Key Success Factors for Knowledge Management & Knowledge Management System Initiative. Case Study of EMU.

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ABSTRACT

Management Information System (MIS) is a system that provides all data necessary to manage organization in a more effective and efficient way. Today more than 90 per cent of key business processes are linked to information technology. Competition forces both small and large businesses to introduce some kind of information system to their business. Range of such systems is huge starting from small web site and ending with enterprise systems.

Firms may spend tremendous amount of resources to introduce MIS, however the payoff may be very little, or even lack at all. Because of the inability to successfully introduce MIS organizations loose huge amount of resources as well as advantages of competition.

This study will focus on one particular MIS type, called Knowledge Management Systems [KMS]. It will examine Key Success Factors (KSFs) for Knowledge Management [KM] and KMS initiative, based on the literature review including both:

- Managerial side, which particularly indicates inability of the management to restructure organization according to the new requirements, leadership and top management commitment, presence of knowledge sharing culture, systematic knowledge audit and etc.
- ➤ Sustain commitment of top management to Knowledge Management System integration, usability and user centered design, network design, meta tags and etc.

This study is mainly based on the theoretical case studies of the most common reasons

for the KMS failures and KSFs. We also examined current KM situation in Eastern

Mediterranean University [EMU] and proposed a model for the successful KM initiative

and integration of KMS to the university.

Keywords: Knowledge Management, Knowledge Management Systems

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ÖZ

Yönetim Bilisim Sistemleri, işletmelerin daha etkili ve verimli bir şekilde

yönetilebilmeleri için gereken tüm verileri sağlayan bir sistemdir. Günümüzde temel iş

süreçlerinin yüzde 90'ından fazlası bilgi teknolojisi ile bağlantılıdır. İşletmeler farklı

türdeki bilişim sistemlerini kendi işlerinde kullanabilmek için büyük miktarda kaynak

harcamaktadır. Bu çalışma, özel bir yönetim bilişim sistemi olan bilgi yönetim sistemi

üzerine yapılmıştır. Bilgi yönetim sisteminin modern işletmelerde kullanılabilmesi için

gereken hem yönetsel hem de teknik yönden önemli etkenler üzerine birçok çalışma

yapılmıştır. Bunun yanında akademik enstitülerdeki bilgi yönetimi seviyesi ve bilgi

yönetim sistemi gelişimi üzerine de çalışmalar yapılmaktadır. Bu çalışmanın amacı, bilgi

yönetiminin DAÜ'deki seviyesini analiz etmek ve bilgi yönetim sisteminin üniversiteye

verleşebilmesi için başarılı bir model önermektir.

Anahtar kelimeler: Yönetim Bilişim, Yönetim Bilişim Sistemleri

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I owe my personal success to my family, who was supporting me during these years in North Cyprus. I would like to dedicate this study to three women I love most: my lovely mom, wife and sister and to my father, who is a perfect example of the men for me.

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ACRONYMS

CRMS Customer Relationship Management System

ES Enterprise System

EMU Eastern Mediterranean University

IT Information Technology

IS Information System

KMS Knowledge Management System

KM Knowledge Management

KSFs Key Success Factors

KSC Knowledge Sharing Culture

MNE Multinational Enterprise

SCMS Supply Chain Management System

BACKGROUND

- C. Laudon and Jane Laudon defines information system as a set of interrelated components which connect, process, store and distribute information to support decision making and control in organization[1]. Four types of information systems are:
 - ➤ Enterprise system (ES) as world "enterprise" applies this software pack deals with large amounts of data and usually designed to support large organizations. Enterprise system allows to ensure that an information is shared by and available to all levels of the organization. ES collects data from all various business processes and stores the data in a single database in order to improve future decision making.

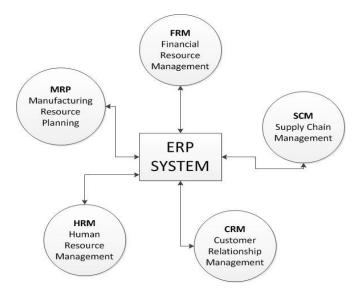


Figure 1: Enterprise System Structure

➤ Supply Chain Management System (SCMS) – SCMS spans all operations of the supply chain. It coordinates flows of products both within an organization and between organizations. It helps all parties to share information about orders, production and inventory. It closely follows production from raw material up to the

end product. The ultimate object of SCM is, as C. Laudon states, to get right amount of products from source to end customer with lowest cost. This statement can be future extend to say that ultimate object of **SCM** is to minimize inventory level as much as possible with assumption that products are available when needed. The most successive example is Dell Corp., which managed to store inventories only for 3 days, hence dramatically reduced the production cost.

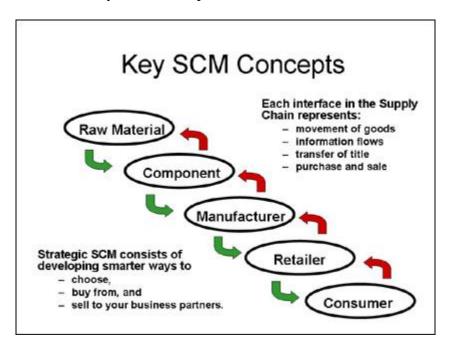


Figure 2: Key SCM Concepts (http://ygraph.com/chart/2416)

➤ Customer Relationship Management System (CRMS) – helps firms to manage their relationships with clients. It allows to better organize and control sales. CRMS, in addition, is used for marketing, customer services, technical support. It allows company to identify most profitable customers and collect all necessary data for detailed statistical and marketing analysis.

Knowledge Management System (KMS) – usually focuses on the specific firm objectives, such as improved performance, and competitive advantage. It also motivates and triggers innovations. KMS collects and stores all intellectual property, knowledge and experience of a company and then make it available for employees to improve business and management. Sometimes KMSs may also link organization to the external source of information, such as libraries and etc. KMS also allow to find hidden relationships in a large pool of data.

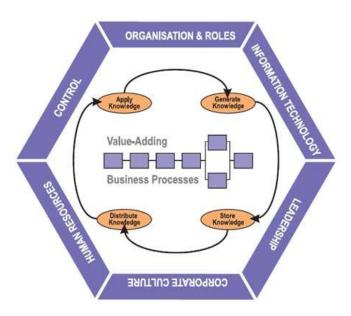


Figure 3: KMS Working Process

Chapter 1

INTRODUCTION

The purpose of this study is to determine Key Success Factors (KSFs) for successful Knowledge Management (KM) initiative through literature review. Based on this research, study examines current existence and level of development of these factors in the example of middle sized university named EMU. Paper will result on the development of meaningful business model for successful integration of KM to the university.

Knowledge is the most valuable asset in modern organizations. Thus, managing knowledge is critical for the organizations. It is quite often for an organizational core competence to be knowledge based and reside on human or intellectual capital rather than on capital asset. Almost always core competence grows from combinations of knowledge, best practices and expertise from different organizational departments and working groups. Humanity has already moved from industrial economy toward knowledge - based one.

Knowledge Management is all about achievement of better efficiency and development of core competencies through the best utilization of the human capital and human resources. It is a challenging task that requires long run commitment of the senior management, developed organizational culture of knowledge sharing and sophisticated and easy to use Knowledge Management System.

Researchers spend enormous amount of time examining all the issues related to KM. Thousands of papers were written on this topic, indicating its importance. However mainly all papers were focused on Knowledge Management of organizations working in industries. Very little research was done to examine situation in Academic institutions. This can be explained that universities traditionally assumed to be non – profitable organizations focused on providing education to students not clients. However globalization and enhanced competition have forced universities to move to the business models of organizations that use internal resources to deliver high quality services to the customers. Fact that all types of services of any academic institution are about knowledge, makes KM even more crucial for future success.

Taking into considerations facts described above the hypothesis of the study is that "Most academic institutions have a weak level of development of KSF for KM initiative".

Returning to the fact of very little attention to KM of academic institutions and researches to KM implementation in academic institutions, the hypothesis of the study is that very few universities have appropriate Knowledge Sharing Culture and KMS on place. Questionnaire is developed to examine all selected KSFs for KM initiative. It is distributed to both senate members of the university and most part of academic staff. Such wide distribution will allow us to define level of existence/absence of these KSFs. Paper will start with Theoretical Part which will introduce reader to the key concepts of Knowledge Management. Next section describes main challenges on the way to successful KM initiative, provide possible solutions to some of them and result on the list of KSFs. Due to the importance of Information Systems, particularly KMS, to

success of any KM initiative a separate section examines success factors for KMS development and implementation. Another section describes what is an effective KMS. This is followed by Methodology section and section of Empirical Analysis (Case Study of EMU).

Chapter 2

THEORETICAL PART

High value of knowledge, as an asset, is now widely recognized. Many organizations understand the importance of knowledge storage and distribution along all parts of the organization. The knowledge was defined as the main resource in the knowledge society by Drucker (1993) [2]. Moreover knowledge has been recognized as a key business asset. Hamel (1990) stated that recognition of knowledge as the core competence is a central factor for any organization to survive [3].

Knowledge Management (KM) focuses on the issues such as improved performance, sharing of best practices and lessons learned, innovation, continuous improvement of an organization and so on. KM emerged as a scientific discipline in very early 1990s and had passed a long way after that. KM is not a one – time and easy to do task it needs long – run commitment from top management. Bergeron (2003) claims that successful implementation of KM initiatives requires long – run commitment from senior management, who are dedicated to train personnel [4].

Recent boom of Information Technologies and data processing capabilities had tied knowledge and KM to Information Technologies creating a new field called KMS. Davenport et al. (1998) considers technology as one of four basic components of KM. IT has made it easier to find, store and distribute knowledge across organization than ever before. It also removed time and space boundaries of knowledge sharing. IT now is a

vital aspect of many efforts to bring KM to the organization, although alone it cannot lead to successful initiative.

Although technology plays a vital role in modern KM the main role or even key success factor is a human issue. Modern organizations are performing tasks that are too big and complicated to be accomplished by a single individual and KM or KMS is not an exception. As already were mentioned, top management should have long – run commitment to the initiative, but there are number of other human factors such as culture of knowledge – sharing and etc. Today world is changing, and we all are moving from industrial era away toward knowledge – based economy.

2.1 KM Definition

KM efforts have a long history. Companies were trying the effort by motivating on – job discussions, establishing corporate libraries and providing training to employees. There is no single agreement on when actually term knowledge management was established as well as there is no universal definition of KM. Business Dictionary defines KM as:

"Strategies and processes designed to identify, capture, structure, value, leverage, and share an organization's intellectual assets to enhance its performance and competitiveness. [5]"

Holm (2001) defines KM in terms of getting right information to the right peoples, in timely manner, in order to help them create knowledge, share and react on the information.

Some researches even include term IT, while defining KM.

Malhotra (1997) defines KM:

"Knowledge Management caters to the critical issues of organizational adaption, survival and competence in face of increasingly discontinuous environmental change. Essentially, it embodies organizational processes that seek synergistic combination of data and information processing capacity of information technologies, and the creative and innovative capacity of human beings. [6]"

Knowledge Management is not only about management of existing knowledge, but also about knowledge creation, distribution and application. IT plays an important role in both these dimensions. One possibly cannot imagine possible way of storage, transmission and management of tremendous amounts of data that modern companies are dealing with without any application of IT. In reality KM is usually about identification and location of knowledge sources/experts within the organization, enhancing competitive advantage by new knowledge generation and distribution/giving access to the huge amount of information.

2.2 KM Strategy and Knowledge Management Systems

Today high competitiveness of industries forces companies to be more innovative, and innovation as known comes from the knowledge. Modern companies should take a completely flesh look at the way of doing business, to gain all advantages from their most valuable asset — **knowledge.** Companies should share experiences and best practices not only between their employees but also between suppliers, distributors and retailers those improving performance of all company network. Knowledge sharing should go behind organizational boundaries to main stakeholders, those involving both internal and external companies.

There is a very simple but powerful logic behind this argument: if you will not share your knowledge with others they won't share it with you. Thomas Davenport and Gilbert Probst (2002) claimed that the key factor to achieve the competitive success for any firm is to communicate with external experts and assure flow of ideas within a broad network. Competitive strategy should be built on ability of organization to manage its knowledge and learn from it better than its competitors do. Today, these abilities are often tied to IT and usage of IT by organization. Companies and employees should take all advantages of powerful technologies, which allow them to communicate, store information and search for it when necessary, drill down tremendous amounts of data, analyze it and find hidden patterns much faster and in a less expensive way.

Nowadays integration of KMS to the organizations often seems to be an important or even crucial object of the organizational management. This often leads to the attempt of companies to develop and integrate a KMS, which would allow sharing of best practices and ideas. Here is what Prusack state about this:

"Here's an uncontroversial thought if ever you've heard one: a firm's competitive advantage depends more than anything on its knowledge. Or to be slightly more specific, on what it knows, how it uses what it knows and how fast it can know something knew."

However rate of failures of such attempts is tremendous, although number varies a lot, it had been said that the rate is minimum above 50%. Storey and Barnett [7] states that more than 50% of total KMS projects fail, in terms of achievement of their stated goals or objectives. Chief knowledge officer of Booz – Allen & Hamilton, C. Lucier suggests that 84% of all KM programs will fail in terms of real impact.

2.3 Knowledge as a Source of Competitive Advantage

It is clear that companies should use knowledge as a source of competitive and strategic advantage. Story is all about the generation of higher value to the customers due to better knowledge of products, market, people and processes. One example is Amazon that uses a technology to analyze behavior and choices of its customers and then makes recommendations, which allow customers to find products best suiting their needs.

Peoples/employees are still remaining the most valuable asset for most of organizations. Knowledge Management in this case refers to mapping talent employees and utilizing their talents. Different groups usually have different performance, because of personal characteristics of team members. Finding these differences and closing them may save huge amounts of funds to the organizations through enhanced efficiency.

Knowledge management in terms of customers and market behaviors allow companies to understand new trends in purchaser behavior, as well as identify new target groups or create new businesses.

These are just a few examples of how KM can be used to gain competitive advantage. There are many other examples of how companies use their knowledge – base to compete. In general companies that want to be successful should analyze all information and knowledge both inside and outside the organization in order to predict and react on any change in the environment in a timely manner.

2.4 Tacit versus Explicit Knowledge

Before going in to deeper, it is necessary to understand some basic concepts of knowledge, such as tacit and explicit knowledge.

2.4.1 Tacit Knowledge

In fact tacit knowledge is usually personal experience, skills or some sort of technical knowledge. It is always difficult to write it down, store or transfer to others. An example is how to swim, or ride a bicycle. You can try to explain it to someone, but in reality this explanation won't help him or her to swim.

2.4.2 Explicit Knowledge

Just an opposite of tacit knowledge is an explicit knowledge; this type of knowledge can be easily stored or transferred to the others. It is also always easy to document such knowledge. A good example is guideline or encyclopedia.

2.4.3 Nonanka's Model

Nonaka (1997) proposed a four modes model of knowledge conversion, where four nodes are:

- Socialization process of tacit to tacit knowledge conversion between individuals
- 2. Externalization process of tacit to explicit knowledge conversion
- 3. Combination explicit to explicit knowledge conversion. Nonaka also argued that in this area IT is especially helpful.
- 4. Internalization explicit to tacit knowledge conversion

Nonaka's Four Modes of Knowledge Conversion Tacit Knowledge Tacit Knowledge Tacit Socialization Externalization Explicit Cnowledge Knowledge Tacit Explicit Knowledge Internalization Combination Knowledge Explicit Knowledge Explicit Knowledge

Figure 4: Nonaka's Four modes of Knowledge Conversion

(http://www.emeraldinsight.com/journals.htm?articleid=1885776&show=html)

2.5 Storage and Distribution of Explicit Knowledge

Distribution of knowledge within the organization and along organization network is quit important issue. This process can be mainly referred to Nonaka's Combination process, and represents area where IT is specifically useful. There are number of Information Systems (IS) to support storage and distribution of knowledge within an organization. Some examples are:

- ✓ Document Management Systems designed to store and make accessible big quantities of documents.
- ✓ Content Management Systems allows publishing, editing, and modifying content as well as site maintenance from a central page. It provides a collection of procedures used to manage work flow in a collaborative environment. These procedures can be manual or computer-based.
- ✓ GroupWare supports co operative work of group members to achieve a common goal. The aim is to share documents and rich media in a way that supports effective collaboration.
- ✓ Intranets and Extranets computer networks usually with support of Decision Management Systems
- ✓ Organizational Memory System (OMS) Idea is to use past knowledge in present activities, where appropriate, with aim to increase efficiency. System refreshes and structures data make it available when necessary.

Such systems, however, mainly improve information availability, but do not necessarily result in efficient knowledge management. One reason is that they usually fail to convert tacit knowledge into explicit one. Another reason is that such systems usually applicable to specific area and do not provide generic solution and etc.

2.6 Knowledge Audit

Knowledge audit (KA) should come as an initial step of any KM initiative. It helps to identify amount of knowledge, both tacit and explicit within organization, as well as to map main sources of knowledge. Knowledge audit is a cyclical process that should be done periodically, in order to constantly measure knowledge asset of an organization. There is no single standard for KA, and approaches differ from expert to expert and organization to organization. Ganesh A (2009) proposed a six stage Knowledge Audit Model:

- Measurement of organizational strategic information and culture goals are to obtain clear vision of organizations knowledge needs and to compare position of organization with its KM status.
- 2. Obtaining and prioritizing organizational core processes –goals are to determine vital knowledge related to organizational core processes and identification of people directly connected to these processes.
- 3. Assessing the current knowledge health goal is to understand how well knowledge is used to achieve organizational goals.
- Audit reporting goal is to report outcomes of KA. Report will act as a base for KM strategy.

- Recommendations on KM strategy goal is to provide recommendations based on results of KA.
- 6. Continuous knowledge re auditing goal is to analyze rest of core processes to complete KA and measure performance of KM initiative [8].

A number of techniques can be employed in order to conduct KA, including, interviews questionnaires, literature review and etc. Employed technique should result on the knowledge map as an output. Knowledge map should locate sources, directions and breaking points inside the organization. It will give an idea of how to improve key business and organizational processes.

Chapter 3

KEY SUCCESS FACTORS

KM initiative, as already were said, is quit complex task. This section lists and analyzes the key success factors that any type of organization should consider before it initiates KM program. Section does not result on the complete list of success factors, since some factors vary from company to company and some are unique to any particular company. Instead it results on some common factors, obtained through literature review and proposes a possible solution to some of the problems.

3.1 Tacit/Explicit Problem in KMS

Tacit knowledge is more valuable for companies, since this type of knowledge is usually stands behind what we call professionalism. Moreover, we can say that, the huge amount of explicit knowledge formed in our brain is much more valuable tacit knowledge. However ten years (may differ from country to country) in primary school, 4 years in university doing bachelor, another year of doing MBA and 10 years of practice cannot then be easily told to someone. Here we come to our first identified, through the literature review, problem. Source of the problem lies in belief that Information Technologies can capture tacit knowledge. This lead to the widely spread opinion that tacit knowledge can be converted to explicit one, which in turn can be stored.

3.1.1 Proposed Solution to Tacit/Explicit Problem in KMS

In order to achieve long run competitive advantage, companies must invest into transferring tacit knowledge of their employees into information that can been stored. Obvious labor-intensive technic to do so is to interview best employees in the attempt to write down best practices that they use. Firms can later transfer it to the standard procedures.

Such ways, however, may only capture part of the tacit knowledge held by the employees. The other part should be shared in the face – to –face interactions. In order to understand possible way to achieve it, let us consider Multinational Enterprise (MNE) with branches in several countries. First best practices and ideas should be shared among employees of each separate branch. It is recommended to keep number of employees in each branch (if it possible) low enough to facilitate interpersonal interactions between them. "Low number of employees" by using appropriate managerial technics, such as corporate parties and get-together activities and brainstorming, can reach several hundred employees. These several hundred employees will still know each other face by face and interact regularly. It is also essential to set group based performance, good practices and innovation rewards to stimulate flow of the knowledge and ideas within each group.

Next step is to facilitate sharing of information across different branches. It could be done by regular meetings of employees from different branches to discuss best practices and ideas. However essential point here is not to limit meetings only to top management, allowing employees at all levels to share information. In addition periodical movement

of best employees to different branches to adapt best practices in new workplaces facilitates knowledge sharing even further.

3.2 Reliance on IT

The belief that Information Technologies can alone solve all business problems is widely spread. ShirNir (2002) states that companies initiating KM project initially focus on the technology requirements, although the key elements are people and process. Many companies tend to solve their organizational problems just by spending some amount of financial resources on a new system. But this way showed that only spending money on new system is not enough to reach goals. The belief that Information Technologies can alone solve all business problems is common not only for KMS but for all types of MIS projects.

This is the main reason why development of KMS has received so close attention, while personnel, managerial, and organizational issues have not. This is also the reason why so many companies or company managers tend to blame system, or system developers on a failure.

KM is not only about technology. In order to succeed organization should focus on people first. Technology will help to overcome and solve many of difficulties related to human aspect but only when tied with some other policies.

Information Technology plays a central role in Knowledge management. It is the only way to store information and connect people in different location to each other. However since most of the firms use same types of technology (Lotus, Oracle, SAP), IT can provide only initial advantage. Whether a firm can transform this initial advantage to the

sustainable one depends on the wide range of other factors including culture, social structure, management technics, reward systems and etc.

3.3 Development of Knowledge Sharing Culture

For a long time knowledge was perceived as a key asset that determines one's position within the organization and ensures that person will keep this position. Still tremendous number of people/employees refusing to share knowledge necessary to perform their job. Fear is that if they will teach someone, this person can replace them later. Policies of the organizations that reward personal performance even making situation worth. Employee perceives his expertise as the main way to get promotion and sharing it with someone puts a big question mark on any reward. The problem of not sharing of knowledge is even greater for individualistic countries such as US and UK, where for many years and even now employees are normally rewarded for individual performance. The essential problem here is the development of trust.

Richard Alleyne (2009) [10] states: "Researchers found that Britain was the most individualistic society in the world – one that valued the self over the group more than any other country. «Culture of trust should be created, personnel must be sure that sharing their knowledge will not reduce their value to the organization, instead it will increase it and even may lead to the higher status and promotions. Culture of the organization that will promote respect and reward to those who share their useful knowledge will make individuals to open their files and share information. IT can help overcome this issue at least to some extent, however just integration of KMS will not make experts to simply share their knowledge.

Today's Knowledge Management IT platforms are really sophisticated. They include Internet Portals, Emails to communicate with experts, chat rooms and data repositories. Users may ask questions directly to experts and receive answers, which in turn are rated by the users and stored in the repositories, for future queries. Although such fully automated approaches have a lot of advantages, they lack face to face interactions and promote mistrust between organization and its employees, considering process of ownership and knowledge transfer of valuable information [10]. As Stephan Kudyba (2005) states:

"Knowledge directories may contain knowledge information of the most knowledgeable individuals; documents containing best practices of essential business processes may be available; individuals who are capable of creating value added documents may have been identified; online chat networks may be created; well organized and accessible knowledge portals may be available – but this does not ensure successful and consistent knowledge transfer."

Modern technologies, such as video conferences, allow distance face —to — face interactions. All technologies that are rich in terms of interaction may force creation of trust between location remove peers. Result is that modern IT equips us with technologies which are substitutes to face —to — face interactions.

In addition new KMS will not itself force an employee who is not interested in possessing new knowledge or information to seat and search for it. As the CEO of a commercial – services company mention in the interview, "We provide pretty much the same services in every location. But many regional managers would rather die than learn from each other." (Anil Gupta & Vijay Govindarajan, 2000). Some sort of reward system, not necessary financial, should also be developed in many instances. As Prusak states, employees rewards, which may include compensation and promotion directly

connected to knowledge activities, can also help to pass complex barriers and motivate people.[11] Another important issue here is that individuals may perceive their knowledge as an intellectual capital, so they want to be sure that they can access it if they are no longer a part of the company.

Returning back to the concept of the cultural change of organization, it is possible to state that, the assumption that introduction of new technology will act as an engine to the cultural change is highly misleading. Engine of the usage of MIS is a knowledge sharing culture that must either exist in organization or be created in a parallel with an integration of new Information Technology. Grote G. and Baitsch C. (1991) found that integration of new technology do not change organizational culture but instead fits to pre – existing cultural patterns. [11]

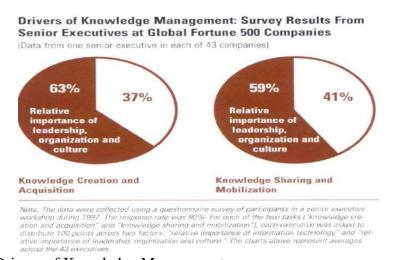


Figure 5: Drivers of Knowledge Management

3.4 Bixler's Four Pillar Model

Bixler (2002) proposed a four pillar model to achieve successful KM initiative. He argued that in order to succeed all four pillars must be addressed:

- Leadership develops business and operational strategies to success. Strategies
 in turn determine company's vision and should align KM with business tactics to
 deliver value of KM to all organizational layers. The focus of the task should be
 to build executive support and create KM champions. Success of KM initiative
 will require a leader at the top of an organization.
- 2. Organization every member of the organization should recognize the value of knowledge creation and sharing. Organization should align the operational processes with the framework and strategy of KM. KMS must be designed to facilitate flow of knowledge throughout organization. Organization should be redesigned and KM must be integrated into business processes.
- 3. Technology provides all tools to support KM within the organization. Although cultural and organizational changes are vital for success, lack of proper technology can lead to failure. Since no technology product meets every requirement choice should be done on the best–fit basis. Main functional requirements include:
 - capture and store
 - search and extract
 - allow individuals or groups to have access to critical information
 - easy to navigate
 - allow sharing of the resources and collaboration between different parties
 - ability to create and personalize profiles
 - recommend solutions
 - ability to integrate most common business application

- easy to maintain
- 4. Learning organizational learning must be enhanced with appropriate managerial techniques such as promotion of cross functional teams leading to the creating of a learning community [12].

3.5 Summary of Key Success Factors

Based on the literature review we define most critical factors to succeed in KM initiative:

- 1. Leadership Commitment of top management tied with strong leadership skills should boost probability of the KM initiative success. Since KM is still new area, many employees are not familiar with the subject. Top management should adjust vision statement of the company, clearly explain the concepts and benefits, and make sure that everyone within organizations understands the importance of initiative. Management should also monitor KM activities of employees and model their behavior to promote it. Farida Hasanali (2002) in her articles wrote that the CEO of Buckman Laboratories, chemical company, when he noticed that particular employee has not been active within the system, he sends a message: "Dear associate, you haven't been sharing knowledge. How we can help you? All the best, Bob.[13]"
- 2. Knowledge sharing culture should be analyzed in advanced, before KM initiative take place. Knowledge sharing should be fueled by rewards to make employees want to share knowledge. Employees should start treat a failure as an opportunity to learn, and to prevent others from similar mistakes. They should openly talk

- about their mistakes, which is possible only when entire organization will exhibit such behavior.
- 3. Systematic KA and processes Knowledge Audit should be implemented not only as an initial step of the KM initiative, but in continuous manner to provide analysis of how organization knowledge culture and process are changing. Correcting policies and actions should be taken on the as needed basis.
- 4. Information Technology and Infrastructure KMS should be developed to define all KM elements. Without a KMS employees ability to share information will be highly limited. Although IT is vital, it is not the only one factor. KM is not an IT system, instead KMS is a part of KM initiative. Next section takes a closer look on some critical factors of KMS implementation.
- 5. Measurement KM is a very complex process and large number of variables affecting it outcome. Set of milestones should be established to measure success of KM project; such milestones may include increased customer loyalty, decreased costs, and increase in sales. However it is important to understand that some milestones are affected by other variables. Such as increase in sales may be also due to new advertising company. So regression analysis (as an example of tool) should be done including many variables correlated to each other in order to lower probability of assigning success of other policies to KM initiative.

Chapter 4

CRITICAL FACTORS OF KMS IMPLEMENTATION

IT is a vital part of any KM initiative. Organization should clearly determine properties and functions that should be supported by KMS. When all functions are defined next step is to select an existing software pack that best suits these functions or develop new software. People who are on charge of KMS development and integration must have clear understanding of user requirements. In other words KMS will fail if system functions will not match objectives of KM initiative. This section will define factors that should be addressed during KMS implementation.

4.1 Sustain Knowledge Management Initiatives

Inability to sustain of the KM initiative is perhaps one of the most common reasons for the failure of KMS. It is highly related to the inability of the organization to restructure in order to meet integration of new Information System. Many of the small business and government agencies managers never consider the necessity for the maintenance as well as frequent updates of the system. This is true for all types of Information System. In order to clearly state the problem let us consider an example of small company, which orders a web page in order to attract new customers. Management of the company creates some set of information and vision of the future web site. These information and vision is passed to the system developers, which actually designs the page. After a long cycle of modifications, web page actually appears online.

Any web project requires frequent update of information, which in turn requires both technical skills and creation of new materials. It is often the case that firm does not have employees who have technical and business expertise to sustain initiative. Hiring of new staff is not considered before project initiative take place. Consequently even if firms realize new labor requirements, budget constraints may not allow hiring new employees. In addition it is very rarely that management has knowledge of the concepts, such as Search Engine Optimization (SEO). The net result is that, although web page can bring new customers at the beginning, later becomes one of the millions dead pages in the web.

This concept can be extended to any Information System including KMS. It can also be extended to state, that not only system usage trainings for employees are necessary. But it can also be suggested to have technical support available for all employees, especially during the initial period after the system was introduced.

4.2 Lack of Usability and User Centered Design

James Robertson (2002) defines Knowledge Management as a process that ensures that staff has access to the information they need in a timely manner [14].

Usability refers to the easy use of the object created by the human being. System usability in turn ensures that users can perform all tasks that they need with a system.

Table 1 presents main attributes of user – friendly information system.

Table 1: User – friendliness attributes of the Information System

1.	Learnability	Learning process of the system must be easy
		and at best interactive
2.	Efficiency	System must allow the users to work

		productively
3.	Memorability	System must be easy to remember, so the skills
		do not have to be re – learnt.
4.	Errors	Design of the system should include error
		handling. Ideally, errors should be prevented
		whenever possible.
5.	User satisfaction	User must be satisfied with the system and the
		way it works.

The problem in fact is, that, often after system is developed and employed, staff ignores it existence. Employees simply do not refer to the newly developed system as a source of information. They continue to use previously employed practices. One of the sources of this problem is the lack of user-friendliness of the system. In other words staff perceives the system as being too complicated for use. If more than couple of clicks is necessary to find information, users will perceive system as too complex, which will lower usage of the system. User – friendliness attributes of the system presented in Table 1 can be extended to the user – centered design approach. It involves users of the system in all steps of the development of the system. By involving users, developers make sure that they that the system satisfies user's needs, which may solve usability problem.

Usability tests should also be frequently done. Probably the best way to test level of system usage is to use logging to track how frequently, and for what purpose staff uses the system.

Chapter 5

EFFECTIVE KM SYSTEM

KPMG Consulting (KPMG, 2000) [15] found that KMS often do not support effective KM. The reason behind is the lack of an overall understanding of organizational requirements. Davenport and Prusak (2000) stated that there are three main KM activities within organizations:

- 1. Knowledge Generation
- 2. Knowledge Sharing
- 3. Knowledge Codification

These three main activities begins with individual learning, hence individual knowledge emerge. This knowledge is than can be transferred to other individuals through communication. Next phase is to transfer this tacit knowledge to the explicit one. This phase is particularly important since explicit knowledge can be easily stored and then shared with others. The proposed Knowledge Management System Design Model will have to support all knowledge generation, knowledge sharing and knowledge classification.

5.1 Central System Design Issues

KM System design in order to be effective should follow Knowledge Management Scenario. Knowledge Management Scenario starts with the knowledge creation, following by capturing and storage of valuable knowledge, which in turn is sort and organized so to be easily available. Last step is the deployment of knowledge to people, technology and different processes within the organization. This cycle is exhibited in Figure 6:

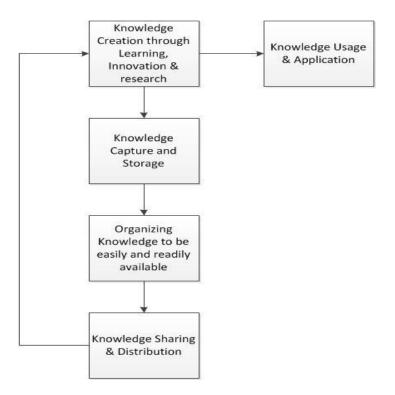


Figure 6: Knowledge Management Scenario

Based on this scenario we identify five key functions to be supported by KMS. These functions are presented in Table 2:

Table 2: Key five KMS functions

#	Function
1.	Knowledge generation through interactions between individuals and experts, research and
	etc. (e.g. live chats, discussion forums)
2.	Knowledge storage (e.g. electronic documents, web pages)
3.	Transformation of tacit knowledge to the explicit one, whenever possible (e.g. attempt to
	explain and describe in details best practices)

4.	Knowledge sharing (e.g. emails, content management systems)
5.	Ability to drill down large amount of data (e.g. Search engines)

We propose three System design aspects to support these functions:

- 1. Network design to support knowledge sharing
- 2. Glossary to provide clear and shared language
- 3. Meta knowledge (Meta tags), which will guide knowledge seekers.

5.1.1 Network Design

Common approach to share information is the establishment of network, based on the Central Repository Model. Information is stored in large database (repository) and can be accessed through private or public networks. The Central Repository Model shown on the Figure 7:

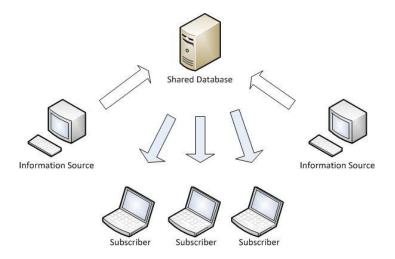


Figure 7: Central Repository Model

However we believe that this model is inefficient to design effective network that will facilitate information sharing between all parties involved. Although knowledge seekers should be connected to the central database, they also need to be connected knowledge experts or sources. Connection to the central repository will allow them to search for

explicit knowledge, while connection to the knowledge experts will allow seeking for tacit knowledge. We also argue that connection to knowledge sources need to be done, not directly but through knowledge brokers. According to Ruggles (1998) knowledge broker is a person that helps participants to locate knowledge or experts needed.

For better understanding let's consider Multinational Enterprise with different departments, such as accounting, marketing, sales and etc. Each department should be represented in the network by separate repository and repository manager. Employees in each department and in each particular branch communicate with each other. Repository manager of different branches, but of the same departments, in turn communicate with each other. Knowledge seeker first contacts repository manager (knowledge broker) in his branch (if expert if not available within their own branch), which in turn will decide to which branch linked the knowledge seeker. Repository manager of the branch to which employee is link will in turn direct them to the expert, which holds particular knowledge. Such network is represented in figure 8:

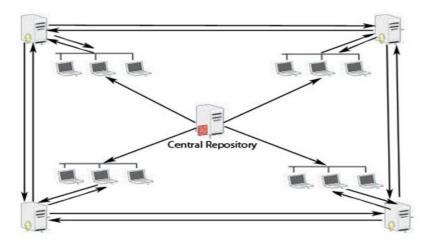
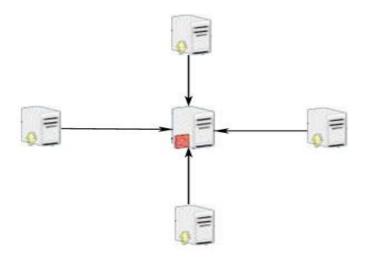


Figure 8: Proposed Network model

Data from each small repository in turn can be periodically stored to central database, after the checking on redundancy. Note that employees can only retrieve information from central database. In other words they don't have permission to store any data within central repository. New practices and data from each branch and department periodically transferred from local databases to the central one by repository managers. This process described in Figure 9:

Figure 9: Data Transfer to Central Repository



5.1.2 Clear and Shared Language

Georgia Garza in her article "Knowledge Management: Five Distinct Approaches" states that development and sharing of the common language is critical knowledge management practice [16]. It is a highly important task to develop a commonly shared language and this task requires time and resources. However development of the common language is only one part of the story. Teaching employees to use the language also is not an easy task. In addition some employees may even lack necessary skills to describe their experiences in manner that can be clearly understood by others. We argue

that proposed network topology model may help overcome these issues at least to some extent. This is reached through the test for the redundancy stage in which data should also be checked for the common language standards by repository managers before insertion to the main database take place.

5.1.3 Meta – Knowledge

Meta – Knowledge is defined as knowledge about knowledge. Regarding KMS meta – knowledge is information about the data stored within the database. Clear Meta – tags within the system are specifically important when learning takes form of searching for the content offered by the knowledge management system. Thomas H. & Natalja R. states that Meta – knowledge is highly relevant for the success of computer supported knowledge management and organizational learning in a company [17]. There must be an existence of different types of Meta – knowledge within KMS. The availability of different types of Meta – knowledge increase usage of KMS.

We argue that out of different types of Meta – knowledge it is specifically important to develop two kind of Meta – knowledge to support proposed network model:

1. Content Meta— knowledge which should clearly display quality and timeliness of the content stored within both locals and central repositories. It is also very beneficial to provide any type of ranking system, so that users can score the content. This will help participants to determine whether they can trust the reliability of the content. In case with local databases it will also help local repository managers to find most useful content to be transferred to central repository.

2. Participants Meta–knowledge is knowledge about participants and experts of the KMS. For the experts it should include complete profiles and areas of work. For participants it may include number of different posts in each topic and average scores of such posts. Reward system should also be linked to it. For example employees may get bonuses for some number of solutions that they post within the system and which were found useful by other employees and management. At some point employee can even be transferred to the category of the expert with relevant promotions. Such reward system which is closely linked to the activity of users within the system will facilitate system usage and increase effectiveness.

We also argue that it is a bad practice to limit the access rights of users to any information within the system. Access rights should determine ability to moderate the information, but not to access it. In other words if employee finds it interesting for himself to read information not from his area of work, it is better to allow him to do it. Company may identify new talents by doing so.

Chapter 6

METHODOLOGY

Measure of existing knowledge and determination of the knowledge share culture of the organization is fundamental basis for KM initiative and further facilitation of knowledge sharing. Based on the above discussion of the Critical Success Factors of KM initiative, we define following hypothesis:

Key Success Factors of Knowledge Management initiatives in any type of organization are:

- 1. Leadership and Top Management Commitment
- 2. Knowledge Sharing Culture
- 3. Systematic KA and Processes
- 4. Information Technology and Infrastructure
- 5. Measurement

6.1 Methods of the Study

Study will use both qualitative and quantitative methods. Questionnaire designed in a way allowing responders to specify any additional information, those providing base for qualitative analysis. Quantitative method will be based on scoring default options for answers in the questionnaire. The mean value scores are used to derive the study conclusions. Such approach allows interviewers to use qualitative, quantitative or both methods to answer.

Bryman (1995) lists five options of qualitative research conduction:

- survey,
- case study
- action research,
- experiment,
- qualitative research.

This paper will provide case study analyzing Eastern Mediterranean University (EMU) middle size university in Turkish Republic of Northern Cyprus. The study aims to examine current situation of university in terms of KM, and propose a model for successful implementation of KM initiative both based on key success factors for KM. The objective of the questionnaire is to assess current situation of EMU in term of key success factors of KM initiative. Questionnaire was built to address five main factors that were assumed to be critical. These factors were presented in our hypothesis. Factors were derived from detailed literature review. The questions were taken from the K. Mathi MBA thesis. Questions were adjusted to be consistent with the present study. Part of the questions was taken from different companies that used questionnaires to assess status of knowledge management in their organizations.

6.2 Questionnaire Structure

Questionnaire is divided into five sections. Each section assumed to examine one of the key success areas:

Leadership and Organization – Display whether there is an existence on continuous support of knowledge sharing from top and middle management (Question 2, 14, 21). Determine whether employees are rewarded for knowledge

sharing and reuse (Question 7). Assess level of KM support by EMU (Questions 10,11,12,14)

Existence and Level of Knowledge Sharing Culture - examine internal culture of organization and behavior of employees in attempt to determine whether it supports knowledge management (Questions 1, 4 - 9).

Systematic KA and processes – Determine whether EMU continuously audits its level of KM and takes corresponding actions (Question 13). Determine whether systematic processes are in use to facilitate KM (Questions 15, 16, 17, 18).

Determine existence of appropriate IT software packages and infrastructure that enables and facilitates KM within EMU (Questions 15, 22, 23).

Measurement – To determine whether EMU efficiently uses its knowledge (Questions 19, 20, 21)

One additional question (Question 24) represents attempt to map internal experts of EMU to provide additional basis for future KM initiative.

6.3 Approach and Measurement Scale

The questionnaire was distributed through emails to all academic and non – academic staff of EMU. The choice of such a distribution channel was due to the high speed of delivery and responses. Questionnaire allows each participant to choose from five scale based options or write a note if he/she has different opinion. The answers were allocated to 5 point scale with five (5) as "Always" and one (1) as "Never". Three (3) points to "Sometimes" and assumed to be a median.

Chapter 7

EMPRICAL ANALYSIS AND RESULTS (CASE STUDY – EMU)

7.1 History of EMU

Eastern Mediterranean University is a middle size university located in Northern Cyprus. Eastern Mediterranean University was established in 1979. It currently offers programs fully recognized by Council of Higher Education in Turkey. The University has fully developed campus facilities, and possess a multicultural environment with international students from more than 70 countries. It provides services of highly qualified faculty members from 35 different nations. Modern style of education shared by all allows students to be trained as individuals thoroughly learned and endowed with excellent research skills. Such students can generate new knowledge and are aware of and meticulous about environmental issues. They also very creative, confident and ready to compete with the world youth.

Eastern Mediterranean University ranked within the best 1500 universities in 2011 Webometrics Rankings of World Universities. EMU, which was previously placed as the 1704th university in Webometrics Rankings, has made a considerable progress as it has been ranked as the 1421th university based on the Webometrics evaluations which included 20,000 universities and took 16 universal criterions as their basis.

7.2 Case Study Findings

Study concentrates on critical success factor of KM. Questionnaire was distributed to assess the level of KM and analyze KM in university as perceived by academic and non – academic managerial positions.

The results from Questionnaire in the Appendix A in English and Turkish languages were used to conduct qualitative analysis. The response rate was very slow indirectly indicating unawareness of KM importance or unwillingness to share knowledge.

The key responders were primarily university executives/senate members (Targeted 20, Responded 18). Other responders included managerial positions in academic and non – academic units of EMU (Targeted 15 responded 5).

One additional question (Question 24) was designed with an aim to build draft of knowledge map of university. However attempt failed due to very weak rate of responds, only 6 out of 35 described areas that they think they can be useful to others. This again indicates very low level of knowledge sharing culture.

7.3 Qualitative Results

The results of the section are based on the analysis of the questionnaire distributed.

Results are split in terms of each Key Success Factor and together form a hypothesis of the thesis.

7.3.1 Leadership and Organization

EMU provides some support to employees when they wish to share experience/best practices (Responses to Question 2), however the level of support is weak. The mean value obtained was 2.4 with 1 as "Always" and 4 as "Rare". University also does not actively encourage knowledge sharing (Responses to Question 14) and do not spend

adequate resources on trainings of employees (Responses to Question 21). Employees are rarely visibly rewarded for the knowledge sharing putting downside pressure on knowledge sharing culture development (Responses to Question 7). Employees are not actively rotated to share practices (Responses to Question 10). The efficiency of working teams is weak, due to resistance of learning from each other (Responses to Question 11). There is no clear vision of how EMU should implement KM initiative (Responses to Question 12). Moreover university does not systematically assess future knowledge requirements and craft strategies to meet those (Responses to Question 13).

These issues display that there is almost no support of KM from university management. The concept of KM is rarely spread inside of university and very little number of employees understands and practice KM support. The absence of Chief Knowledge Officer position in the university rector's office makes situation even worse.

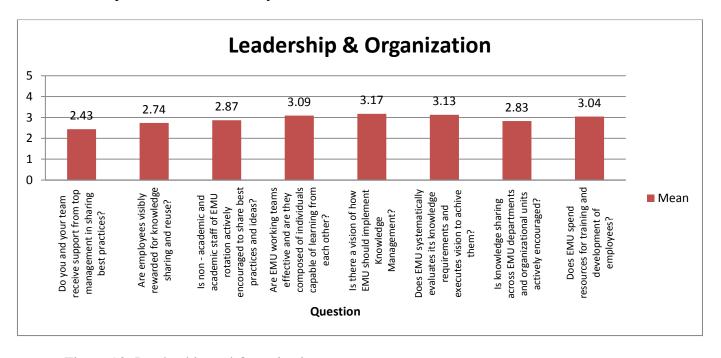


Figure 10: Leadership and Organization

7.3.2 Knowledge Sharing Culture

Research has discovered that employees only share experiences with each other sometimes rather than always (Responses to Question 1). However they often communicate in informal face - to - face manner, and use informal intranet to share their knowledge with other employees (Responses to Question 9). Such informal communications seems to mainly come from friendship relations between employees, not from university spending effort to make people talk to each other (Responses to Question 8, 9). In addition it is very difficult to determine whether such knowledge sharing affects efficiency of EMU as an organization, since the topics can be unrelated to university activities. Most of employees do not understand importance of failure in terms of experience gained (Responses to Question 4). The mean answer to the Question four was about 4 with 5 indicating never. Such bad results indicate that employee do not prefer to talk about actual reasons of failure, those organization will lose ability to gain any lesson. The level of internal organizational helpfulness is very weak (Responses to Question 5) again very little level of knowledge sharing culture presence. Mainly employees perceive knowledge as a personal asset and do not see benefits of sharing it with someone (Responses to Question 5, 6). Such range of problems exists partially due to the absence of the reward system closely linked to the knowledge sharing and reuse (Responses to Question 7).

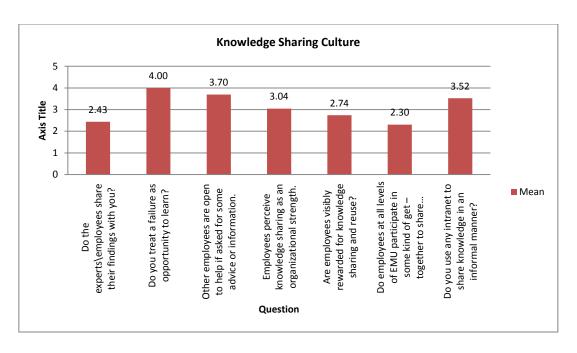


Figure 11: Knowledge Sharing Culture

7.3.3 Systematic Knowledge Audit and Processes

University does not systematically conduct KA and craft a strategy to meet future knowledge requirements. KM does not embody in EMU vision statement and there is no position Chief Knowledge Officer both indicating that university still does not recognize importance and benefits of KM. There is almost no constant flow of ideas inside the university and part of the ideas is lost or not shared with right people, those putting a question mark on their implementation (Responses to Question 20). The system of cataloguing and archiving documents is weak both in electronic and non – electronic terms (Responses to Question 15). Teams that complete tasks do not record any experience learned (Responses to Question 16). Employees frequently face difficulties in terms of finding right information on a daily basis (Responses to Question 17). In addition they feel that working redundancy exist to a large extent, in other words they are frequently doing things that were done by others (Responses to Question 18). Overall EMU loses biggest part of the internally generated knowledge, and fails to document and

store most part of explicit knowledge not to mention tacit. There is no easily available path to reach to the target internal knowledge and employee's waste time solving problems that already were solved. These issues results on the importance of the development of internal KMS.

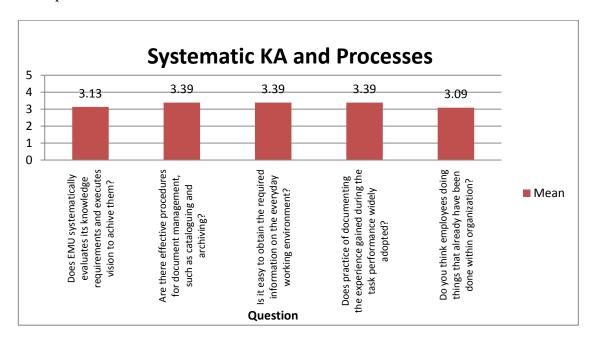


Figure 12: Systematic Knowledge Audit and Processes

7.3.4 Information Technology and Infrastructure

EMU still does not have appropriate KMS on place. Moreover there are no Content Management or Document Management systems, or employees have no idea about their existence. There is very weak system for electronic documents archive and cataloguing (Responses to Question 15, 22). EMU has no system allowing knowledge sharing between employees (Responses to Question 22) again putting downward pressure on knowledge sharing and reuse. Overall university should consider purchasing/development of KMS in near future. KMS is perhaps a heart of KM initiative and development/installation and training of people will take time. So KMS initiative

should start as early as possible in a parallel with other KM issues, such as promotion of KM importance and development of Knowledge sharing culture.

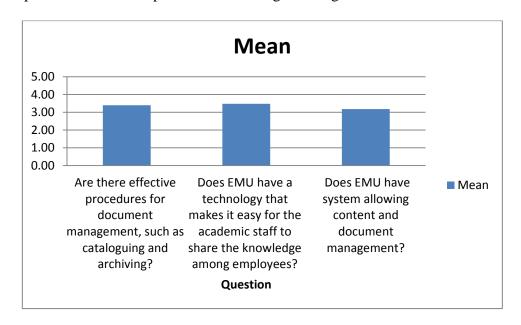


Figure 13: Information Technology and Infrastructure

7.3.5 Measurement

EMU does not practice participative goal settings, have clear milestones to measure success and timely feedbacks (Responses to Question 19). There is no flow of ideas and innovation inside EMU (Responses to Question 20). In addition university does not spend enough resources to train and increase efficiency of employees (Responses to Question 21).

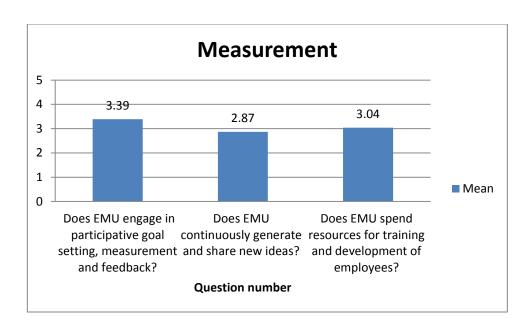


Figure 14: Measurement

7.3.6 Summary

The hypothesis of the study that EMU have a weak level of development for each of five KSFs for KM initiation is supported by the qualitative results. Knowledge sharing is not encouraged and knowledge sharing culture is very weak. Definitely IT infrastructure should be built to support KMS and KMS should be designed and installed. Figure 9 presents mean values of five KSFs:

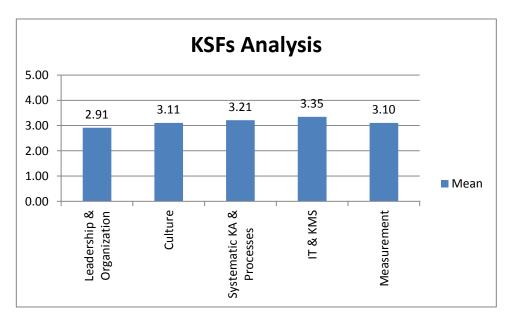


Figure 15: KSFs Analysis

Mean values of KSFs:

1. Leadership and organization: Mean 2.91

2. Knowledge sharing Culture: Mean 3.11

3. Systematic KA & Processes: Mean 3.21

4. IT & KMS: Mean 3.35

5. Measurement: Mean 3.1

Chapter 8

MODEL TO SUCCEED IN KM INITIATIVE

There is no more doubt about importance of KM. This being the fact, organizations invest millions of dollars in attempt to reduce duplicated work, increase efficiency and improve productivity by implementing KM programs. All these investments expect to result on high returns, however in practice many of them fail. Definitely there is no panacea approach that leads to successful KM initiative; instead any chosen approach should reflect nature of the business and industry in which organization is operating. One rule of thumb is that it is not simply about technology, it's about people. The following model proposed in this study attempts to build a skeleton of KM initiative in any organization that just considering taking initiative, this skeleton can be further adjusted to reflect particular characteristics of the business and industry.

Step 1) Establish a KM department and CKM position to craft and execute KM strategy

• The origin of the KM initiative, as an origin of any big project, should start at the highest end of hierarchical pyramid of the organization. The rector office (in case of EMU) should realize the need for the knowledge management to increase efficiency and competitiveness of the university. A new department responsible for the design and implementation of KM initiative must be established as the initial step.

- Step 2) Insure that CKM is familiar with the industry, company is operating at, and understands key business drivers
 - The head of the KM department should not only be a professional in the field of KM, but also be a native to the structure, culture and main operations of the company. In addition the person should have very strong leadership skills, since the main challenge will be convince organizational members that the benefits of KM will outweigh the cost and that employees at all organizational layers are key determinants of the success. The CKM will also need to design a reward system for the staff opened for the knowledge sharing and insure that employees understand how exactly they can share their experiences and how they will be rewarded for doing so.
- Step 3) Give reasonable decision making power, authority and financial and human resources to CKM
 - The KM initiative is a very complex task that requires adequate time and resources allocation. The decision making power of the CKM is an important factor minimizing the amount of time required to implement the innovation. In addition managers with strong decision making power are perceived more seriously by the employees.

Step 4) Embody KM to the vision statement of the organization

• KM must be embodied to the vision statement of the organization. KM department, in turn, must insure that employees perceive vision statement not as a "couple nice sentences". Employees at all layers of the organization should understand that the vision statement determines the goal of the organizations and

describes where the top management sees the company in the future. The vision statement should be structured in the way that makes very clear that the tool to insure future success is KM.

Step 5) Provide enough meetings of top management with employees explaining importance of KM to the organization

• When KM department will start its operations the first and perhaps the most significant challenge will be to insure that employees understand that this is the time for change. The CKM should personally provide a serious of meetings with employees explaining importance of the KM. The meetings should not be focused only on the top management of the company, but reach almost every employee. The best way to indicate the point where organization is ready to introduce KMS is when people will start talking about importance of the KM.

Step 6) Initiate a KMS integration or development

• Timing of the KMS development and integration is another important factor. Integration of KMS to the organization, which is not ready to accept and use it will fuel the probability of failure. The new system should come when employees are excited to use it. While personal meetings of CKM will attempt to bring organization to this level, KMS should be designed in a manner that allows employees to use it without any difficulties. No more than couple of clicks should allow one to find the information he/she is looking for, or to upload, comment and suggest on the previously uploaded content.

Step 7) Analyze knowledge

• The data should be analyzed and sorted accordingly. Right people should be able to get right information. There is no need to distribute all information to everyone. A system with clear meta-tags should be developed. The data should be disaggregated according to the subjects. The outdated data should be periodically removed from the system assuring that there is no data duplication and misleading of the knowledge seekers. The latest events and experience of teams engaged in the recent activities should be uploaded in timely manner and according to the subject.

Step 8) Set clear milestones for KM initiative

The KM initiative should never be run in a "blind manner". A clear set of milestones to measure the level of KM achievements should be developed. For instance increased number of international publications can be used for the academic part of the university. An average cost reduction of the scientific discoveries can be another example. In case of the students recruitment department an increased number of applications can be used as a milestone. At this point it is appropriate to use statistical tools such as regression analysis to determine a real impact on KM on the outcome.

Step 9) Implement KM initiative in phases

• KM is a complex task, which should be implemented in phases. The proposed in this study model can also act as an KM initiative phases break-down.

Step 10) Provide reward and recognition

 The employees should be constantly rewarded for their knowledge share and knowledge reuse. KM department should monitor frequency of the KMS usage, number of posts and ranks of the posts. Based on the results of monitoring employees should get rewards, promotions or positive feedbacks from the top management.

Chapter 9

LIMITATIONS OF THE STUDY

There are a number of limitations of the current study that future researches will need to address:

- The university has complicated organizational structure with different units operating in the range of areas. Current study simplifies the situation by threating the university as a single operational unit. However, different departments are seeking for the different types of knowledge. Further research is required to determine and categorize different type of knowledge required by the operational departments.
- The study attempted to build a map of experts/knowledge resources at the university. The attempt, however, wasn't successful. The map of the experts in different areas is the base of KM initiative, which needs to be addressed.
- The exact KM requirements of the university also need to be examined in order to determine the main functions of the KMS.

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APPENDIX

The aim of this research is to identify, whether EMU lacks a Knowledge Management System (KMS). KMS is a way to improve efficiency of organization through effective manages of knowledge existing within the organization, and generation of new knowledge and best practices.

Knowledge Management (KM) is a process that helps organization to discover, choose, organize, and disseminate important information and expertise.

(Bu araştırmanın amacı, DAÜ'nün Bilgi Yönetim Sisteminden (BYS) yoksun olup olmadığını tespit etmekdir. BYS, kurum içindeki mevcut bilgiyi etkili biçimde yöneterek, yeni bilgi ve en iyi uygulamaları oluşturarak kurumun verimliliğini artırmak için kullanılan bir yoldur.)

(Bilgi Yönetimi (BY), kurumun önemli bilgileri bulmasına, seçmesine, düzenlemesine, yaymasına ve aktarmasına yardımcı olan ve iş avantajı kazanmak için uzmanlaştıran bir işlemdir.)

1.	Do the experts\employees share their findings with you? (Uzmanlar ya da çalışanlar sizinle bulgularını paylaşır mı?)							
	Always	(Herzaman)		Frequently	(Sıkça)□	Sometimes	(Bazen)□	
	Rare (Nac	diren)□						
2.	Do you and your team receive support from top management in sharing best practices? (Siz ve ekibiniz en iyi uygulamaların paylaşılmasında üst yönetimden destek alıyor mu?)							
	Always (Herzaman) □		Frequently (Sıkça)□	Sometimes	s (Bazen)□	
	Rare (Nac	diren						
	Use scal	e of 1 to 5 for	the f	following que	stions, where	e 5 (Always),	4 (Often), 3	
	(Sometim	ies), 2 (Occasio	onall	y), 1(Never)				

(Sıkça), 3(Bazen), 2(Ara sıra), 1 (Asla). 3. Do you record and share knowledge with other employees on a daily basis? (Günlük bazda diğer çalışanlarla bilgi kaydı ve paylaşımı yapar mısınız?) 3□ 1 □ $2\square$ $4\square$ 5□ Notes 4. Do you treat a failure as opportunity to learn? (Bir başarısızlığı, öğrenmek için fırsat olarak görür müsünüz?) $1 \square$ $2\square$ $3\square$ $4\square$ $5\square$ Notes 5. Other employees are open to help if asked for some advice or information. (Bilgi ve tavsiyeleri sorulduğunda, diğer çalışanlar yardımcı olmaya hazırdırlar.) 1 □ $2\square$ $3\square$ $4\square$ 5□ Notes (Notlar):_____ 6. Employees perceive knowledge sharing as an organizational strength. (Çalışanlar bilgi paylaşımını güç olarak fırsata dönüştürürler.) $3\square$ 1 🗆 $2\square$ $4\square$ 5□ Notes (Notlar):_____ 7. Are employees visibly rewarded for knowledge sharing and reuse? (Calışanlar bilgi paylaşımı ve tekrar kullanımı için gözle görülür biçimde ödüllendirilirmi?) 1 🗆 $2\square$ $3\square$ $4\square$ 5□ Notes (Notlar):

Aşağıdaki sorular için 1 ile 5 arasındaki ölçeği kullanın: 5(Herzaman), 4

8.	Do employees at all levels of EMU participate in some kind of get – together to share knowledge activities? (Her düzeydeki DAÜ çalışanları, bir şekilde bir araya gelip bilgi paylaşımı etkinliğinde bulunur mu?) $1 \ \square \ 2 \ \square \ 3 \ \square \ 4 \ \square \ 5 \ \square$	
	Notes	
	(Notlar):	_
9.	Do you use any intranet to share knowledge in a form of personal communication? For example, discussing personal experience and best practices with colleagues in informal face to face interactions. (Ağ içi bağlantıları gayri resmi bir biçimde bilgi paylaşımı için kullanır mısınız	
	Örneğin, kişisel deneyim ve en iyi uygulamaları, gayri resmi olarak	iş
	arkadaşlarınızla yüz yüze tartışır mısınız?)	
	$1 \square \qquad 2 \square \qquad 3 \square \qquad 4 \square \qquad 5 \square$	
	Notes	
	(Notlar):	_
10.	Is non - academic and academic staff of EMU actively rotated to share practice and ideas? (DAÜ'deki çalışan ve akademisyenler en iyi uygulamalarını ve fikirlerini paylaşmak için aktif olarak teşvik edilirler mi?) 1 □ 2□ 3□ 4□ 5□	
	Notes	
	(Notlar):	_
11.	Are EMU working teams effective and are they composed of individuals capable of learning from each other? (DAÜ'de çalışma ekipleri etkili mi ve bu ekipler birbirlerinden öğrenme yeteneğine sahip bireylerden mi oluşur?) $1 \ \square \ 2 \ \square \ 3 \ \square \ 4 \ \square \ 5 \ \square$	e
	Notes	
	(Notlar):	

12.	2. Is there a vision of how EMU should implement Knowledge Management? (DAÜ'nün Bilgi Yönetimini nasıl uygulayacağı konusunda bir vizyonu var mıdır?)				
	1 🗆	$2\square$	3□	4□	5□
	Notes				
	(Notlar):				
13.	vision to	achieve th	nem? (DA	Ü sistem	ts knowledge requirements and executes atik olarak gelecekteki bilgi ihtiyaçlarını için planlar yapar mı?)
	Notes				
	(Notlar):				
14.	encourag	_	'de bölür edilir mi?	nler ve ki)	partments and organizational units actively uruluş birimleri arasında bilgi paylaşımı
	Notes				
	(Notlar):				
15.	and archi var mı?)		lge yönet	imi için e	cument management, such as cataloguing tkili kataloglama ve arşivleme yöntemleri
	1 🗆	$2\square$	3□	4□	5□
	Non – ele	ectronic (H	El ile yapı	lan yönte	mler):
	1 🗆	2□	3□	4□	5□
	Notes				
	(Notlar):				

16.	•		•		nation on the everyday working inda doğru bilgi bulmak kolay mı?)
	1 🗆	$2\square$	3□	4□	5□
	Notes				
	(Notlar):				
17.	-	dopted? (I		-	perience gained during the task performance amamladığında, bu görevden öğrenilenleri
	1 🗆	$2\square$	3□	4□	5□
	Notes				
	(Notlar):				
18.	organizat	-	ışanların ünüyorsu	kurum içe	that already have been done within crisinde daha önceden yapılmış şeyleri
	Notes				
	(Notlar):				
19.		0 0	-		al setting, measurement and feedback? ne ve geri bildirim ile uğraşmakta mıdır?) 5□
	Notes				
	(Notlar):				
20.		IU continu ir akışı ve 2□			l share new ideas? (DAÜ'de yeni fikirlerin) 5□
	Notes				
	(Notlar):				

21.		-			ng and development of employees? (DAÜ, aynak ayırır mı?) 5□
	Notes	2	3	4	<i>3</i>
	(Notlar):				
22.	the know		ong empl	oyees? (E	akes it easy for the academic staff to share OAÜ'de çalışanlar arasında bilgi paylaşımı
	1 🗀	2	30	4 □	<i>у</i> п
	Notes				
	(Notlar):				
23.			•	_	atent and document management? (DAÜ'de bir sistem var mı?) 5□
	Notes				
	(Notlar):				
24.	please st	ate below	. (Uzman	olduğunu	re expert at, and can help others? If yes zu düşündüğünüz ve başkalarına yardım nı? Eğer var ise lütfen aşağıda belirtiniz.)
_					