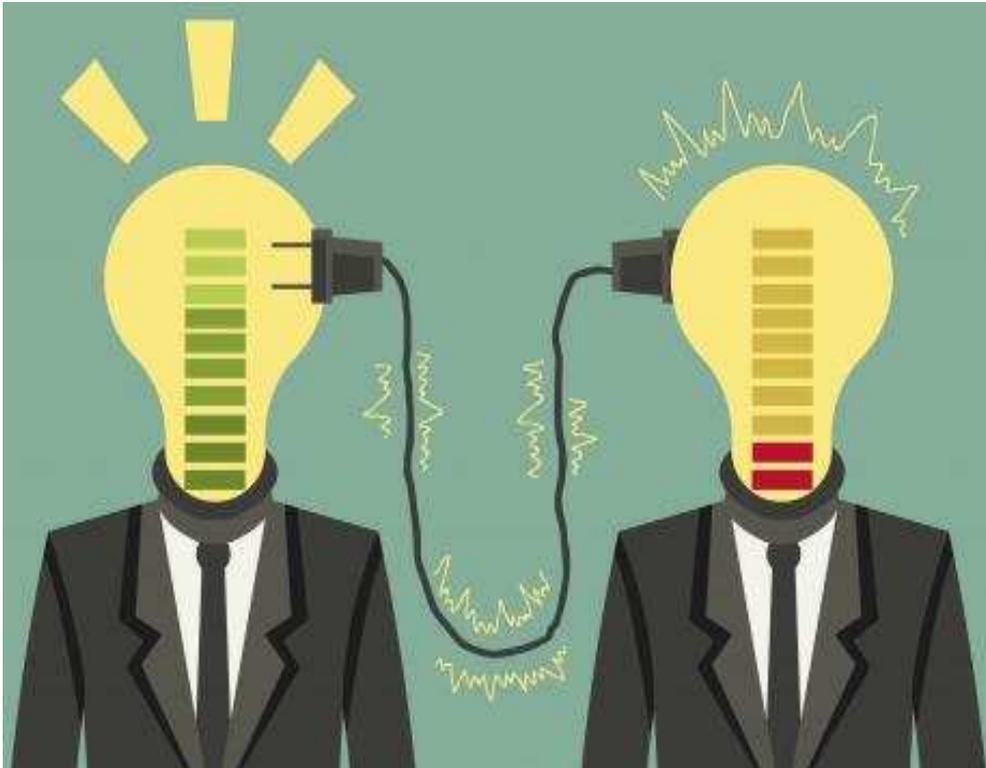
In order to determine what resources they have at their disposal and to pin point strengths and weaknesses, management needs to organize the knowledge into something manageable. Knowledge organization involves activities that "classify, map, index, and categorize knowledge for navigation, storage, and retrieval" (Botha et

al. 2008). Markus (2001) assigns the role of preparing, sanitizing, and organizing this knowledge to a "knowledge intermediary".

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## Study Session 11: Knowledge Sharing



*Source:* [http://www.informationage.com/sites/default/files/styles/article\\_landscape/public/field/image/knowledge%20sharing.jpg?itok=KEFOnwjB](http://www.informationage.com/sites/default/files/styles/article_landscape/public/field/image/knowledge%20sharing.jpg?itok=KEFOnwjB)

### Introduction

As stated earlier, knowledge management is fundamentally about making the right knowledge or the right knowledge sources (including people) available to the right people at the right time. Knowledge sharing is therefore perhaps the single most important aspect in this process, since the vast majority of KM initiatives depend upon it.

Knowledge sharing can be described as either push or pull. The latter is when the knowledge worker actively seeks out knowledge sources (e.g. library search, seeking out an expert, collaborating with a co-worker etc.), while knowledge push is when knowledge is "pushed onto" the user (e.g. newsletters, unsolicited publications, etc.).

Knowledge sharing depends on the habit and willingness of the knowledge worker to seek out and/or be receptive to these knowledge sources. The right culture, incentives, and so on must therefore be present.

In this study, you will learn the concepts of knowledge sharing according to the different types of knowledge. The role of IT will also be explored and discussed from a general perspective.

### **Learning Outcomes for Study Session 11**

At the end of this study, you should be able to:

- 11.1 Explain explicit knowledge and knowledge sharing
- 11.2 Discuss explicit knowledge sharing and IT
- 11.3 Explain explicit knowledge sharing and competitive advantage
- 11.4 Discuss tacit knowledge sharing
- 11.5 Explain embedded knowledge sharing

#### **11.1 Explicit Knowledge and Knowledge Sharing**

Successful explicit knowledge sharing is determined by the following criteria (Bukowitz and Williams 1999):

- **Articulation:** The ability of the user to define what he needs.
- **Awareness:** Awareness of the knowledge available. The provider is encouraged to make use of directories, maps, corporate yellow pages, etc.
- **Access:** Access to the knowledge.
- **Guidance:** Knowledge managers are often considered key in the build-up of a knowledge sharing system (Davenport & Prusak 2000, Gamble & Blackwell 2001). They must help define the areas of expertise of the members of the firm, guide their contributions, assist users, and be responsible for the language used in publications and other communication material. This is so as to avoid an information/knowledge overload.
- **Completeness:** Access to both centrally managed and self-published knowledge. The former is often more scrutinized but takes longer to publish and is not as hands-on (and potentially relevant). Self-published information on the other hand runs the risk of not being as reliable.

IT systems have proved extremely useful in aiding or performing many of these functions.

#### **In-Text Question**

The following are criteria of explicit knowledge sharing except

- a. Completeness
- b. Guidance
- c. Access
- d. Decision

## **In-Text Answer**

D. Decision

### **11.2 Explicit Knowledge Sharing and IT**

IT is useful in most stages of the knowledge sharing process, and it is used for content management as well as data and text mining (looking for hidden knowledge, relationships, etc. within data and documents).

Content management systems are used to update, distribute, tag, and otherwise manage content. They may include a wide range of functions, including web content management and document management systems (which I consider separately). They may be used to (based on Wikipedia entry):

- Import and create documents and multimedia material.
- Identify key users and their roles.
- Assign roles and responsibilities to different instances of content categories or types.
- Define workflow tasks. Content managers can be alerted when changes in content are made.
- Track and manage multiple versions of content.
- Publish content to a repository to support access. Increasingly, the repository is a part of the system, incorporating search and retrieval.

Document management systems use numerous advanced indexing, searching, and retrieval mechanisms (e.g. using meta data or content from the actual document) to facilitate explicit knowledge sharing.

To take advantage of all of these functions, it is a foregone conclusion that the system was chosen and implemented appropriately. This aspect is discussed in the section on knowledge management systems.

All in all, IT is a very useful tool in the management of explicit knowledge and information. This is not to say that humans no longer play a part. They certainly do, and knowledge and content managers are instrumental in ensuring that the knowledge is relevant, up to date, and presented correctly.

## **In-Text Question**

Document management systems can use retrieval mechanisms to facilitate explicit knowledge sharing. True or False

## In-Text Answer

True

### 11.3 Can Explicit Knowledge Sharing Systems Yield Competitive Advantage?

For the actual storage and retrieval, there is very little disagreement on the value of IT as a means of sharing, sorting, and accessing explicit knowledge. Disagreement, however is found is on the value placed on this function. KM and organizational learning theorists have sometimes downplayed the value of explicit knowledge and focused largely on tacit knowledge (**Brown & Duguid, Cook & Brown 1999**).

However, it has also been argued that in a world where we have an overflow of explicit knowledge and information, the ability to manage it, and thus to provide continuous streams of relevant knowledge and information, can be a source of competitive advantage in itself (**Maier 2002, Botha et al 2008**).

The latter view appears to be gaining support, although one important point should be considered: explicit knowledge management systems are quite transparent and therefore fairly easy to replicate. This means that they cannot be the source of sustained long term competitive advantage (**Jackson et al 2003**).

Considering all that have been noted, in most cases, implementing a solid system that enables explicit knowledge sharing is crucial for the following reasons:

- Not doing so would almost certainly become a source of competitive disadvantage (for lack of a better word).
- They may well provide a short term advantage, which may be extended through continuous improvements and new technologies.
- With proper care, such systems will also play a limited role in the sharing of tacit knowledge, as will be discussed in the next section.

## In-Text Question

KM and organizational learning theorists have sometimes downplayed the value of explicit knowledge. True or False

## In-Text Answer

True

### 11.4 Tacit Knowledge Sharing

Sharing tacit knowledge requires socialization. This can take many different forms. **Davenport & Prusak (2000)** outline a few relevant factors:

- Informal networks, which involve the day to day interaction between people within work environments are considered very important
- Unlike the formalized structure of the firm, these networks span functions and hierarchies. They are therefore difficult to identify and monitor.
- Management should support these networks by providing the means for communication. Japanese firms have created talk rooms where employees can engage in unstructured, unmonitored discussions.

A specific location is useful but not mandatory - this process also occurs in cafeterias etc. Management must simply provide the means for employees to foster informal networks and "trade" tacit knowledge.

- Management must also understand the value of chaos. This refers to the value of unstructured work practices that encourage experimentation and social interaction. Within a more chaotic environment, individuals are given the freedom to solve problems creatively and, in so doing, must tap into and evolve their social networks.

This is closely linked to the notion of theory in use vs. espoused theory. The value of less structured work environments is also well known within innovation management.

Codification of tacit knowledge is difficult and sometimes outright impossible. There will often be a resulting knowledge loss (**Bukowitz and Williams** 1999, **Davenport & Prusak** 2000). Often, it is much more reasonable to simply externalize the sources of tacit knowledge rather than the knowledge itself (**Davenport & Prusak** 2000).

This means that often it is better for experts to externalize what they know rather than how they know it. The main role of KM then becomes making sure that experts can be found so that tacit knowledge can be passed on through practice, mentoring, and networking (socialization), and that the firm supports and encourages the networking that is necessary for these functions to occur.

To share tacit knowledge requires a culture conducive to this type of sharing. Furthermore, knowledge managers (generalists that understand the types of knowledge that exist in the communities) must be used to locate and translate knowledge elements, thus facilitating their integration into other communities. This endeavour is very much about people and managing organizational culture change.

### **Tacit Knowledge Sharing and IT**

IT oriented approaches often place undue focus on externalization (**Swan** et al 2002). Due to the context specific nature of tacit knowledge, and due to the fact that much of

it cannot be codified, externalization should sometimes not be attempted. In this context, IT is perhaps best as an expertise locator.

However, in some cases IT can be of some limited use as a forum for externalization of tacit knowledge. For example, groupware systems that support brainstorming can help in the codification process (Botha et al 2008). Online discussion databases and forums can also be sources of externalized knowledge (Botha et al 2008), although the richness of this knowledge should be questioned.

While IT is crucial for information management, it is important not to confuse information with knowledge. Using IT to move tacit knowledge is difficult since knowledge represents the shared understanding and the sense making that is deeply rooted in the social practice of the community. The focus for the successful sharing of tacit knowledge must be on social interaction, problem solving, mentoring, and teaching.

IT's contribution to OL therefore depends on its fit to the social context of the communities. Technology must not be seen as the superior solution and should not be used to structure organizational practice (at most to supplement it). There is also the danger that IT may limit the participation of some members of the community.

It may make it more difficult for individuals to become accepted members of the community by limiting socialization channels. The challenge is to extend the reach of communication without sacrificing reciprocity in regards to knowledge sharing or socialization.

The management of tacit knowledge has traditionally been a pitfall of IT driven KM, and something that designers and manufacturers have not been adequately versed in - particularly in the 1990s. The current situation still sees the subject divided between those who take a technologically-centric view and those who take a people-oriented approach (Bali et al 2009). Increasingly however, the limitations of IT are being recognized in this context, as well as in related disciplines such as knowledge creation.

The role of IT for tacit knowledge sharing can thus be summarized as follows:

- **As an expert finder:** To locate the source of the tacit knowledge through systems like corporate yellow pages.
- **As providing limited support in the socialization of tacit knowledge:** If IT systems support varied, formal and informal forms of communication then they can help tacit knowledge sharing by supporting teams, projects, communities, etc. Functions like being able to attach notes to documents, or video

conferencing can support work environments over long distances to some degree.

It is very important to realize though that if one replaces existing socialization functions with IT, this can backfire and become outright detrimental to the firm's efforts.

- **As providing limited support in the externalization of tacit knowledge:** Through groupware applications that support the codification process, discussion forums etc. However, not only is this aspect limited, but externalization itself is only rarely feasible.

### **In-Text Question**

The role of IT for tacit knowledge include the following except

- a. Expert finder
- b Support for socialization
- c Great viscosity
- d Support for externalisation of tacit knowledge

### **In-Text Answer**

- c. Great viscosity

## **11.5 Embedded Knowledge Sharing**

As a reminder, embedded knowledge refers to knowledge locked in products, processes, routines, etc. Embedded knowledge can be shared when the knowledge from one product or process is incorporated into another. Management must understand what knowledge is locked within those sources, and they must transfer the relevant parts into a different system. To do this, Gamble and Blackwell advocate the use of:

- Scenario planning: The practice of creating a set of scenarios and hypothesizing how they might unfold by drawing upon the perspectives of experts, the firm's knowledge asserts, and so on. For more on this see here [http://www.valuebasedmanagement.net/methods\\_scenario\\_planning.html](http://www.valuebasedmanagement.net/methods_scenario_planning.html)
- After action reviews: "is a structured review or de-brief process for analysing what happened, why it happened, and how it can be done better" (Wikipedia).
- Management training

Embedded knowledge could theoretically be transferred as is, simply by testing the effects of procedures or design features transferred from one area to another. However, often it will have to be made explicit, or partially explicit, at least to the responsible managers. This way, they can hypothesize the effects that embedded knowledge has in a given situation and use simulation and experimentation to implement it in a new area.

Beyond the knowledge mapping functions described in the subsection on organization and assessment, IT use is usually more indirect. It can be used as a support in the design of simulations, experiments, and product design, and it can also provide modelling tools used in reverse engineering of products. However, these tools are not typically considered as being knowledge management systems and are thus beyond the scope of this topic.

One direct role of IT systems is as an embedded knowledge repository where procedures, guidelines, etc. are stored and retrieved. If implemented properly, with the IT system complementing rather than disrupting existing processes and culture, then it can support practices and routines, and eventually become an embedded knowledge artifact in its own right.

## **Conclusion**

To facilitate knowledge sharing, KM must understand the requirements of the users, as well as the complexities and potential problems with managing knowledge and knowledge sources. Very broadly speaking, management must therefore implement the right processes, frameworks, and systems that enable knowledge sharing. They must also foster a knowledge sharing culture that ensures that these investments are fully utilized.

Characteristics of Knowledge Sharing	Explicit knowledge	Tacit knowledge
Characteristics	Codified knowledge found in documents, databases, etc. Easy to share, modify, and copy.	Intuitive, knowledge rooted in context & practice. Difficult to articulate, share, modify, and copy.
Management	Organize, categorize, refine, & share.	Common practice, mentoring, apprenticeships, project teams, informal networks, chaos, etc.
Use of IT	Very useful	Limited/indirect

For explicit knowledge, seven issues have been identified that KM must consider, these include: articulation, awareness, access, guidance, completeness. IT has been identified as a key component of this type of knowledge sharing, facilitating and lowering the cost of the storage, access, retrieval, and variety of explicit knowledge.

Tacit knowledge sharing depends on socialization and practice. KM must offer the means for this to take place by providing the right forums (primarily physical, but also virtual), supporting networks and communities, and accepting unstructured work environments. Generalists, known as knowledge managers, should be used to gain an understanding of the location of knowledge sources and to bridge the gaps between communities and networks.

In order to support the transfer of tacit knowledge, KMS must support the socialization functions, while at the same time not enforcing strict managerial practices/routines/hierarchies/etc. One of its best roles is as an expert finder, although it can also help in the direct transfer of tacit knowledge through the support of rich and varied methods of communication, which preferably include informal communication channels.

Embedded knowledge sharing is a process whereby embedded knowledge is passed on from one product, routine, or process to another. Several tools have been described that can help management understand the effects of embedded knowledge and help in its transfer. These were: scenario planning, after action reviews, and management training.

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**Activity 11.1:** Knowledge Sharing

**Time Allowed:** 1hour

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Discuss with your colleagues the practical application of knowledge sharing to your everyday living as a learner

### **Summary for Study Session 11**

In this study, you have learnt that:

1. Knowledge management is fundamentally about making the right knowledge or the right knowledge sources (including people) available to the right people at the right time. Knowledge sharing is the most important aspect in this process, since the vast majority of KM initiatives depend upon it.
2. Knowledge sharing depends on the habit and willingness of the knowledge worker to seek out and/or be receptive to these knowledge sources.
3. It has been argued that in a world where we have an overflow of explicit knowledge and information, the ability to manage it, and thus to provide continuous streams of relevant knowledge and information, can be a source of competitive advantage in itself

### **Self-Assessment Questions (SAQs) for Study Session 11**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

#### **SAQ 11.1 (Testing Learning Outcomes 11.1)**

Explain the determinants of successful explicit knowledge sharing

#### **SAQ 11.2 (Testing Learning Outcomes 11.2)**

Identify the use of content management systems

#### **SAQ 11.3 (Testing Learning Outcomes 11.3)**

Identify why a solid system enables explicit knowledge sharing

#### **SAQ 11.4 (Testing Learning Outcomes 11.4)**

Identify the socialization tacit knowledge sharing forms.

#### **SAQ 11.5 (Testing Learning Outcomes 11.5)**

Explain embedded knowledge sharing

## Notes of Study Session 11

### SAQ 11.1

- **Articulation:** The ability of the user to define what he needs.
- **Awareness:** Awareness of the knowledge available. The provider is encouraged to make use of directories, maps, corporate yellow pages, etc.
- **Access:** Access to the knowledge.
- **Guidance:** Knowledge managers are often considered key in the build-up of a knowledge sharing system (Davenport & Prusak 2000, Gamble & Blackwell 2001). They must help define the areas of expertise of the members of the firm, guide their contributions, assist users, and be responsible for the language used in publications and other communication material. This is so as to avoid an information/knowledge overload.
- **Completeness:** Access to both centrally managed and self-published knowledge. The former is often more scrutinized but takes longer to publish and is not as hands-on (and potentially relevant). Self-published information on the other hand runs the risk of not being as reliable.

### SAQ 11.2

Content management systems are used to update, distribute, tag, and otherwise manage content. They may include a wide range of functions, including web content management and document management systems (which I consider separately).

### SAQ 11.3

- Explicit knowledge sharing provide a short term advantage, which may be extended through continuous improvements and new technologies.

### SAQ 11.4

- Informal networks, which involve the day to day interaction between people within work environments are considered very important
- Unlike the formalized structure of the firm, these networks span functions and hierarchies. They are therefore difficult to identify and monitor.
- Management should support these networks by providing the means for communication. Japanese firms have created talk rooms where employees can engage in unstructured, unmonitored discussions. A specific location is useful but not mandatory - this process also occurs in cafeterias etc. Management must simply provide the means for employees to foster informal networks and "trade" tacit knowledge.
- Management must also understand the value of chaos

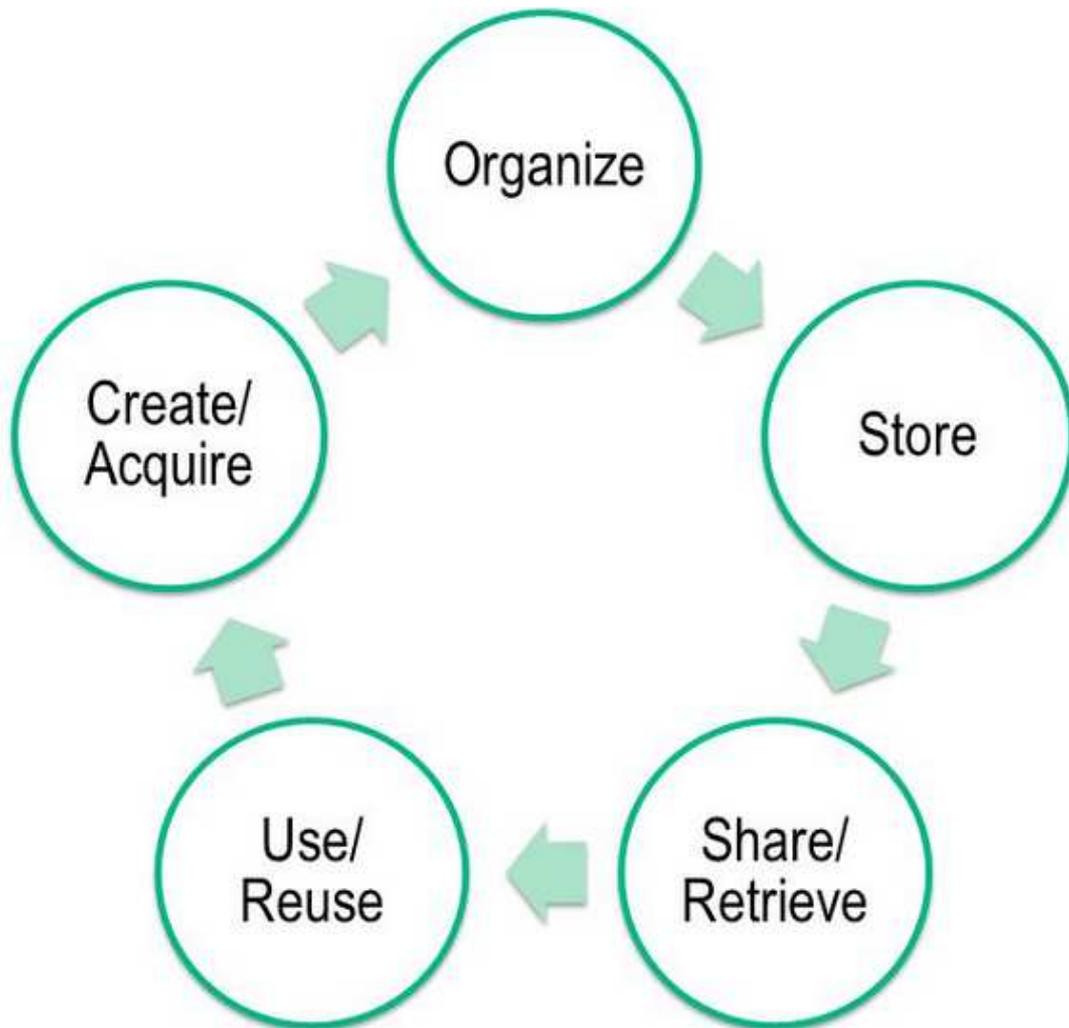
## SAQ 11.5

Embedded knowledge refers to knowledge locked in products, processes, routines, etc. Embedded knowledge can be shared when the knowledge from one product or process is incorporated into another. Management must understand what knowledge is locked within those sources, and they must transfer the relevant parts into a different system

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## Study Session 12: Managing Knowledge Reuse



*Source:* [http://images.slideplayer.com/5/1515850/slides/slide\\_9.jpg](http://images.slideplayer.com/5/1515850/slides/slide_9.jpg)

### **Introduction**

In the previous study, you learnt how knowledge is identified, organized, and shared. The issues were discussed from a broad perspective, relevant to both knowledge reuse and knowledge creation and acquisition. In this study, you will learn about the specific situations involved in knowledge reuse and discuss the different managerial challenges.

### **Learning Outcomes for Study Session 12**

At the end of the study, you should be able to:

- 12.1 Identify the three roles for knowledge reuse
- 12.2 Identify knowledge reuse situations
- 12.3 Discuss the problems and recommendations for managing knowledge reuse

## 12.1 Three Roles for Knowledge Reuse

Let's have a quick overview of the knowledge reuse process, and some useful definitions. Knowledge reuse is the process of recovering **salvaging or processing to use Knowledge again especially in a different way after reclaiming or reprocessing**. Markus (2001) identifies three roles in the reuse of knowledge:

- **Knowledge producer:** The original creator of the knowledge
- **Knowledge intermediary:** The one who packages and prepares the knowledge so that it may be stored, retrieved, and shared. This may involve any number of functions such as indexing, categorization, standardizing, publishing, mapping, etc.
- **Knowledge consumer:** The person who is the recipient and user of the knowledge in question.

As Markus points out, these three functions may involve different people or they may all be done by the same person. E.g., knowledge reuse by a person accessing the documented (explicit) research of someone in a different part of the organization requires that the producer created the documents, that either he or someone else prepared them so that they may be understood and retrieved, and that the knowledge consumer retrieved and used it.

In other words the roles were filled by two or three people and the process included explicit knowledge capture and sharing across the organization. Alternatively, in another scenario someone may want to use their own documentation later on. This process involves just one person in all three roles and the only function performed is capturing the knowledge in a way that will allow retrieval at a later point.

For tacit knowledge, the role of intermediary could be defined as the expert himself - since he must present the knowledge (through practice and socialization) in a useable way to his student, team mates, etc.

It may also fall upon the person who identified this expert and made it possible for others to reach him, e.g. if a knowledge manager creates an expert profile for publishing on the intranet; this way, the knowledge manager creates an explicit account of what the expert knows rather than promoting externalization of the knowledge itself.

To sum up, someone has to produce the knowledge, someone has to make this knowledge available, and someone has to search for and use this knowledge. This implies not just the capability, but also the willingness to share, to search, and to retrieve.

### In-Text Question

The roles of knowledge reuse include the following except

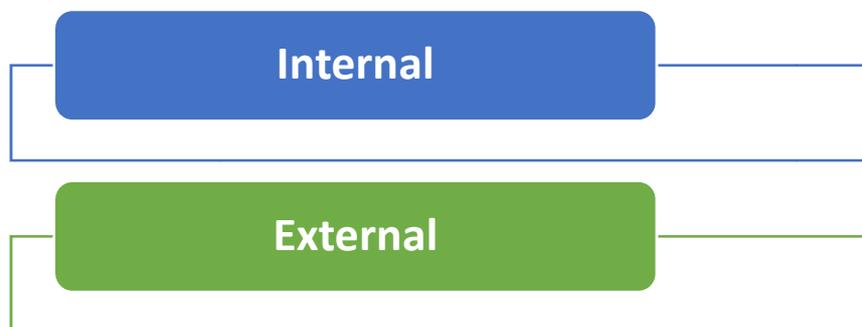
- a. Knowledge Producer
- b Knowledge Intermediary
- c Knowledge Consumer
- d Knowledge Fault Finder

### In-Text Answer

D. Knowledge Fault Finder

## 12.2 Knowledge Reuse Situations

Fruchter and Demian (2002) identify two very general types of knowledge reuse:



*Figure 12.1: Types of Knowledge Reuse*

- **Internal:** Where the knowledge producer uses his own knowledge at some future point.
- **External:** Where the knowledge consumer uses someone else's knowledge. The authors point out that the latter has a much higher failure rate for reasons that include the loss of contextual knowledge and information, and knowledge that is not properly captured due to the costs involved.

A more detailed framework is offered by Markus (2001) who identifies four knowledge reuse situations. These are defined below, drawing also upon the work of Timbrell and Jewels (2002) who found support for Markus's work through their study. The recommendation segments also draw upon some of the issues discussed under knowledge-sharing, as well as some of my own insights.

- **Shared Work Producers:** People working in teams producing knowledge for their own reuse. They are closest in knowledge-distance. They generally will have a good understanding of what they need and where to find it (including both documents and experts).

Knowledge reuse will however be harder within cross functional teams. Markus also warns that the rationale for the decision making is often forgotten. They need knowledge about how/what/why it was done, what improvements could be made.

- **Shared Work Practitioners:** People who perform similar work in different settings (e.g. same position in different locations). Knowledge is produced for someone else's use. Defining the knowledge needs is usually easy, as is locating the right experts within the network (which is used frequently). Basically, they need to know how to do something or why something works.
- **Expertise-Seeking Novices:** People who seek out knowledge they do not normally work with. They are furthest in knowledge-distance. They have great difficulty "defining the questions, locating and judging, the quality of the knowledge sources, and applying the expertise." (Timbrell & Jewels 2002).
- **Miners Secondary Knowledge:** People who try to find knowledge in work produced in different contexts, so as to apply it in other situations. The knowledge and context of the consumer may be very different to the producer. The main challenge here is defining the question. Often requires complex search algorithms which are hard to create (such as those used within text and data mining).

### In-Text Question

Shared work producers are closest in knowledge-distance. True or False

### In-Text Answer

True

## 12.3 Problems and Recommendations for Managing knowledge reuse

The managerial issues regarding knowledge reuse can be summarized as follows:

**Cost:** The time and money necessary to organize, package, store, and retrieve the knowledge. This is particularly true in the cases when tacit knowledge is externalized into explicit knowledge such as documents. A great deal of cost is associated with capturing context (something that is often impossible) and with preparing the document for retrieval. Even with IT, the latter includes categorization, summarizing, use of metadata, etc.

Content management is also necessary to check language and presentation, and also to keep the repositories relevant and up to date. The cost associated with the re-use of

tacit knowledge involves setting up the right circumstances for it to take place e.g. teams, mentoring, teaching, projects, etc., as well as the systems that support communication and expertise location.

**Specific requirements of specific individuals and groups:** Presented in Markus's four roles above. Management must be aware of the different requirements, and support each situation accordingly. Articles on knowledge reuse are still dominated by IT theories which focus largely on organizing, presenting, and retrieving explicit knowledge.

**Shared work producers, recommendations:** For explicit knowledge, try to maintain context; pay attention to indexing, categorization, and other search related functions; document rationale behind the knowledge. For cross-functional teams assign a generalist to bring the knowledge together and to ensure consistency.

For tacit knowledge support communication and informal networks (e.g. between former team members). For cross-functional teams, use the generalist to help define non-codified tacit expertise with individual team members. Record this expertise together with the individual team roles.

**Shared work practitioners, recommendations:** If explicit, decontextualize knowledge and provide all relevant information regarding indexing, searching, and relevance. Use knowledge push to make potential recipients aware of it. For tacit knowledge, create the right situations for socialization, e.g. teamwork, projects, informal communication, etc. Use IT as an expertise locator and communication support, but understand its limitations in tacit knowledge transfer.

**Expertise-seeking novices, recommendations:** For explicit knowledge decontextualize knowledge but support reconceptualization in the context used by the novice. For both knowledge types, try to codify the contents of the knowledge source e.g. by defining the content of a document or the knowledge of an expert. Provide awareness training. For tacit knowledge, follow the recommendation postulated for shared work practitioners.

**Miners Secondary Knowledge:** Record context information such as metadata. Provide relevant training regarding knowledge, data, and information repositories, as well as analysis and search techniques. Implement IT systems that match the needs of the consumer e.g. data mining and analysis tools, text mining tools, etc.

**Willingness:** Both the producer who packages knowledge and the consumer who seeks the knowledge must be willing. This brings us back to issues like culture, which promote knowledge reuse and knowledge sharing. The cultural aspect will be dealt with in the section on organizational culture change.

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**Activity 12.1: Managing knowledge reuse****Time Allowed:** 2hours

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Do personal study on managing knowledge reuse?

**Summary for Study Session 12**

In this study, you have learnt that:

- 1 Knowledge reuse is the process of recovering, salvaging or processing to use Knowledge again especially in a different way after reclaiming or reprocessing.
- 2 Elements of knowledge reuse include: roles of knowledge reuse, knowledge reuse situations and problems for managing knowledge reuse.
- 3 Articles on knowledge reuse are still dominated by IT theories which focus largely on organizing, presenting, and retrieving explicit knowledge
- 4 Shared Work Producers involves people working in teams producing knowledge for their own reuse

**Self-Assessment Questions (SAQs) for Study Session 12**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

**SAQ 12.1 (Testing Learning Outcomes 12.1)**

Identify three roles in the reuse of knowledge

**SAQ 12.2 (Testing Learning Outcomes 12.2)**

Mention two general types of knowledge reuse

**SAQ 12.3 (Testing Learning Outcomes 12.3)**

Explain the term 'cost' as a managerial issue regarding knowledge reuse

**Notes****SAQ 12.1**

- **Knowledge producer:** The original creator of the knowledge
- **Knowledge intermediary:** The one who packages and prepares the knowledge so that it may be stored, retrieved, and shared. This may involve any number of functions such as indexing, categorization, standardizing, publishing, mapping, etc.

- **Knowledge consumer:** The person who is the recipient and user of the knowledge in question.

### SAQ 12.2

**Internal:** Where the knowledge producer uses his own knowledge at some future point.

**External:** Where the knowledge consumer uses someone else's knowledge

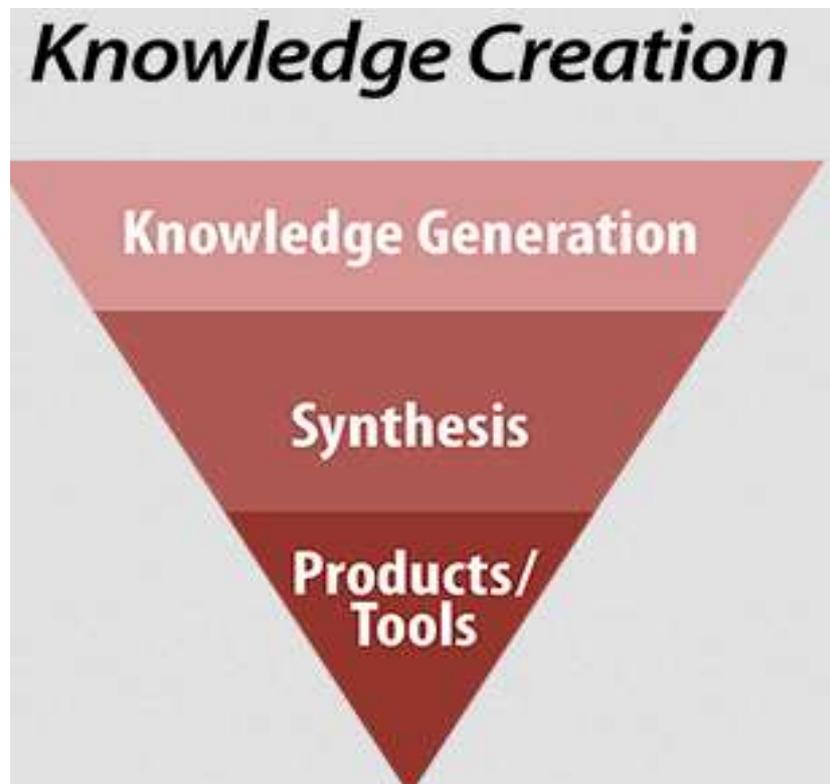
### SAQ 12.3

**Cost:** The time and money necessary to organize, package, store, and retrieve the knowledge. This is particularly true in the cases when tacit knowledge is externalized into explicit knowledge such as documents. A great deal of cost is associated with capturing context (something that is often impossible) and with preparing the document for retrieval. Even with IT, the latter includes categorization, summarizing, use of metadata, etc.

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## Study Session 13: Knowledge Creation



*Source: <https://www.epi-q.com/wp-content/uploads/2013/03/knowledge-creation2.png>*

### **Introduction**

In this study, you will learn about knowledge creation and the role of management in the knowledge creation process, the use of information technology (IT) for knowledge creation and management, knowledge acquisition and sources of knowledge acquisition. You will also learn how knowledge management initiative can lead to knowledge creation and utilization.

### **Learning Outcomes for Study Session 13**

At the end of this study, you should be able to:

- 13.1 Explain knowledge creation
- 13.2 Discuss the management of creation
- 13.3 Explain IT and knowledge creation
- 13.4 Define Knowledge acquisition
- 13.5 Explain the role of knowledge management

## 13.1 Knowledge Creation

The ability to create new knowledge is often at the heart of the organization's competitive advantage. Sometimes this issue is not treated as part of knowledge management since it borders and overlaps with innovation management (Wellman 2009).

Knowledge creation according to the Nonaka's SECI model is about continuous transfer, combination, and conversion of the different types of knowledge, as users practice, interact, and learn. Cook and Brown (1999) distinguish between knowledge and knowing, and suggest that knowledge creation is a product of the interplay between them.

The shift in condition between the possession of knowledge and the act of knowing - something that comes about through practice, action, and interaction- is the driving force in the creation of new knowledge. Furthermore, in order for this interplay to be most fruitful, it is important to support unstructured work environments in areas where creativity and innovation are important.

### **Box 13.1** Definition of knowledge creation

Knowledge creation according to the Nonaka's SECI model is about continuous transfer, combination, and conversion of the different types of knowledge, as users practice, interact, and learn.

Knowledge sharing and knowledge creation thus go hand in hand. Knowledge is created through practice, collaboration, interaction, and education, as the different knowledge types are shared and converted. Beyond this, knowledge creation is also supported by relevant information and data which can improve decisions and serve as building blocks in the creation of new knowledge.

### **In-Text Question**

Knowledge can be created through the following means except

- a. Practice
- b. Collaboration,
- c. Interaction,
- d. Simulation

## In-Text Answer

d .Simulation

### 13.2 Managing Knowledge Creation

The role of management in the knowledge creation process is thus as follows:

1. **To enable and encourage knowledge sharing:** On the tactical side, as described in the previous subsection, management must understand where and in what forms knowledge exists.

They must then provide the right forums for knowledge to be shared. For tacit knowledge this implies a particular emphasis on informal communication, while for explicit knowledge this implies a focus on a variety of IT systems. On the strategic side (to be discussed in-depth later), management must create/design the right environments, processes, and systems that provide the means and willingness for it to take place.

2. **To create a suitable work environment:** This includes the notion of creating an interplay between knowledge and knowing. It implies offering relevant courses and education, but most importantly allowing new knowledge to be created through interaction, practice, and experimentation.

**Botha** et al (2008) point to the importance of shared experiences in the knowledge creation process when dealing with tacit knowledge, and the need for an environment where these can be formed. **March** (1988) discusses how our cultural norms often stifle innovation and new knowledge creation.

He advocates environments where we recognize that goals can be created through action, where intuition is accepted and valued, and where experience is nothing more than a theory. These concepts bring us back to the concept of theory in use (referring to work environments that do not follow strict, "official" rules and procedures), and the acceptance and support of environments that allow brainstorming, trial and error, and unstructured interaction.

As an example, from innovation theory, one can refer to the practice of establishing teams to solve problems, unhindered by the bureaucracy that may exist in the firm. **Peters** (1988) refers to the value of chaos and the advantage of smaller, fast-acting teams. One common alternative is the use of cross-functional project teams.

These are usually a group of experts from different parts of the organization, led by a "generalist" project leader. If these teams are allowed the freedom to experiment and

work in an autonomous, or virtually autonomous environment, it can be a great catalyst for innovation and new knowledge creation.

Then, once the task is completed, the members return to their role in the organization, helping to spread this knowledge back into their own community of practice. The project team itself can also facilitate the creation of bridges between communities of practice, and at times may even serve as a way to extend them.

Variations of this concept can be seen in several places in innovation theory, notably in Nonaka and Takeuchi's self-organizing project teams in the hypertext organization.

- 3. To provide systems that support the work process:** These can be groupware systems that facilitate communication or brainstorming. However, they must not interfere with creative processes or communities of practice, or enforce rigid organizational practices (espoused theory).
- 4. To provide knowledge workers with timely, relevant information and data.** In today's fast paced environment this is virtually synonymous with the implementation of IT systems which can store, retrieve, organize, and present information and data in a helpful way.

### **In-Text Question**

Shared experiences is needed in the knowledge creation process when dealing with tacit knowledge. True or False

In-Text Answer

True

### **13.3 IT and Knowledge Creation**

The use of IT for knowledge creation is very much the same as it is for knowledge sharing, allowing for some degree of support in the transfer of all knowledge types. One important aspect is that it must support, and not interfere with, informal collaboration.

For example, groupware systems can be used to enhance communication between communities or teams, particularly if they support varied (e.g. video, audio, text - according to the needs of the individual firm), informal communication.

Apart from this, IT also has an important role through information management, by providing access to data and information, and allowing the manager to perform in-depth analyses. More than that, IT systems can also be programmed to spot trends in data and information and present that to the manager. This essentially enables the

manager to make better decisions and aids knowledge creation by providing some of the building blocks for new knowledge.

IT tools can also be used in the innovation process (e.g. tools used in the actual product design), but these are outside the scope of knowledge management.

Knowledge creation depends upon the mechanisms described in the subsection on knowledge sharing, combined with the ability to put knowledge into practice in an environment which supports interaction and experimentation.

The creative process is a delicate one, and it is easily ruined by strict adherence to organizational rules and regulations, or by bureaucracy. Similarly IT systems must be implemented with care (as discussed above), and not attempt to replace processes vital to knowledge creation.

### **In-Text Question**

IT roles in knowledge creation involves the following except

- a. Provision of access to data and information
- b. Usage in the innovation process
- c. Creating backdoor data usage
- d. Spotting trends in data and information

### **In-Text Answer**

- c. Creating backdoor data usage

## **13.4 Knowledge Acquisition**

Knowledge acquisition refers to the knowledge that a firm can try to obtain from external sources. External knowledge sources are important and one should therefore take a holistic view of the value chain (**Gamble & Blackwell 2001**). Sources include suppliers, competitors, partners/alliances, customers, and external experts. Communities of practice can extend well outside the firm.

Knowledge acquisition is a topic that could fill books and extend well outside the knowledge management (KM) focus. For this reason, detailed descriptions of how to manage external relationships are beyond the scope of this topic. However, since KM is inextricably linked to corporate strategy, an overview of the options available to the organization will be helpful to understanding the full potential of KM role.

This subsection will discuss the knowledge available from the different sources, and the managerial issues that must be considered. In the subsection titled "External

Knowledge Network", I will tie this back to the overall strategic level and look at the process behind external knowledge acquisition.

The main sources of knowledge acquisition are:

### 1. Customers

Customer knowledge comes in different forms. **Gebert** et al (2002) identify three different types:

- **Knowledge for customer:** The knowledge that the customers can gain in order to satisfy their knowledge needs. It can include product, market, and supplier knowledge. It can be sourced from our company or from other external sources like other customers and competitors (Zanjani 2008).
- **Knowledge about customer:** The kind of knowledge that enables us to know the customer better, to understand their motivations, and to address them better. Includes requirements, expectations, and purchasing activities.
- **Knowledge from customer:** The kind of knowledge that deals with products, suppliers, and markets. It can be used to improve our products and services.

These three categories apply to actual knowledge acquisition as well as to data and information, which can be processed and used to create knowledge (Zanjani 2008); e.g. data on purchasing habits could be analysed to create knowledge that could improve marketing or design decisions.

Knowledge sharing is thus important, although it may take many different forms depending on the area of business. KM is particularly important for B2B relationships where the buyers are usually more prominent (i.e. either buy many products or buy expensive products) and the products are more likely to be customized to the needs of the customer.

This can, and often should result in a closer relationship with more detailed communication and feedback, where the customers are involved as partners when discussing modifications and improvements (**Gerbert** et al 2002).

Some possible KM initiatives thus include:

- Collecting feedback
- Collecting and processing marketing related information
- Collecting suggestions
- Involvement in development/design

Effective acquisition of customer knowledge is dependent on customer relationship management. IT can be used in this context both as a means of collecting feedback and enhancing communication and cooperation between partners (the principles of knowledge sharing apply here within the confines of the specific relationship).

It is also useful as a way to gather data and information regarding sales, trends, feedback, and so on, which can then be used to create new knowledge within the organization.

## **2 Suppliers**

**Chan** (2009) presents a classification for supplier knowledge based on the concepts outlined by Gerbert et al (2002) regarding customer knowledge. These are:

- **Knowledge for suppliers:** This is the knowledge that suppliers require and includes "production needs and forecasts, inventory, products, customers, and markets" (Chan 2009).
- **Knowledge about suppliers:** This is knowledge that is used to understand how the supplier can match the requirements of the organization; provide insight regarding quality, delivery, defects, financial risks etc.
- **Knowledge from suppliers:** This refers to the knowledge that suppliers have gathered from their dealings with the organization.

The KM initiatives and the role of IT are similar to the ones presented in the customer segment, with the organization now taking on the role of customer. Knowledge acquisition in this case also includes data and information which can be processed and used as building blocks for new knowledge creation.

Gamble and Blackwell (2001) refer to compatible goals, cultural alignment, and leadership commitment amongst the key factors for sustained, productive, long-term relationships.

## **3. Competitors**

This deserves mention but it is a fairly straightforward aspect of KM. It simply involves collecting, organizing and presenting the data, information, and knowledge that the firm has acquired in such a way that one can search, retrieve, and analyze it. Some of this falls within the scope of information management, but it is particularly the process of using these components to create better decisions and new knowledge that is of interest here.

IT systems are very useful in this case, since the sources are largely explicit and presumably require frequent updating and manipulation. Data mining and analysis, document management systems with suitable search functions and expert systems are most relevant here.

## **4. Partners/alliances**

Alliances intended to increase knowledge are a valuable potential resource. However these must be properly managed. Key success factors include fostering trust, learning from your partner, and effectively managing the creation of knowledge relevant to both parties. Knowledge transfer can be facilitated by personnel exchanges, common projects and other forms of regular interaction, technology sharing, etc. (**Gamble & Blackwell 2001**).

Focusing on informal communication, collaboration, and socialization is of paramount importance for valuable tacit knowledge acquisition and for extending communities of practice beyond the firm's borders.

Chan (2009) once again formulates a set of knowledge types based around the work of Gerbert et al (2002):

- **Knowledge for partners:** Knowledge which satisfies their needs, including "knowledge about products, markets, and suppliers" (Chan 2009).
- **Knowledge about partners:** Knowledge acquisition focused on understanding the ability of partners to perform their role in the relationship. Includes distribution channels, products, services, etc.
- **Knowledge from partners:** The knowledge that partners have accumulated from dealing with the organization.

IT can be used in this case very similarly to the way it is used inside the organization for knowledge sharing and knowledge creation (including data/information analysis) - in other words supporting communication, collaboration, experimentation, expertise location, analysis tools, etc. The exact system has to fit the nature of the relationship and the business model.

What is of particular importance in this case is to safeguard the system so that only that knowledge which the firm is willing to share becomes available. In the 80s, joint ventures between American and Japanese firms often resulted in a lopsided endeavour favouring the latter, since the Japanese were far more willing to listen and the Americans were far more willing to talk.

It is important to remember that the goal here is two way learning; that a relationship will not last forever; and that a partner today may be a competitor tomorrow. KM must therefore be very aware of what knowledge is being shared, and the IT systems must reflect this policy.

### **In-Text Question**

Some possible KM initiatives thus include the following except

- a. Collecting feedback

- b. Collecting and processing marketing related information
- c. Collecting forms
- d. Involvement in development/design

### **In-Text Answer**

- c. Collecting forms

## **13.5 The Role of Knowledge Management KM**

Very broadly speaking, there are a couple of roles where KM efforts should feature heavily once the target has been acquired. These are:

### **To identify the valuable/redundant knowledge sources in the target organization:**

This is a very difficult process since it involves the understanding of the target company's tacit and embedded knowledge locked within people, communities, processes, networks, procedures, etc.

One of the major causes of failure in M & A is that during the restructuring process, key people are let go by mistake or key communities are disrupted. The old adage that the company should be seen more like a living organism than a machine holds very true here.

**To combine this (relevant) knowledge with the organization's knowledge assets to achieve synergy:** This is the essence of many M & A; the notion that the whole should be greater than the sum of its parts. Integrating acquired companies is a difficult task, heavy on people management and the creation of a common culture.

It is hard to say how much of this falls within KM specifically, and there certainly are no universal rules on this topic. Fundamentally, the same principles on knowledge sharing, reuse, and creation apply here, with a particular focus on culture, networks, and incentives, within a different and potentially hostile environment.

### **Other expertise**

This refers to the other sources of external knowledge available to a firm, and includes hiring new personnel or acquiring the services of consultants.

The role of KM in these cases is to make sure that the right knowledge is acquired. Essentially the process has two parts, on the one hand the strategic and tactical requirements of the firm must be taken into account, and on the other these must be compared to the knowledge assets of the organization.

If external services are acquired from consultants or other temporary service providers, KM must work together with strategic management to determine if this

knowledge is worth integrating into the firm by assessing the need to reuse it in the future vs. the cost of transferring it into the organization.

If it is deemed as something that should be integrated, then the right learning situations must be established to transfer the knowledge into the firm. These could be mentoring relationships, use of project teams that include organizational members, courses and education, etc.

### **In-Text Question**

The following are roles of knowledge management except

- a. To identify the valuable/redundant knowledge sources in the target organization
- b. To make sure that the right knowledge is acquired.
- c. To ensure liquid change in knowledge
- d. To determine if this knowledge is worth integrating into the firm

### **In-Text Answer**

- c. To ensure liquid change in knowledge

### **Summary for Study Session 13**

In this study, you have learnt that

1. Knowledge creation is about continuous transfer, combination, and conversion of the different types of knowledge, as users practice, interacts, and learns in an organization.
2. Management must understand where and in what forms knowledge exists.
3. The use of IT for knowledge creation is very much the same as it is for knowledge sharing,
4. Knowledge acquisition refers to the knowledge that a firm can try to obtain from external sources.

### **Self-Assessment Questions (SAQs) for Study Session 13**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

### SAQ 13.1 (Testing Learning Outcomes 13.1)

Explain knowledge creation

### SAQ 13.2 (Testing Learning Outcomes 13.2)

Identify the role of management in the knowledge creation process

### SAQ 13.3 (Testing Learning Outcomes 13.3)

Explain the relationship between IT and knowledge creation

### SAQ 13.4 (Testing Learning Outcomes 13.4)

Define knowledge acquisition

### SAQ 13.5 (Testing Learning Outcomes 13.5)

Identify the role of KM

## Notes

### SAQ 13.1

Knowledge creation according to the Nonaka's SECI model is about continuous transfer, combination, and conversion of the different types of knowledge, as users practice, interact, and learn. Cook and Brown (1999) distinguish between knowledge and knowing, and suggest that knowledge creation is a product of the interplay between them.

### SAQ 13.2

The roles of management in the knowledge creation process is thus as follows:

**To enable and encourage knowledge sharing:** On the tactical side, as described in the previous subsection, management must understand where and in what forms knowledge exists.

**To create a suitable work environment:** This includes the notion of creating an interplay between knowledge and knowing. It implies offering relevant courses and education, but most importantly allowing new knowledge to be created through interaction, practice, and experimentation.

1. **To provide systems that support the work process:** These can be groupware systems that facilitate communication or brainstorming. However, they must not interfere with creative processes or communities of practice, or enforce rigid organizational practices (espoused theory).
2. **To provide knowledge workers with timely, relevant information and data.** In today's fast paced environment this is virtually synonymous with the implementation of IT systems which can store, retrieve, organize, and present information and data in a helpful way.

### SAQ 13.3

The use of IT for knowledge creation is very much the same as it is for knowledge sharing, allowing for some degree of support in the transfer of all knowledge types. One important aspect is that it must support, and not interfere with, informal collaboration.

For example, groupware systems can be used to enhance communication between communities or teams, particularly if they support varied (e.g. video, audio, text - according to the needs of the individual firm), informal communication

### SAQ 13.4

Knowledge acquisition refers to the knowledge that a firm can try to obtain from external sources.

### SAQ 13.5

**To identify the valuable/redundant knowledge sources in the target organization:**

This is a very difficult process since it involves the understanding of the target company's tacit and embedded knowledge locked within people, communities, processes, networks, procedures, etc.

**To combine this (relevant) knowledge with the organization's knowledge assets to achieve synergy:** This is the essence of many M&A; the notion that the whole should be greater than the sum of its parts. Integrating acquired companies is a difficult task, heavy on people management and the creation of a common culture.

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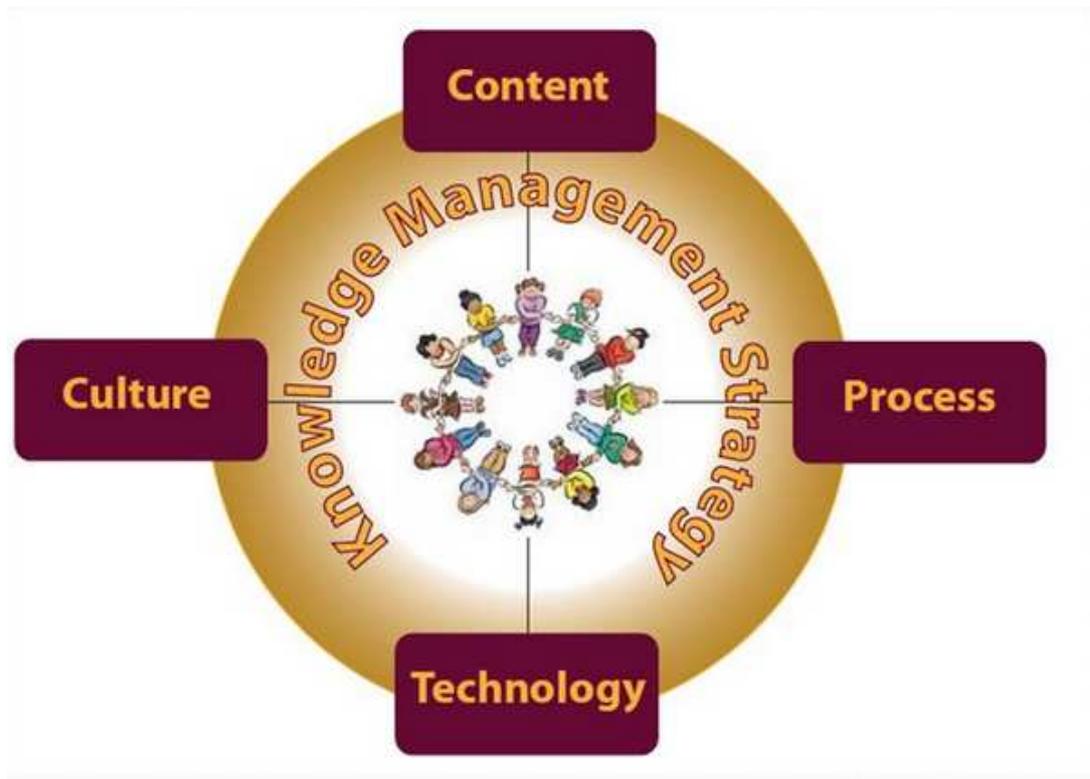
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## Study Session 14: Knowledge Management Strategy



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### Introduction

Knowledge management process deals with the general ways knowledge can be generated and managed. Strategic investments represent the company's choices/options so as to enable and enhance the processes outlined earlier (e.g. knowledge generation and sharing) and to help define which knowledge is relevant (i.e. in line with strategic objectives) and which is not. In this study session you will learn about knowledge management strategy and how long-term knowledge management strategy affects:

- Organizational Structures
- Organizational Culture
- Knowledge Retention
- Core Competencies
- External Knowledge Network
- Knowledge Management Systems
- Summary: Knowledge Management Best Practices

## Learning Outcomes for Study Session 14

At the end of this study, you should be able to:

- 14.1 Explain organisational structures
- 14.2 Define organisational culture change
- 14.3 Discuss the management of organisational culture change
- 14.4 Explain knowledge retention
- 14.5 Discuss knowledge retention strategy

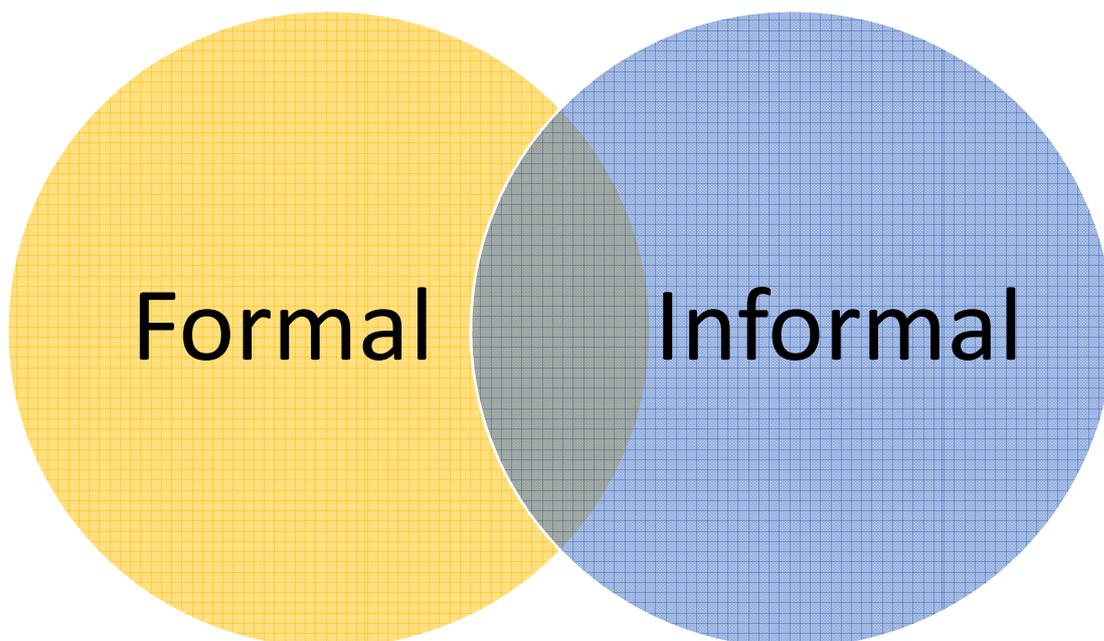
### 14.1 Managing Organizational Structures

This study deals with the physical and non-physical divisions and barriers that influence the way knowledge management (KM) operate. By "organizational structure", it means the layout of the company itself and also to the various bodies that exist within it.

It is important to note that many elements within this topic stretch well outside our focus, and volumes could be written on it alone. The focus here will be only on the general elements that are directly related to KM.

#### 14.1.1 Types of Organizational Structures

Organizational structures deal with the way the firm is organized, and the way people relate to one another. Broadly speaking, there are two types of organizational structure, namely:



*Figure 14.1: Types of organisational structure*

These two concepts are not independent, and the formal structure may greatly influence informal networks, both positively and negatively.

**Formal:** The formal organizational structure is the official structure of the organization, which is normally displayed on an organizational chart, and which denotes the hierarchical relationships between members of the firm. It is beyond the scope of this lecture to offer a discussion on the various formal organizational structures. However, there are a few things that are relevant to KM:

1. The formal organizational structure must not be so rigidly enforced so as not to stifle informal structures such as communities of practice, where knowledge sharing and creation may take place. It is the knowledge manager's job to understand the knowledge dynamics of the organization and to recognize how the formal and informal structures coexist.
2. The formal organizational structure, particularly in a larger firm with separate departments, will impact knowledge flows. There is no set structure that is best, since most have advantages and disadvantages depending upon the business type, firm size, etc. However, studies seem to indicate that flatter, decentralized structures are more effective for KM.
3. This also makes sense logically, since knowledge flows would be less hindered in such a structure. Implementing changes to formal structures can thus mean restructuring the organization, but it can also mean enforcing existing structures to a lesser or greater degree.

**Informal:** The unofficial organizational structures are the ones that are created through informal networks, as a result of working within the organization. They represent the way people actually interact. Brown and Duguid (1992) advocated looking at the firm as a community of communities. Increasingly, the value of these informal structures is being understood, and the knowledge manager must learn to identify and support these networks.

This process is closely related to KM, since knowledge flows and repositories (particularly tacit) are dependent upon these structures. KM therefore must play a central role in their management, including identification of the structures and the knowledge they hold, implementing changes, bridging gaps between communities, and so on.

Unfortunately, implementing changes to informal social networks is difficult without running the risk of disrupting them. There are however several ways that managers can influence social networks:

- Generalists (sometimes referred to as gatekeepers) can be used to identify communities and their expert know-how, and to help coordinate activities such as cross-functional projects.
- Project teams and other teamwork can serve as a means to bridge the gap between communities.
- Common physical meeting areas can allow communities to grow and flourish.
- Virtual socialization and people finders can support communities of practice.
- Common vision, goals, ideals, social gatherings etc. and a climate of trust can serve as a way to lessen the distance between organizational members and communities.

### **In-Text Question**

Formal organizational structure must not be so rigidly enforced. True or False

### **In-Text Answer**

True

## **14.2 Organizational Culture Change**

The concept of organizational culture has already been discussed in a previous subsection. I will therefore keep my introduction to the subject to a minimum, and instead focus almost exclusively on organizational culture change.

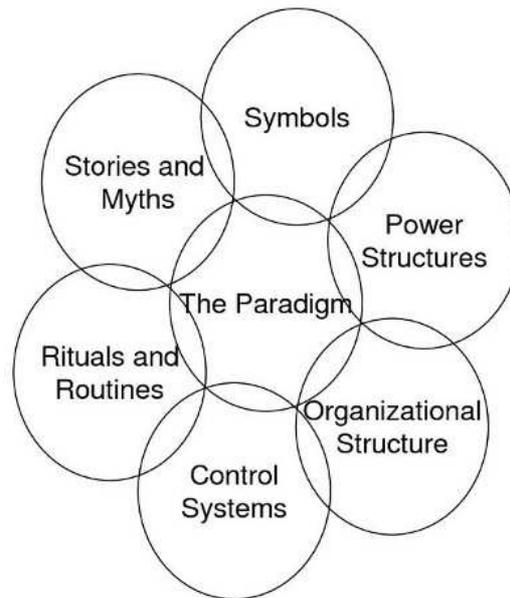
Organizational culture represents the way things are done in an organization, encompassing the values, beliefs, and attitude that generate a common framework for interpreting events.

Knowledge sharing, and thus all aspects related to knowledge management (KM), depend upon organizational culture. Trust is a particularly important issue, since workers need to feel secure that they are not jeopardizing themselves by engaging in knowledge sharing.

In order for proper cooperation to take place, management must create a culture where knowledge sharing is seen as beneficial for the individual as well as the organization. Managing organizational culture change is therefore at the very core of KM and organizational learning processes.

### **14.2.1 Defining and Mapping Organizational Culture**

Johnson (2001) presents a model called the cultural web (see below), outlining the various components of organizational culture.



*Figure 14.2: Components of organizational structure*

**The paradigm:** The set of assumptions shared and taken for granted by the organization.

**Rituals and Routines:** These represent "the way we do things around here". They point to what is valued, and include behaviours that are taken for granted as being correct.

**Stories and myths:** The organization's folklore that passes on the common perception of past events, thus reinforcing beliefs and passing them on to newcomers.

**Symbols:** All the symbolic elements of the firm, including titles and dress codes.

**Control Systems:** Systems that are designed to promote certain activities by rewarding correct behaviour and monitoring performance.

**Organisation Structures:** The formal structure of the organization, as explained in the subsection on organizational structures (though in this case it is considered solely in regards to its influence on culture).

**Power structures:** The more powerful groups are also most likely to be involved in shaping the paradigm. A big problem arises when "the main targets for change are also those who hold the power." (Bali et al 2009).

Johnson (2001) advocates culture mapping according to this framework so as to assess the culture as a whole and be able to determine its compatibility with strategy.

### **In-Text Question**

The various components of organizational culture include the following except

- a. Symbols

- b Power Structure
- c. Control Systems
- d. Power Shift

### **In-Text Answer**

- d. Power Shift

## **14.3 Managing Organizational Culture Change**

Wellman (2009) presents a series of leadership roles that will help facilitate organizational culture change towards a knowledge friendly culture:

- **Acknowledge the existence and influence of organizational culture:** It must be brought into the open so people can see and understand how it affects activities
- **Have a clear and persistent vision of what the culture should be and of what changes need to be applied:** This vision must be understood by management at all levels and spread across the organization.
- **Consciously manage culture:** Wellman suggests using health assessments and employee surveys to evaluate progress and direction. Expanding upon this, one might add the use of incentives (whatever is suitable within that particular organization) and of using managers as intermediaries between different cultures within the organization.

Management must strive to create a culture where knowledge sharing is perceived as beneficial to the whole and also to the individual. In other words, through shared vision, incentives, etc. they must foster an atmosphere of trust to ensure that individuals have faith in the principle of reciprocity. They must also bridge cultural differences that exist between different communities and power structures within the organization.

Gardner presents a somewhat more concrete approach to organizational culture change. He states that it is dependent on redefining the assumptions that shape the common understanding, or in other words the paradigm.

It thus involves introducing "anomalies" that present a reality that cannot be true under the old assumptions. As more and more anomalies are presented, people will eventually abandon old beliefs and frames of understanding and eventually be willing to adopt new ones.

No matter what, organizational culture change is a difficult process that is likely to meet significant resistance. Its stubbornness is due in part to the fact that it is history

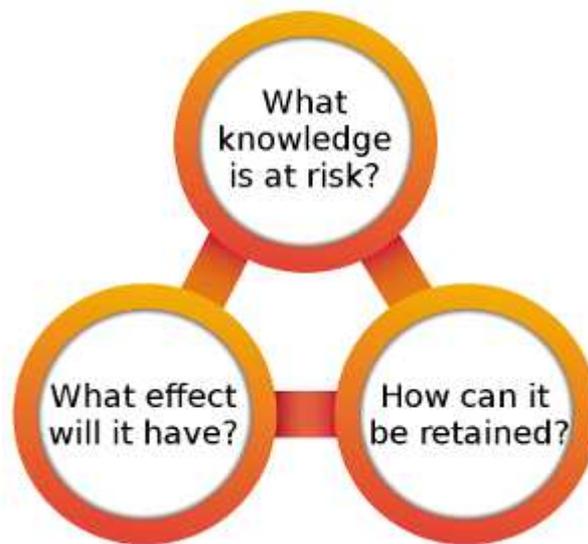
dependent, woven into everyday practice, and used as socializing mechanism for newcomers (Beitler 2005). However, as Beitler argues, despite all the hurdles, managing culture simply must be done.

#### 14.4 Knowledge Retention

Knowledge retention involves capturing knowledge in the organization so that it can be used later. In a previous section on organizational memory, Walsh and Ungson (1991) defined five knowledge repositories, namely individuals, culture, transformations (i.e. procedures & formalized systems), structures (e.g. formal and informal networks), and external activities.

This is where knowledge can exist or be retained in an organization. In this section, you will learn about the managerial side, so as to answer the question: How can management promote the retention of (crucial) knowledge?

Most often, one hears of knowledge retention in the context of losing key employees and using techniques such as exit interviews to try to capture their knowledge. In reality, knowledge retention should be integrated into how the organization operates and start well before a key employee is about to depart. Although it is considered crucial for long term organizational success, few organizations have formal knowledge retention strategies (Liebowitz 2011).



*Figure 14.3: Knowledge retention*

A knowledge retention strategy as a part of knowledge management (KM) will identify the knowledge resources that are at risk and must be retained, and then implement specific initiatives so as to keep these resources in the firm. Like most

other KM-related processes and strategies, success depends upon successful knowledge sharing and having a knowledge sharing and learning organizational culture.

Apart from the more general knowledge sharing initiatives that a firm may use - e.g. support of formal and informal knowledge networks (social areas, social media, meetings, company functions, knowledge fairs, expertise locator, etc.), changing the organization culture, etc. - examples of tools and techniques which can be used specifically for knowledge retention include (adapted from Smith 2007, Liebowitz 2009, and Liebowitz 2011):

- Implementing reward structures to encourage sharing of key knowledge.
- Use of project teams and cross-functional project teams.
- After-action reviews.
- Storytelling.
- Mentoring programs & job shadowing.
- Interviews & exit interviews.
- Job rotation.
- Company procedures/processes manuals.
- Taking advantage of the knowledge of retirees.

### **In-Text Question**

Knowledge retention does not involve reuse.

### **In-Text Answer**

False

## **14.5 Knowledge Retention Strategy**

**Doan** et al (2011) identify three basic questions that must be asked when considering knowledge retention:

- a. What knowledge may be lost?
- b. What are the organizational consequences of losing that knowledge?
- c. What actions can be taken to retain that knowledge?

Expanding upon these questions, one can outline several concrete steps necessary in the formulation of a knowledge retention strategy, and they are:

1. Understanding your risk factor: Liebowitz (2011) identified
  - a. The average age of your employees is high
  - b. The company has placed insufficient focus on:
    - i. knowledge capture

- ii. mentoring programs
    - iii. employee training and development
  - c. Information is difficult to find or is often misplaced.
  - d. There is little informal communication in the organization.
  - e. Many knowledgeable employees are leaving the organization.
2. Classifying your knowledge: Knowing the knowledge resources of the organization, including where they are and in what form they exist (something covered under knowledge organization and assessment).
  3. Understanding which knowledge is most critical (also covered knowledge organization and assessment).
  4. Understanding the pillars of knowledge retention (Liebowitz 2009 & 2011): Knowledge retention consists of a wide range of tools, some easy and some hard to implement. Liebowitz identifies four categories which encompass all the initiatives within knowledge retention. These are:
    - a. Recognition and reward structure: Management has the choice to use either intrinsic motivators (i.e. which make the job itself more satisfying, such as praise or recognition) or extrinsic motivators (i.e. which offer benefits unrelated to the job, such as money) (**Gamelgaard** 2007).  
 These must take organizational as well as national cultural factors into account (**Gamelgaard** 2007), but overall the most effective and longer lasting appear to be intrinsic motivators (**Gamelgaard** 2007 & **Liebowitz** 2009). However, a combination of both is usually the way to go.
    - b. Bidirectional knowledge flow: Establishing a two-way system of knowledge capture, where knowledge is not only passed down from the senior employee to the junior employee, but also vice versa.
    - c. Personalization and codification: Personalization refers to connecting people and includes tools such as mentoring, job rotation, knowledge fairs, communities, and so on, while codification includes tools like after action reviews, various knowledge repositories, lessons learned systems, etc. (Liebowitz 2009).
    - d. The golden gem: Bringing back important retirees in various capacities. This includes rehire programs, consultancy, part-time work, temporary jobs, etc. (Corporate Executive Board 2005).

Using a phased retirement system (e.g. leave of absence – part time work – casual rehire) can also help to slowly lose a key employee and to gradually transfer all his key knowledge to the organization (Corporate Executive Board 2005).

5. Understanding the success factors: **Doan** et al (2011), following a comprehensive review of knowledge retention literature, arrive at the following key success factors:
- a. Top management support
  - b. Knowledge retention strategy
  - c. Learning culture
  - d. Human resource practices (since knowledge resides in people, knowledge retention is closely linked to HR practices including recruitment, education, rewards, and performance management)
  - e. Information and communication technology tools :

### **In-Text Question**

Some basic questions that must be asked when considering knowledge retention include the following except \_\_\_\_\_

- a. What knowledge may be lost?
- b. What are the organizational consequences of losing that knowledge?
- c. What actions can be taken to retain that knowledge?
- d. What type of education needed

### **In-Text Answer**

d. What type of education needed?

### **Summary for Study Session 14**

In study session 14, you have learnt that:

1. Organizational structures and organizational culture can influence knowledge management and knowledge retention.
2. Knowledge retention involves capturing knowledge in the organization so that it can be used later. It identifies three basic questions that must be asked when considering knowledge retention.
3. Knowledge retention consists of a wide range of tools, some easy and some hard to implement.

## **Self-Assessment Questions (SAQs) for Study Session 14**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

### **SAQ 14.1 (Testing Learning Outcomes 14.1)**

Explain the types of organisational structure

### **SAQ 14.2 (Testing Learning Outcomes 14.2)**

Outline the various components of organizational culture

### **SAQ 14.3 (Testing Learning Outcomes 14.3)**

Explain the management of organisational culture change

### **SAQ 14.4 (Testing Learning Outcomes 14.4)**

Define Knowledge retention

### **SAQ 14.5 (Testing Learning Outcomes 14.5)**

Explain knowledge retention strategies

## **Notes on Study Session 14**

### **SAQ 14.1**

Broadly speaking, there are two types of organizational structure, namely formal and informal. These two concepts are not independent, and the formal structure may greatly influence informal networks, both positively and negatively.

The formal organizational structure is the official structure of the organization, which is normally displayed on an organizational chart, and which denotes the hierarchical relationships between members of the firm.

Informal: The unofficial organizational structures are the ones that are created through informal networks, as a result of working within the organization.

### **SAQ 14.2**

The paradigm: The set of assumptions shared and taken for granted by the organization.

Rituals and Routines: These represent "the way we do things around here". They point to what is valued, and include behaviours that are taken for granted as being correct.

Stories and myths: The organization's folklore that passes on the common perception of past events, thus reinforcing beliefs and passing them on to newcomers.

Symbols: All the symbolic elements of the firm, including titles and dress codes.

Control Systems: Systems that are designed to promote certain activities by rewarding correct behaviour and monitoring performance.

Organisation Structures: The formal structure of the organization, as explained in the subsection on organizational structures (though in this case it is considered solely in regards to its influence on culture).

Power structures: The more powerful groups are also most likely to be involved in shaping the paradigm.

### SAQ 14.3

- **Acknowledge the existence and influence of organizational culture:** It must be brought into the open so people can see and understand how it affects activities
- **Have a clear and persistent vision of what the culture should be and of what changes need to be applied:** This vision must be understood by management at all levels and spread across the organization.
- **Consciously manage culture:** Wellman suggests using health assessments and employee surveys to evaluate progress and direction.

### SAQ 14.4

Knowledge retention involves capturing knowledge in the organization so that it can be used later.

### SAQ 14.5

Concrete steps necessary in the formulation of a knowledge retention strategy include the following:

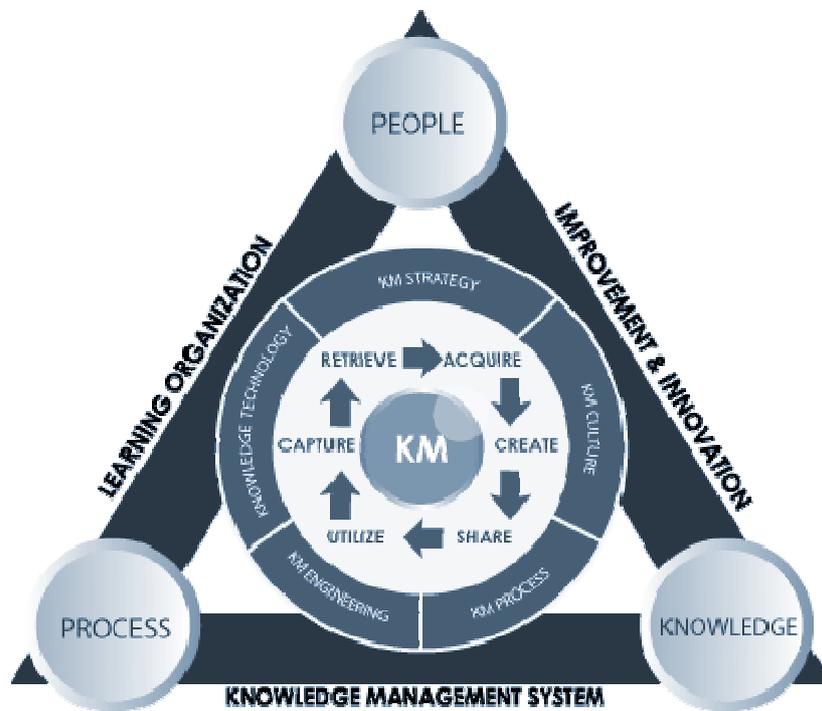
- a. Understanding your risk factor
- b. Classifying your knowledge
- c. Understanding which knowledge is most critical
- d. Understanding the pillars of knowledge retention

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## Study Session 15: KM and Core Competencies



*Source: <http://cdn.logicialdoc.com/images/knowledge-management/knowledge-management-life-cycle-bgrey.png>*

### Introduction

The knowledge management definition presented earlier, involved the reuse and creation of relevant knowledge. The word ‘relevant’ links knowledge management (KM) to the concept of organizational core competencies. The challenge here is to discuss this subject without diverging too much into related topics that are not directly relevant to KM. In this study, you will learn about the core competencies required by organization members for knowledge management issues and the establishment of knowledge management system.

### Learning Outcomes for Study Session 15

At the end of this study, you should be able to:

- 15.1 Define core competencies
- 15.2 Explain knowledge management systems
- 15.3 Discuss the problems and failures of knowledge management systems
- 15.4 Define the term adoption, acceptance and assimilation

## 15.1 Core competencies

Definitions vary greatly. The term was originally coined by Prahalad and Hamel (1990) who defined it as "the collective learning of the organization, especially how to coordinate different production skills and integrate multiple streams of technologies". Since then it has been defined in multiple ways, but very generally, core competencies refer to the firm's primary expertise, which is a source of sustained competitive advantage.

Arriving at a more precise definition is not necessary for our purpose here. Suffice it to say, that these are key capabilities, which, from the resource-based perspective of the firm, are the primary drivers of innovation and competitive advantage.

Core competencies thus have a large knowledge component, and managing them is, in the very least, a product of corporate strategy working with KM and innovation management. This simplified model has strategy dictating the overall direction, KM managing the knowledge dynamics, and innovation management turning core competencies into profitable core products.

To understand the role of KM, take a look at how core competencies are managed:

- 1. Identifying and assessing core competencies:** The firm should map out its key competencies, possibly linking them directly to specific core products. Then, an evaluation must take place, assessing what one has vs. what one needs to have (as determined by strategy and the competitive environment).  
KM is responsible for identifying where the key knowledge is located, including the tacit expertise and knowledge embedded in products, routines, etc, as well as identifying knowledge gaps.
- 2. Sustaining core competencies:** Organizational core competencies, like all knowledge assets, have the virtue of improving rather than depreciating through use. Conversely, lack of use will lead to erosion of any skill set. The role of KM here is twofold, on the one hand, it must keep stock of the state of key knowledge assets and, on the other, it must leverage key knowledge assets across the organization.
- 3. Building core competencies:** Building new core competencies involves an interplay between knowledge, practice, coordination, and refinement. Knowledge assets must be built, enhanced, combined, and coordinated in an environment that supports experimentation and improvement. Building core competencies can be a complicated endeavour since sustained competitive advantage is derived from assets that are hard to imitate (**Dierickx and Cool 1989**).

From a KM perspective, this implies the build-up of specific tacit knowledge and expertise (i.e. uncodified knowledge that is generally more valuable, and inherently more difficult to copy and transfer), often across multiple departments or functions.

- 4. Unlearning core competencies:** Organizations have a habit of trying to keep doing what they have always been doing. Unlearning a competency when it is no longer useful is one of the key aspects of a successful firm, and history is riddled with examples of companies that have failed to do so.

In the process of unlearning, KM again plays an important role by identifying and managing the firm's knowledge assets in the right direction. This may be done through re-training, restructuring, creating new knowledge flows, external knowledge acquisition, outright removal, etc.

The specific dynamics of the processes of knowledge creation, knowledge acquisition, knowledge sharing, and knowledge reuse, which are central to the management of core competencies, have been discussed earlier. The purpose of this section is to emphasize that KM is not just a collection of individual initiatives. The build-up of skills and competencies, involving the coordination of multiple KM disciplines with other organizational functions, must often be managed according to long-term strategic goals and coordinated across the organization.

### **Knowledge Management Systems**

The issue of knowledge management systems has probably always been the most discussed and debated topic within knowledge management (KM). Even though knowledge management systems are not the most important part of KM (with some arguing that they are not even absolutely necessary), this is still the subject that generates most interest.

Consider the impact of IT in all the knowledge management strategy subsections, with particular emphasis on its role in knowledge sharing. From this point on, the discussion will be organized as follows:

- This subsection will discuss the theoretical implementation of knowledge management systems and its impact on the organization.
- The section titled "KM Tools" will look at some of the main categories of systems available.

### **In-Text Question**

Leveraging key knowledge assets across the organization is an important role of knowledge management. True or False

### **In-Text Answer**

True

## **15.2 What are Knowledge Management Systems?**

Knowledge management systems refer to any kind of IT system that stores and retrieves knowledge, improves collaboration, locates knowledge sources, mines repositories for hidden knowledge, captures and uses knowledge, or in some other way enhances the KM process.

If the explanation above makes the definition of these systems seem vague, that is because there is no consensus as to what constitutes a knowledge management system, much like there is no consensus regarding KM. Furthermore, since KM is involved in all areas of the firm, drawing a line is very difficult. James Robertson (2007) goes as far as to argue that organizations should not even think in terms of knowledge management systems.

He argues that KM, though enhanced by technology, is not a technology discipline, and thinking in terms of knowledge management systems leads to expectations of "silver bullet" solutions. Instead, the focus should be determining the functionality of the IT systems that are required for the specific activities and initiatives within the firm.

- Groupware systems & KM 2.0
- The intranet and extranet
- Data warehousing, data mining, & OLAP
- Decision Support Systems
- Content management systems
- Document management systems
- Artificial intelligence tools
- Simulation tools
- Semantic networks

These categories will cover the vast majority of the systems that people will normally link directly to KM.

### **In-Text Question**

\_\_\_\_\_systems refer to any kind of IT system that stores and retrieves knowledge.

- a Knowledge management
- b Power Management
- c IT management
- d Information Management

### **In-Text Answer**

- a. Knowledge management

### **15.3 Problems and Failure Factors**

Too often, the effects of technology on the organization are not given enough thought prior to the introduction of a new system. There are two sets of knowledge necessary for the design and implementation of a knowledge management system (Newell et al., 2000):

1. The technical programming and design know-how
2. Organizational know-how based on the understanding of knowledge flows

The problem is that rarely are both sets of knowledge known by a single person. Moreover, technology is rarely designed by the people who use it. Therefore, firms are faced with the issue of fit between IT systems and organizational practices, as well as with acceptance within organizational culture (Gamble & Blackwell 2001). Botha et al (2008) stress the importance of understanding what knowledge management systems cannot do.

They point to the fact that introducing knowledge sharing technologies does not mean that experts will share knowledge - other initiatives have to be in place. Akhavan et al (2005) identify several additional failure factors including: lack of top management support, organizational culture, lack of a separate budget, and resistance to change.

Building upon all these, and incorporating previously discussed elements, failure factors of knowledge management systems are as follows:

- Inadequate support: managerial and technical, during both implementation and use.
- Expecting that the technology is a KM solution in itself.
- Failure to understand exactly what the firm needs (whether technologically or otherwise).

- Not understanding the specific function and limitation of each individual system.
- Lack of organizational acceptance, and assuming that if you build it, they will come – lack of appropriate organizational culture.
- Inadequate quality measures (e.g. lack of content management).
- Lack of organizational/departmental/etc. fit - does it make working in the organization. easier? Is a system appropriate in one area of the firm but not another? Does it actually disrupt existing processes?
- Lack of understanding of knowledge dynamics and the inherent difficulty in transferring tacit knowledge with IT based systems (see segment on tacit knowledge under knowledge sharing).
- Lack of a separate budget.

### **In-Text Question**

Failure factors of knowledge management systems are the following except:

- a. Inadequate support: managerial and technical, during both implementation and use.
- b. Expecting that the technology is a KM solution in itself.
- c. Technology repertoire
- d. Failure to understand exactly what the firm needs (whether technologically or otherwise).

### **In-Text Answer**

- c. Technology repertoire

## **15.4 Adoption, Acceptance and Assimilation**

According to Hecht et al. (2011), the process of successful implementation has three stages: adoption, acceptance, and assimilation. Based on recognized models and theories, the authors identified three comprehensive sets of factors affecting these three elements. The resulting model organized the KMS implementation factors into the following categories:

- Adoption:
  - Influenced by design: Innovation characteristics, fit, expected results, communication characteristics.
  - Not influenced by design: Environment, technological infrastructure, resources, and organizational characteristics.
- Acceptance

- Influenced by design: Effort expectancy, performance expectancy.
- Not influenced by design: Social influences, attitude towards technology use.
- Assimilation:
  - Influenced by design: social system characteristics, process characteristics.
  - Not influenced by design: Management characteristics, institutional characteristics.

### **Step 1: KMS Adoption**

Some of the key factors identified by **Hecht** et al (2011) are: characteristics, commercial advantage, cultural values, information quality, organizational viability, and system quality. To promote KMS adoption:

- Start with an internal analysis of the firm.
- Evaluate information/knowledge needs & flows, lines of communication, communities of practice, etc. These findings should form the basis of determining the systems needed to complement them.
- Make a thorough cost-benefit analysis, considering factors like size of firm, number of users, complexity of the system structure, frequency of use, upkeep & updating costs, security issues, training costs (including ensuring acceptance) etc. vs improvements in performance, lower response time, lower costs (relative to the previous systems) etc.
- Evaluate existing work practices and determine how the systems will improve - and not hinder the status quo.
- One very interesting rule of thumb presented by Botha et al (2008), is that "the more tacit the knowledge, the less high-tech the required solution". For example, expert knowledge is often best supported by multimedia communication technology and by expert finders. Beyond that, it is about human interaction and collaboration.

### **Step 2: KMS acceptance**

Some of the factors outlined by **Hecht** et al. (2011) include: anxiety, ease of use, intrinsic motivation, job-fit, results demonstrability, and social factors. Promoting acceptance can be improved by:

- Involve the users in the design and implementation process when possible (Liebowitz 1999).
- Involve the user in the evaluation of the system when applicable (Liebowitz 1999).
- Make it as user friendly and as intuitive as possible (Frank 2002).
- Support multiple perspectives of the stored knowledge (Frank 2002).
- Provide adequate technical and managerial support.
- Use product champions to promote the new systems throughout the organization.

### **Step 3: KMS Assimilation**

Some of the factors identified by **Hecht** et al. (2011) include: knowledge barrier, management championship, process cost, process quality, and promotion of collaboration. Assimilation can be improved by:

- Content management (**Gamble & Blackwell**, 2011): In order for the system to remain useful, its content must be kept relevant through updating, revising, filtering, organization, etc.
- Perceived attractiveness factors (**Gamble & Blackwell**, 2001): This includes not only the advantages of using the KMS, but also of management's ability to convince users of these advantages.
- Proper budgeting: i.e. planning expenses and implementing a KMS that is cost efficient.
- Focus on collaboration. In particular, consider the adoption of enterprise 2.0 / KM 2.0 systems, which by design promote collaboration while generally being inexpensive and often quite popular.
- Management involvement: The system must be championed by management at all levels.

Naturally, these factors do not apply to all systems. Some are fairly straightforward and accepted in today's society (e.g. email). However, the strategic implications of implementing knowledge management systems that significantly aim to change the way things are done in the organization requires proper consideration and careful planning.

### **In-Text Question**

KMS adoption can be promoted through the following except \_\_\_\_\_

- a. Start with an internal analysis of the firm.
- b Evaluate information/knowledge needs & flows, lines of communication, communities of practice, etc.
- c. Make a thorough cost-benefit analysis
- d. Market your research

### **In-Text Answer**

d. Market your research

### **Summary for Study Session 15**

In study session 15, you have learnt:

1. The core competencies in knowledge management, how they are managed and why it is necessary to identify them.
2. The knowledge management systems, problems and failures.
3. About the two sets of knowledge necessary for the design and implementation of a knowledge management system.
4. About Adoption, Acceptance and Assimilation

### **Self-Assessment Questions (SAQs) for Study Session 15**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

#### **SAQ 15.1 (Testing Learning Outcomes 15.1)**

What do you understand by the term ‘core competencies’ in knowledge management?

#### **SAQ 15.2 (Testing Learning Outcomes 15.2)**

Define Knowledge management systems

#### **SAQ 15.3 (Testing Learning Outcomes 15.3)**

Outline two sets of knowledge necessary for the design and implementation of a knowledge management system

#### **SAQ 15.4 (Testing Learning Outcomes 15.3)**

Explain Adoption, Acceptance and Assimilation

## Notes for Study Session 15

### SAQ 15.1

Core competencies refer to the firm's primary expertise, which is a source of sustained competitive advantage

### SAQ 15.2

Knowledge management systems refer to any kind of IT system that stores and retrieves knowledge,

### SAQ 15.3

1. The technical programming and design know-how
2. Organizational know-how based on the understanding of knowledge flows

### SAQ 15.4

- Adoption:
  - Influenced by design: Innovation characteristics, fit, expected results, communication characteristics.
  - Not influenced by design: Environment, technological infrastructure, resources, and organizational characteristics.
- Acceptance
  - Influenced by design: Effort expectancy, performance expectancy.
  - Not influenced by design: Social influences, attitude towards technology use.
- Assimilation:
  - Influenced by design: social system characteristics, process characteristics.
  - Not influenced by design: Management characteristics, institutional characteristics.

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## Study Session 16: Careers in Knowledge Management



*Source: [https://www.healthcareers.nhs.uk/sites/default/files/styles/hero\\_image/public/hero\\_images/Staff-by-a-desk.JPG?itok=rHM2tHeB](https://www.healthcareers.nhs.uk/sites/default/files/styles/hero_image/public/hero_images/Staff-by-a-desk.JPG?itok=rHM2tHeB)*

### **Introduction**

KM can be taken as a stand-alone discipline or as part of a broader education. KM courses and certifications exist at all levels, though it is usually taken as a graduate level subject. As with all subjects, the depth of the course will affect the kind of position that you are qualified for within the spectrum of KM-related positions (see "Knowledge Management Positions and Roles").

Generally speaking, KM programs tend to have either a managerial/business or an IT focus. Since KM is now inextricably linked to technology at least to some degree, there will be a certain degree of overlap; however, the educational programs available in the various institutions do tend to have a "business school" or "IT school" focus. Similarly, positions in companies often reflect this.

In this study, you will understand the modalities involved in pursuing a career in knowledge management. You will examine the kind of KM educations and courses you can find from a general perspective. In the other subsections you will learn about the positions that are available within this field and roles and then at the skills that are required for a knowledge management career.

## Learning Outcomes for Study Session 16

At the end of this study, you should be able to:

- 16.1 Explains knowledge management positions and roles
- 16.2 Discuss knowledge management skills
- 16.3 Discuss knowledge managers and the chief knowledge officers

### 16.1 Knowledge Management Positions and Roles

In this section you will understand the knowledge management roles that one may find in a company. It is important to note that different companies may have some, all, or none of these positions.

Furthermore, many will be part time roles (Skyrme 2011), representing a portion of an employee's/manager's responsibilities; this can even be the case for a top position like a CKO (Ning 2006). Alternatively, multiple roles may be integrated into one position, or the knowledge management responsibilities may be a part of more general functions (e.g. an intellectual capital manager, an information worker, etc.).

However, these are the general roles that one can expect to fulfil in one capacity or another if one pursues a career in KM.

**Chief Knowledge Officer (CKO) / Chief Learning Officer (CLO):** This represents the highest position within the field of KM. The CKO or CLO is responsible for the overall strategy, planning, and implementation. The CKO or CLO will be responsible for (**Rusonow** 2003 in **Dalkir** 2005):

- Formulating KM strategy
- Handling KM operations
- Influencing change in the organization
- Managing KM staff

Due to the importance of this position, the required knowledge and skills of the CKO (or CLO) are specifically addressed in the section on Knowledge Management Skills.

**Knowledge Manager:** This is a general term for an executive who works with the CKO to implement knowledge initiatives and who manages KM efforts (Department of Navy, CIO). Examples of projects undertaken by knowledge managers include strategizing KM and change management, taxonomy construction, social network analysis, etc. (**Ning** 2006).

**KM Champions / Knowledge Leaders:** They promote KM in an organization (**Dalkir** 2005), often by championing specific initiatives, e.g. re-designing the intranet, facilitating communities of practice, constructing taxonomies, etc. (**Ning** 2006).

**Knowledge Navigators / Knowledge Brokers:** Someone who knows where knowledge is located (Dalkir 2005) and who connects people with knowledge to those who need it (Skyrme 2011).

**Knowledge Synthesizers / Knowledge Stewards:** This role is responsible for keeping knowledge up to date (Skyrme 2011) and recording significant knowledge to organizational memory (Dalkir 2005).

**Knowledge Editor:** Someone who manages the format and language of explicit knowledge so that a user can more easily utilize it (Skyrme 2011).

**Knowledge Analyst:** Someone who translates user needs into knowledge requirements (Skyrme 2011).

**Knowledge Transfer Engineer:** This person captures and codifies tacit knowledge so as to facilitate its reuse. He also facilitates the transfer of tacit knowledge by connecting relevant people (Department of Navy, CIO).

**Knowledge Systems Engineer:** This is a systems expert who creates solutions for KM initiatives through the use of portals, intranets, databases, and so on (Department of Navy, CIO).

Apart from this, there are a whole host of positions involved directly or indirectly within KM, including everything from content publishers, human resource roles, mentors, librarians, etc (Dalkir 2005). In some capacities, such positions may receive a designation which includes “knowledge management”, e.g. knowledge management assistant.

The roles and positions outlined above are not exhaustive; there are countless other ways to organize and name the KM functions. However, they should cover the main responsibilities of KM workers and managers.

### **In-Text Question**

The following are roles of Chief Knowledge Officer except \_\_\_\_\_

- a. Formulating KM strategy
- b Handling KM operations
- c. Refuting defamations
- d. Influencing change in the organization

### **In-Text Answer**

- c. Refuting defamations

## 16.2 Knowledge Management Skills

In this section I will draw upon several sources to outline the skills necessary for a career within knowledge management. Evidently, different positions will emphasize different aspects of KM, with leadership positions requiring a great ability to manage, influence, and organize, while technical positions would focus more on IT skills (relatively speaking).

Over the years, there have been several approaches to defining these skills from various perspectives. Below I will talk first about the skills of the knowledge worker and then specifically of knowledge managers and the CKO or CLO (henceforth referred to as the CKO).

### The Skills of Knowledge Workers

On a very general level, Mohanta (2010) identifies six characteristics that all knowledge workers need to some degree:

1. Possessing factual and theoretical knowledge
2. Finding and accessing information
3. Ability to apply information
4. Communication skills
5. Motivation
6. Intellectual capabilities.

This provides a foundation for understanding the basic knowledge management skill set, but it does not include the skills needed for more specialized positions, e.g. within management or IT systems.

For this we turn to the knowledge management skills map presented by TFPL (2000). TFPL is a UK-based recruitment, training, and consultancy company for the knowledge, information, and data industries. Their knowledge management skills map is the result of an extensive survey of over 500 organizations. According to their research, they defined the following general categories, each consisting of a large set of skills:

- **Strategic & Business Skills:** Includes business planning, industry knowledge, strategic thinking, leadership, and organizational skills.
- **Management Skills:** Includes business processes, people management, process mapping, team building, and measurement.
- **Intellectual & Learning Skills:** Includes problem solving, mentoring, conceptual thinking, being analytical, and the ability to deal with ambiguity.

- **Communication and Interpersonal Skills:** Includes listening, negotiation, marketing, team working, and consulting.
- **Information Management Skills:** Includes codification, content management, information processes, taxonomies, and IT applications.
- **IT skills:** Includes database management, information architecture, programming, software applications, and workflow.

Depending on the specific KM position, some of these skills will be emphasized ahead of others. For example, according to TFPL, a knowledge worker would rely more heavily on communication & interpersonal skills and thinking & learning skills, while requiring least ability within management. By contrast, a CKO would require little skill within information management and IT, and high skills in the other categories (particularly within strategic & business skills).

Another useful skill is identified by **Skyrme** (2011), who notes that "**knowledge networking**" is considered a key ability for their KM team members. Knowledge networking is explained as the ability to connect with people and continuously expand one's networks to include other knowledgeable persons.

### **In-Text Question**

The Skills of Knowledge Workers include the following except \_\_\_\_\_

- a. Possessing factual and theoretical knowledge
- b Aptitude to work
- c Finding and accessing information
- d Ability to apply information

### **In-Text Answer**

b Aptitude to work

## **16.3 Knowledge Managers and the (chief knowledge officer) CKO**

**McKeen & Staples** (2002) conducted a survey of 41 knowledge managers and from it they created a tentative portrait of the knowledge manager:

- Highly educated
- Already a seasoned organizational performer. Chosen for KM based on proven performance.
- Seeks new knowledge
- Likes "being at the forefront of something new and exciting"
- Derives more motivation from a challenge than from formal power
- Receives intrinsic rewards from helping others

- A risk-taker
- Sees KM as a way to "make a mark within the organization".

Looking more closely at the CKO, TFPL regard the most important characteristics of a CKO to be first and foremost strategic & business skills, followed by thinking & learning skills and communication & interpersonal skills. Baren 2011 offers a similar though more specific perspective, by identifying five core areas within which CKOs should possess as many skills as possible. These are:

1. Knowledge Management Experience
2. Learning Industry Experience
3. Technology Project Management
4. Matrix Management Skills
5. Industry Subject Matter Expertise

Again, the emphasis is on very strong management skills, though with certain specializations. For instance, in his experience within technology management, the CKO should have rolled out new solutions and acted as a liaison between business and technology. His matrix management skills should include enabling cross-functional teams and being comfortable in a "matrix reporting environment" (Baren 2011).

This concludes this article on knowledge management skills. Hopefully, it should have helped shed some light on the type of skills required by knowledge workers, and particularly on what constitutes a competent knowledge manager and/or CKO.

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### **Activity 16. 1:** Careers in knowledge Management

**Time Allowed:** 1 hour

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Take time out and counsel a friend about careers in knowledge management

### **Summary for Study Session 16**

In study session 16, you have learnt that:

1. The term 'Knowledge Manager' is a general term for an executive who works with the CKO to implement knowledge initiatives and who manages KM efforts
2. Strategic & Business Skills includes business planning, industry knowledge, strategic thinking, leadership, and organizational skills.
3. McKeen & Staples (2002) conducted a survey of 41 knowledge managers and from it they created a tentative portrait of the knowledge manager

## **Self-Assessment Questions (SAQs) for Study Session 16**

Now that you have completed this study session, you can assess how well you have achieved its Learning outcomes by answering the following questions. . You can check your answers with the Notes on the Self-Assessment questions at the end of this study

### **SAQ 16.1 (Testing Learning Outcomes 16.1)**

Outline the roles of chief knowledge officer

### **SAQ 16.2 (Testing Learning Outcomes 16.2)**

Mention the skills of a knowledge worker

### **SAQ 16.3 (Testing Learning Outcomes 16.3)**

Highlight the tentative portrait of the knowledge manager

## **Notes for Study Session**

### **SAQ 16.1**

- Formulating KM strategy
- Handling KM operations
- Influencing change in the organization
- Managing KM staff

### **SAQ 16.2**

1. Possessing factual and theoretical knowledge
2. Finding and accessing information
3. Ability to apply information
4. Communication skills
5. Motivation
6. Intellectual capabilities.

### **SAQ 16.3**

- Highly educated
- Already a seasoned organizational performer. Chosen for KM based on proven performance.
- Seeks new knowledge
- Likes "being at the forefront of something new and exciting"
- Derives more motivation from a challenge than from formal power
- Receives intrinsic rewards from helping others

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