

# Strategic Change in Knowledge Management and e-Learning: Enhancing Workplace Learning

**Ali Mahdi Owayid**

*AlBuraimi University College*

E-Mail: [admin@buc.edu.om](mailto:admin@buc.edu.om)

**Khalid Alrawi**

*Professor, University of Modern Sciences*

E- Mail: [Kalrawi47@hotmail.com](mailto:Kalrawi47@hotmail.com)

**Khaled Shaalan**

*Professor, British University in Dubai*

E- Mail: [Khaled.shaalan@buid.ac.ae](mailto:Khaled.shaalan@buid.ac.ae)

## Abstract

E-learning is an emerging field in the intersection of education learning, and business, referring to delivered information and education services or improved via Internet services and related technologies. The paper is an attempt to show how knowledge management (KM) and E-learning (EL) specifically can be of prominent support in the workplace. Aligning firm as a whole to a continually changing environment as far as learning and innovation are concerned is a challenge. The paper posits that KM consists of enablers such as Information systems infrastructure, Team working, Employees involvement, Top management leadership and commitment, and Employee empowerment that are critical to the success of a knowledge-based organization.

The presented model in this paper integrates Knowledge management and e-learning into adaptable framework that offers integrated support as well as effect on various Medias involved in the education systems. The model is a suggestion to improve teaching and learning process and how KM adds a successful help for educational consumers in selecting and evaluating e-learning media. The model is based on an analysis of KM and e-learning literature and the information search process.

**Keywords:** Knowledge Management, E-learning, Knowledge Management Enablers, Managers Commitments, Decision Making

## 1. Introduction

Knowledge management is a structured procedure that helps organizations to utilise and implement knowledge in order to discover, store, share, and apply this knowledge within organization. To make a KM work efficiently and effectively it must be a local and personalized [17]. E-learning which called distance learning offers solutions to teach and train learners remotely by using internet services or through interactive software. In organization KM duties comprises of organizing, transferring, locating and ensuring the usage of information and expertise within the organization. The enablers support for such a process is the culture of the organization, leadership perception, the technology used and

measurement of achievement. Within such understanding, management uses the processing capabilities to take effective action to achieve the firms' goals [16].

Most centres of learning in the organization are built around the concept of team learning with the organization to pursue individual learning, in small or large groups, or the entire organization. The learning concept may be necessary for the company to have the necessary skills to function effectively. From the point of view of knowledge management, at all levels of learning are important and must be fed and are a natural part of the culture, but to date, the focus has been on the team and the organizational learning and knowledge. Therefore, organizational learning refers to the ability of the organizations to acquire the necessary skills to survive and compete in their environment [4].

E-learning is the use of all information and communications forms of electronic technologies to improve teaching and learning systems performance [1]. The e-learning market is growing rapidly in the developed world and is an emerging market in the developing world. In spite of Knowledge management and e-learning can give more to each other, they still not incorporated in practice. In general, the initiators of knowledge management are driven by strategic project planners who desire to build most part of the intellectual resources in an enterprise. E-learning as well as training are frequently driven by particular fields of business or by department of human resources. Consequently, e-learning has reflected a department focus or short period plan and not reflected a long period plan – strategic plan – or project wide vision [22].

Recently, e-learning has emerged as a more advanced strategy for learning in many places all over the world, particularly in education and business sectors through the electronic technologies and Internet. Accordingly, new action plans and programs have been developed to be more compatible with this update system. However, substantial questions remain with regard to the best strategies for e-learning system design, funding, implementation, and capacity building [8].

In conclusion, it is found that the differences between the KM environment and the e-learning environment are artificial, not important and undesirable [9]. Mainly, supporters of integrating these environments see that e-learning becomes as a part of Knowledge management and regard knowledge management as a tool to be used in e-learning. The rapid progress in software facilitates the integration process even with the existing of organizational and cultural gaps [22].

E-learning initiatives provide a means to overcome linguistic and cultural challenges to the education system. In many cases educational institutions are legally required to provide care in among the e-learning process, and assuming the high quality of teaching [11]. Shifting to constructivist learning environments besides supporting building collaborative knowledge in KM systems make the separation process between knowledge management system and e-learning system is not significant [26].

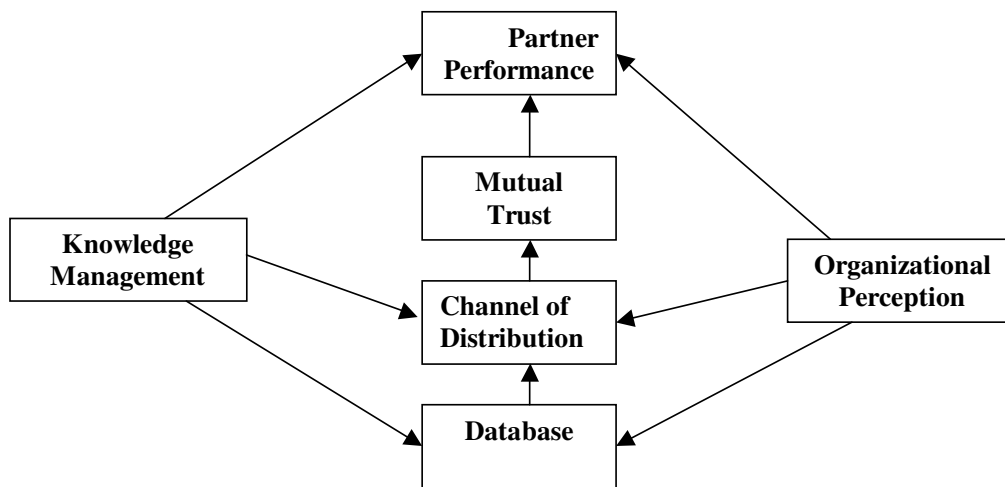
Knowledge management support organizations to discover, choose, manage, share, and transfer very important information. The effectiveness and competitive advantage can be gained through a successful managing for knowledge inside organization and developing process of knowledge management needs to recognize crucial success factors of knowledge [6].

This paper analyses and examines the enablers or crucial success factors that in addition to determining the effectiveness of KM within organization's e-learning process, they influence the whole performance of the firm. Following the existing literature, the five vital factors are outlined. These factors - Information systems infrastructure, Employee empowerment, Team working, Employee involvement, and Top management leadership and commitment - are considered to be important for effective KM implementation in the e-learning process. Furthermore, this paper examines the impact of effective knowledge management on organization performance.

To sum up, the primary task of such an organization is the conversion and exchange of information as well as data into knowledge whether these information and data were inside or outside organization; that is to say: the notions and tools of KM turn into a potential of continual significance regarded as a resource ( information) [13].

Figure (1) illustrates the main factors that may explain the perception of the organization among partners to improve their efforts and performance.

**Figure (1):** The (IT)-Organizational Perception and Shared KM [3]



### 1.1. Objectives and the Need for the Study

This paper revolves around the model of KM and EL in specific. The catalyst for success in implementing knowledge management is change within the whole process, technology deployment, other infrastructure, mindset of people, systems, and process and culture of the organization. The model therefore, represents developing organizations' entity overtime which might be assets of valued interest such as human being, an organization, a technology, a product, a process etc.

The paper, therefore, attempts to show how knowledge management KM and e-learning EL can be of a paramount support in the workplace. The road map of the learning process for implementing knowledge management is a necessary guidance for all stakeholders.

Despite the existence of many models in the literature, this study may represent different points of view and provide a complete picture of the KM with EL and can be added to the existing literature. This article attempts to discuss new ideas by developing a KM-EL model through analysing the different perceptions of KM and the ratio of the available literature.

## 2. Research Methodology

The goal of any science is acquiring knowledge and choosing the right method that help researchers to know the reality. The problem arises in choosing the right research methods. Inductive and deductive methods have different objectives and may be summarized as theory development and theory analysis respectively. Inductive methods are usually associated with qualitative research while the deductive method is often associated with quantitative research [5].

The literature review is one of the simplest ways to economize on research efforts. It consists of the review and reconstruction work already done by others and is intended to detect, obtain and consult the literature and other materials that may be useful to the purposes of the study, and to extract and gather relevant information and necessary relation to our research problem (available in different types of documents). This review is elected from parts of the large number of journal articles, books and other kinds of materials in different areas of knowledge, it will be important to select the relevant and the latest information [7]. However, it must be inferred that all published materials are appropriate or reliable sources of information.

## **2.1. Quality Learning and Quality Knowledge Objects**

The relationship between KM and EL has not been fully understood and exploited. On the one hand, learning is seen as an essential element of KM and employees should learn how to share knowledge before use it for particular function or task. In addition, technologies in general and which support technical and organizational components in particular can be beneficial for learning. These technologies may play a significant role with regard to the professional growth of e-learning [24].

Knowledge Management can serve organizations when variety of skills and technologies available with these organizations. For example and especially in information technology department, the information technology manager can enrich her or his role in order to cover knowledge management, while in human resources section, HR team change the reward policies to encourage knowledge sharing. Besides that, using strong skills in building relationships as well as Cross-cultural leadership are needed to run KM mission within the organization [27].

The strength of communication skills among employee is essential in order to understand and implement the organization's mission and process. Therefore, these skills with excellent understanding the role of KM technology should be combined in order to accomplish the organization potential. Thus, organizations considerably vary from one to another in focusing on the required skill and Knowledge management as well [18].

Working process within organization involved with KM and e-Learning systems are extremely knowledge concentrated and encourage employees to work at different places with different responsibilities. The notion that organizations provide solutions to emerging problems requires employees develop their competences to cope with challenges [24].

Both KM and e-learning serve and support the same purpose: learning facilitating and developing the organizations capabilities. KM is linked to the perception of organization, because it refers to the lack of knowledge sharing between members of organizations to encourage people to make their explicit knowledge through the creation of knowledge elements that can be stored in database for reuse or participate in communities of practice; rather than focuses on the individual point of view, as it emphasise on individual acquiring a new knowledge and technical tools to support knowledge building process [25].

Therefore, the integration of KM and EL is more than the shares-based delivery of information as a result of adaptation processes which are not prescribed by an initiative of centralized management of learning. In this respect we may say that linking e-learning and KM systems is enabled by learning object methodologies. Furthermore, acquiring of e-learning companies by knowledge management companies in the market indicate to the strength relationship between knowledge management and e-learning [22]. These and other indicators of converging between knowledge management and e-learning are promising.

At the strategic level KM is often coupled with organizational learning based on the similarities between their goals, used methods or organizational conditions that recognize, support, and value employees' collective intelligence [21].

[24] States although KM is not very old yet, but organizations realize their growth potential through acquisitions are limited. Therefore, the true sign of success, however, will come later down the road when KM is fully integrated with the functions of the organization. At that time, KM is not a complement, but it is impossible to distinguish the process of running a business. In this sense, this may come full cycle, loss of label KM, but retains its functions, but at a much more sophisticated. Accordingly, the learning process is characterized by managing activities and tools, such as the choice of the learning environment (like Internet), the definition of the learning objectives (for example, related to problem at work ), search and selection of learning content (e.g., websites, or other), and after a process of learning preferred.

It is crucial to understand that the learning systems in the organizations must give learners a multiple type of services to support and make the construction of knowledge easier. At the same time, learners can build their own experience of a learning style by using various paths, rather than impose themselves in a particular method of learning [32]. In another words, the amount of data and

information available to the learners must be adapted to the needs of workers and the environment. In particular, if the context of individual characteristics is ignored, learning process may fail to occur [26].

A healthy environment that promotes learning and work must provide content for purposes of learning and help learners to search for relevant content as well as support learning interactions such as supervisors and expert advice. Furthermore, the management capabilities in this field can be used to develop training programs. These programs should be evaluated in accordance with their potential application by using training functions and methodologies in order to achieve educational objectives and psychological objectives as well [23].

## **2.2. How to Achieve Knowledge Management in the Institution**

Knowledge management focuses on mapping, creating or optimizing knowledge flows in a company to add value to a business. E-learning brings more confusion to the field, this term is used both to describe learning supported by networked systems, and developing/managing e-learning content and processes [31].

The transfer of knowledge opens the door to the knowledge management. Mostly, learning is addressed by knowledge management as an element of knowledge sharing processes. KM also concentrates on particular figures of informal learning like learning in a community of practice or accesses the main resources of information and experts. The Knowledge transferring philosophy includes providing a natural way for the conjunction of knowledge management and training [20]. In addition to that, if knowledge management processes has automated within organization, e-learning can be fully integrated.

According to [20], few organizations fully success in integrating e-learning and knowledge management, but progress has been made in recent years. Current solutions are tending to merge e-learning with one part of knowledge management like centralized content management or one function of KM such as management of client relationships with collaboration. More complete solutions wait for a vision for imaging KM and EL and more easy technology for supporting KM and EL. There is only one way for integrating knowledge management and learning by creating a path to knowledge object to turn into a learning object.

Learner's involvement and their active participation in the learning process frequently enhance motivation and learning gain. Generally, the amount of information in KM systems is not prepared for teaching. These chunks of information must be embedded in interactive learning activities in order to use these chunks of information in learning successfully [30].

Management competence can be regarded as the basis for a more effective support of KM and e-learning interventions and competency development is inherently an individual learning activity as well as enhancing the workplace learning. In this respect, Standards have significant role either in KM systems or in e-learning systems where KM technologies can help learners' in their needs in addition to support individual learning processes [19].

By using KM, organizations look for discovering or creating valuable knowledge and to make accessible and useable at appropriate time and place in order to gain maximum organizational performance [18]. Thus, the true value is created by fostering innovation in the organization. In this respect the organization must consider knowledge as strategic assets, and these organizations should capitalize on existing organizational knowledge to improve and build up an intellectual assets base as an attempt to gain a competitive advantage [16].

Most the educational institutions have greatly invested in the education sector in order to reform as well as harmonize the education sector to make information and communication technology inside this sector is up to date. In addition to that, Academic institutions heavily invest in innovation and development, anticipation and preserving the availability of skilled labor, and in a high-quality education [25].

Currently the researchers' believe as an academician working in one of these Academic institutions, communities of practices like KM network and best practices in education environments are in an advanced stage of development. Programs such as KM certification programs corporate

training and academic degree certificate are increasing [29]. Techniques such as data mining and text mining that use KM intelligence and innovation are in the early stages of development. Universities are heavily investing in KM software that facilitate and smooth the progress of organizational knowledge [12].

Managers use the information technology to build the required infrastructure that supports the important activities of acquisition, storing, and sharing knowledge. With the spread of technology and efficient communication network management, there are different choices and alternatives to enhance information technology supporting to KM. The aim of this information technology is sharing, capturing, leveraging for further learning and innovation among employees [14].

Nowadays, Knowledge management becomes imperative in business sector and educational community. At the strategic level, KM is often coupled with organizational learning based on the similarities between their goals, methods used or organizational conditions that recognize, support, and value employees' collective intelligence [9].

KM is linked to organizational perspectives, on the contrary e-learning focuses on an individual perspective. Thus, one of the concerns of KM is the expansion and the utilization of knowledge resources of an organization that it would strengthen objectives of the organization. Identification, sharing and creation of knowledge are the processes that a management requires [9].

The process content should be accessible to KM, just as knowledge assets should be accessible to e-learning. In other words, achieving the integration between the e-learning process and KM is more accountable for the learning outcomes. The value is in their integration and this will provide a set of approaches to support staff in the learning process, and to be consistent in a corporate authorial way [18].

Strategy of knowledge management is the general approach of an organization to bring align their resources and knowledge to the intellectual capacity of its strategy, reducing the gap between knowing what the company needs to know to carry out its strategy and what you know [15].

### 2.3. The Suggested Model

Based on existing frameworks and models, [28], outlined the five most significant and critical enablers or factors (leadership, organizational culture, strategy, information technology and people) that determine the effectiveness of knowledge management within organizations and the impact of their factors on organization performance. [28], also summarized most of the knowledge management enablers through reviewing researches and models investigated by Arthur Anderson And APQC (1996), Earl (1997), Skyme and Amidon (1997), Holsapple and Joshi (1997), Davenport et al. (1998), Liebowitz (1999), Arthur Anderson Business Consulting (1999), APQC (1999), Stankosky and Baldanza (2000), Holsapple and Joshi (2000), Andrew et al. (2001), Chourides et al. (2003), Hasanli (2002), Davenport and Probst (1998), Bixler (2002), and Mathi (2004).

On the other hand, [2], presented a model that combines e-learning and KM into adaptable framework and discussed some factors or enablers that help learners in selecting and evaluating e-learning media. Therefore, both [28][28] and [2] researches are inspired us to present our model. In reviewing the literature, the researchers noted that there is a strong and significant overlap between EL and KM.

Figure (2) describes the process of learning of an individual or an organization within active and interactive environment. The process of active learning is a means to vitalize thoughts of learners besides adding value to the way they adapt to the new learning environment. To describe the model easily, this model is discussed the organizational learning concepts.

Evaluating the value of a product and process may enforce organizations to freeze the process or product over time and this happens due to the need for training, lack of funds, or limited success. In fact, the learning process model carries huge competitive advantages and causes a block of new processes move to a stage of development. Learning organizations normally achieve strides of success when the learning process is modelled to tackle internal and external problems and through which learners can overcome challenges related to skills and technical capabilities.

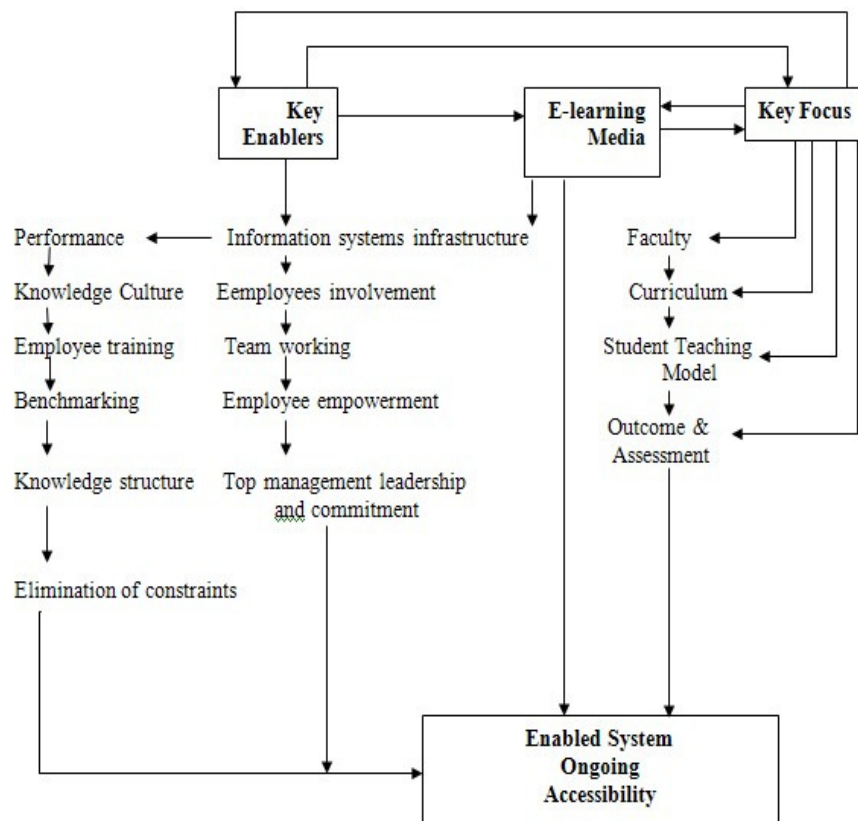
Such organization mediates the learning field as it advertises and implements their product or process, proceeds along the learning field, responses to the environment feedback, and makes a better version of the product or process. An example of such organization is Apple Company which opens learning environment for employees actively and interactively, with a minimum of finished products / processes. The interaction between the internal and external environment through a learning process brings huge benefits as change knowledge will leverage the organization's outcomes and double its benefits. In this learning environment, the expansion of the object of knowledge improves the e-learning environment and often becomes a reality. The outcomes of this model represent the state of flow of knowledge between individuals or groups of learners within the organization.

Move up the continuum, the organization enjoys considerable success with their continuous product or process and may not be aware of the need for change their product or process. Actually, the success can continue for several years and then the market starts looking for new ideas or new products. At that time, it is often too late to compete with more nimble competitors who continued develop themselves and their products or processes.

To reflect on the balance between the individual and the organization in the workplace is another way to use the model of learning. Companies which are contained in certain products or service need to increase employees' acquisition of skills and capabilities to conduct certain tasks in marketing, purchase or communications with customers. Thus learning increase employees technical and mental effectiveness. Similarly, for a person who has blocked on certain set of thoughts and habits, he will face a lot of difficulties to success in organizational learning.

**2.4. The Model**

**Figure (2):** Integration of E-learning & KM framework [2].



### 3. Findings and Results

In this paper, the entity of interest is Knowledge Management and E-learning is considered.

The literature provided many definitions of knowledge management. Researchers have demonstrated that (KM) is a combination of values, contextual information and experiences that provide a framework for assessing and incorporating new experiences and information. Knowledge originates in the mind and applied by people, so it is part of human complexity and unpredictability, whereas in organizations, knowledge is not only found in documents and databases, but it is also in the processes, practices and institutional standards.

From this definition, it is concluded that the knowledge is not ordered or simple but, knowledge is a mixture of different components; cultural, environmental and personal. Therefore, it is difficult to translate knowledge into logical terms or words. These characteristics justify and explain why knowledge is not definable and tangible asset but it is intangible and difficult to capture and manage.

The researchers have concluded that the differences in results between organizations are due to their different capabilities to develop and deploy knowledge. Thus, knowledge management can be considered as the most important dynamics of the company and the main driving of all skills and abilities. As a result, some companies have identified problems that have led them to recognize the need to manage their knowledge. For this reason and in order for organizations to implement knowledge management; they should take into their account three dimensions; staff and culture, management of the company and technology.

Yet, the relationship between KM and e-learning has not been completely understood and utilized. Therefore, Studies have, therefore, demonstrated that knowledge management and e-learning are realized to work and interact closely. The responsibilities for both of KM and EL are supervised by different departments or units in academic institution, and consequently the logistical technologies are hardly related. Accordingly, highlighting has been made on the main features of KM and e-learning whereby both domains can be utilised within organization.

The literature review proposes the use of e-learning systems as a knowledge management tool, posing an integrative framework. Therefore, organizations should benefit from the existing knowledge flowing and conversion among users in order to create a new knowledge by capturing knowledge interaction existing within organizations. Capturing of the perceptions and experiences of users can be facilitated by e-learning through word processing tools, communication tools asynchronous such as email, discussion forums or mailing lists, or through synchronous communication tools such as chatting or using whiteboard, which help track the session, making tacit knowledge of one or more users documents possible.

The e-learning also supports the transformation of explicit knowledge to tacit when users learn and internalize explicit materials. In terms of e-learning, this knowledge conversion process would be closely related to the "Reading to learn". The e-learning system can act as a store of knowledge where a user can inquire about details of a particular project, similar projects, reports, white papers, conclusions of previous projects, etc.

The researchers have suggested that organizations such as academic institutions should avoid all practices that stood behind successes in old economy environment and should find ways to cope with modern economy development in terms of reinvent ideas to align with these challenges.

On the other hand, the socialization process takes place in informal settings where users or experts discuss their experiences, share their different views on a topic particular, propose different ideas for a project or problem, etc. This interaction allows tacit knowledge transfer from one user to another within the organization.

Therefore, the e-learning can create a virtual environment that enhances this interaction. For it features synchronous communication tools (chatting, audio / video conferencing), with asynchronous communication tools (e-mail, discussion forums) or tools group work, allowing the exchange of tacit knowledge where this knowledge may be captured or not. Now, an individual can acquire tacit knowledge directly from other individuals without establishing a communication, but through observation, imitation and practice.



#### **4. Conclusion**

There is a significant difference between the individual and the group or organizational learning. Individual learning is primarily a behavioural activity or cognitive between an individual and the environment, while the team and the organization of collective learning processes depend on the interactions and relationships between individuals and, consequently, learning takes place through the interaction of participants.

In summary, there are many advantages of using knowledge management in education. Although there are some problems that occur when the process of knowledge management takes place, the benefits outweigh the negative aspects. Therefore, all academic institutions in the education sector must take into account the application of KM in educational systems. Consequently, the modes of transmission of knowledge within organizations are to develop and modify the academic educational systems so that the information is transmitted effectively. Thus, the method of KM is an educational tool for the perfect development for all grade levels.

The aim of this study is to demonstrate the huge power of the KM, and the case examined (e-learning), also identifies the necessary success factors for this power to be recognized and realized. Although the transfer of ideas from technology to education seems to be not identical, there is certain basis where these settings are probably common.

Academic institutions can benefit from knowledge management concepts and tools. As economies and businesses move towards the creation of a new world of digital information and knowledge-based work, these institutions face the challenge of how we can contribute to KM solutions. Although there are limits to the application of KM in the field of education in general; that is to say: the high cost of implementation, the benefits outweigh the costs. The advantages of the application of knowledge in the field of e-learning are proposed as a systematic knowledge activities, employee development, customer satisfaction, good foreign relations, and the success of the organization. To establish a well organized learning community, public and private sectors need to collaborate on bases of providing sources and helping in executing Knowledge.

Finally, we can confirm that integrating process of Knowledge management with e-learning can be controlled and mastered only when researchers as well as developers of various disciplines cooperate or work together. Obviously, it is hard to discover a final and optimal solution during the coming years because the growth of both KM and e-learning systems is fast, therefore, several new studies, research articles and issues will come up.

#### **5. Managerial Implications**

It is well known that evaluating intangible services is hard process rather than evaluating tangible services, therefore, managers rely on dimensions such resources, environmental influences, knowledge sharing or marketing quality. Beside that organizations should offer a wide variety of KM products to increase process attractiveness and increase the likelihood of a positive relationship between knowledge management and e-learning. Moreover, organizations should assure that their products increase their budgets.

#### **6. Limitation of the Study**

In this paper, light is shed on the basic concepts of KM and e-learning. Integration of KM and e-learning process is discussed and how this integration can be leveraged for successful online education as well as training. One of the limitation for this study is other studies could emphasise on different enablers that may help in expanding and developing researches in order to study same sector and effort in many institutions. Ignoring the literature that identifying face to face recognition and not relying on information technology networks is another limitation in this paper.

## References

- [1] Allee, V. (1997). principles of knowledge management, *Training and Development*, vol. 51(11), pp. 71-74.
- [2] Alrawi, K. (2010). How Knowledge Management Adds Critical Value to E-learning Media, *Journal of Knowledge Management Practice*, vol. 11(3)
- [3] Alrawi, K. & Alrawi, W. (2011). Knowledge Management for Marketing Management: Implementing Information Technology to Distribution Channel Performance, *Journal of Knowledge and Human Resources Management*.
- [4] Bennet, D. (2006). Expanding the knowledge paradigm, *Vine*, vol. 36(2), pp. 175-181.
- [5] Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done?, *Qualitative research*, vol. 6(1), pp. 97-113.
- [6] Chong, S.C. & Choi, Y. S. (2005). Critical factors in the successful implementation of knowledge management, *Journal of Knowledge Management Practice*, vol. 6(2).
- [7] Cronin, P.R.F.& C.M. (2008). Undertaking a literature review: a step-by-step approach, *British Journal of Nursing*, vol. 17(1), pp. 38-43.
- [8] Curran, C. (2004). *Strategies for e-learning in universities*. Research & Occasional Paper Series: CSHE.7.04.
- [9] Efimova, L. & Swaak, J. (2002). KM and (e)-learning: towards an integral approach? In The new scope of knowledge management in Theory and Practice, proceedings of the 2nd EKMF Knowledge Management Summer School, Sophia Antipolis, France, (pp. 63-69).
- [10] Endres, M. L., Endres, S. P., Chowdhury, S. K., & Alam, I. (2007). Tacit knowledge sharing, self-efficacy theory, and application to the Open Source community, *Journal of knowledge management*, vol. 11(3), pp. 92-103.
- [11] Faez, F. (2010). Linguistic and Cultural Adaptation of Internationally Educated Teacher Candidates, *Canadian Journal of Educational Administration and Policy*.
- [12] Gupta, V. & Lehal, G. S. (2009). A survey of text mining techniques and applications. *Journal of Emerging Technologies in Web Intelligence*, 1(1), 60-76.
- [13] Henczel, S. (2000). The information audit as a first step towards effective knowledge management: an opportunity for the special librarian, *Inspel*, vol. 34(3/4), pp. 210-226.
- [14] Hussain, F., Lucas, C. & Ali, M. (2004). Managing knowledge effectively, *Journal of Knowledge Management Practice*, pp. 1-12.
- [15] Hussain, I., Si, S. & Ahmed, A. (2010). Knowledge Management for SMEs in Developing Countries, *Journal of Knowledge Management Practice*, vol. 11(2).
- [16] King, W.R. (2007). Keynote paper: knowledge management: a systems perspective, *International Journal of Business and Systems Research*, vol. 1(1), pp. 5-28.
- [17] King, W. R. & Marks, P. V. (2008). Motivating knowledge sharing through a knowledge management system, *Omega*, vol. 36(1), pp. 131-146.
- [18] King, W.R. (2009). Knowledge management and organizational learning, *Knowledge Management and Organizational Learning*, pp. 3-13.
- [19] Laakso-Manninen, R. & Viitala, R. (2007). Competence management and human resource development, *HAAGA-HELIA Research*, vol. 1.
- [20] Lamont, J. (2001). KM and e-learning: a growing partnership, *KMWorld*, vol. 10(7).
- [21] Lamont, J. (2002). Knowledge management: shaping the profession, *KMWorld Magazine*.
- [22] Lamont, J. (2003) *Special Section: e-Learning World: Bridging the worlds of e-learning and KM* , 1 Feb, [Online], Available: <http://www.kmworld.com/Articles/Editorial/Features/Special-Section-e-Learning-World-Bridging-the-worlds-of-e-learning-and-KM-9432.aspx> [1 Feb 2013].
- [23] Ley, T., Lindstaedt, S. & Albert, D. (2005). Supporting competency development in informal workplace learning, *Professional Knowledge Management*, pp. 189-202.

- [24] Ras, E., Memmel, M. & Weibelzahl, S. (2005). Integration of e-learning and knowledge management–barriers: solutions and future issues, *Professional Knowledge Management*, pp. 155-164.
- [25] Sammour, G., Schreurs, J., Al-Zoubi, A. Y. & Vanhoof, K. (2008). The role of knowledge management and e-learning in professional development, *International Journal of Knowledge and Learning*, vol. 4(5), pp. 465-477.
- [26] Schmidt, A. (2005). Bridging the gap between knowledge management and e-learning with context-aware corporate learning, *Professional knowledge management*, pp. 203-213.
- [27] Tanriverdi, H. (2005). Information technology relatedness, knowledge management capability, and performance of multibusiness firms, *MIS quarterly*, pp. 311-334.
- [28] Theriou, N., Maditinos, D. & Theriou, G. (2010). Knowledge Management Enabler Factors and Firm Performance: An empirical research of the Greek medium and large firms, International Conference on Applied Business & Economics ICABE.
- [29] Vasconcelos, J., Seixas, P., Lemos, P. & Kimble, C. (2005). Knowledge management in non-governmental organisations: a partnership for the future, In Proceedings of the 7th International Conference, Enterprise Information Systems (ICEIS), Miami, USA.
- [30] Yacci, M. (2005). The promise of automated interactivity, *Professional Knowledge Management*, pp. 214-221.
- [31] Yordanova, K. (2007). Integration of knowledge management and elearning, common features, International Conference on Computer Systems and Technologies, Sofia, Bulgaria.
- [32] Zack, M.H. (1999). Managing codified knowledge, *Sloan management review*, vol. 40(4), pp. 45-58.