The Emerging and Potential Developments Of Interactive Between Knowledge Management and E-Learning: Barriers and Solutions

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Abstract

In this paper the researcher introduced the concept of knowledge management (KM) and e-learning (EL) integration in the potential educational environment/Universities success in Iraq. The purpose of this paper is to analyze the knowledge management and e-learning integration as a crucial component of the educational environment (EE) dynamics, and barriers implementation in the educational environment. The function of this paper is to analyze the (KM and EL) integration as an essential component of the institution's knowledge dynamics, and the organization's barriers implementation in the educational environment. This study was accomplished through questionnaires that surveyed (16) universities' academicians that are located in Iraq. Findings revealed that integration barriers are (Interactivity level problem, Guidance problem, process of ongoing adaptation problem, Technical problem, Learning process negligence problem), and have a negative relationship with the perceived benefits of knowledge. Solutions are suggested.

Keywords: Knowledge Management, E-learning, Educational Environment, Integration, Iraq

Introduction

Knowledge management and e-learning are often used next to each other. In an educational setting, faculty and students create formal and informal functional communities within the context of teaching and learning, and therefore educational institution's culture becomes crucial for societies of inquiry. The establishment of e-learning systems within the academic institutions is something new in the teaching process. The technological capabilities of modern toolsets expand the on-line process and covering a wide spread of learning needs and satisfaction for learners (Whiting, and Miller, 2008). Delivering online quality education and equal access requires a commitment to diverse learner populations. Unfortunately the e-learning market is not as mature as we would prefer in terms of effective solutions, advanced functionalities and learning standards. It has to be based on issues closer to effectiveness irrespective to the size of the population (Abeysekera, 2007).

In most of cases the virtual universities, the e-learning systems base their functionality on a simple browsing mechanism accompanied with a section of web links and a few on-line quizzes. The researchers' believes is that any university as an educational institution should align between KM, information technology (IT), and the learning development within its organizational hierarchy, as these department/variables are often in different parts of their hierarchies.

For Alrawi, et.al, (2011), KM and learning functions need to integrate their activities, their systems and their perceptions to succeed. Therefore, e-learning needs to become more granular, more independent of a fixed training context. The primary need for the academics and employees in such EE is to become more capable of being integrated into formalized learning process and their accountability for achieving higher learning outcomes. Nevertheless the requirements of modern business units seem to diversify from training seminars to corporate learning portals implying a desired reinforcement of capacities for effective actions (Sujan, and Abeysekera, 2007). Quality education and equal access for marginal communities is very much needed; what will make it a reality is a willingness to acknowledge limitations and the courage to raise awareness around issues that will move our educational institutions out of their comfort zone (Wright, and Snell, 2005).

The purpose of this paper is to analyze the (KM and EL) integration as crucial components of the institutional knowledge dynamics, and the organizational barriers implementation in the educational environment. The objective of this paper is to suggest how the integration between KM and e-learning processes can lead to a new perspective in the educational environment, and solutions for the barriers of integration for the educational institutions in Iraq through the realignment of the role and how to value each other.

An initial discussion on e-learning

The intention of the paper is that e-learning be the subset of learning activities and is supported by network technologies. Therefore, e-learning management focuses on learning activities addressed both by knowledge and learning management. The majority of learning platforms incorporates issues like learning styles, learning needs, learning templates as well as learning specification settings (Schneider, and Samkin, 2008). Educational institutions are starting to recognize synergies between knowledge management, training and e-learning programs. The potential contribution e-learning promises to make organizational learning are huge, and the sector continues to grow at an extraordinary rate in the EE. The application of emerging digital technologies such as e-mail, the World Wide Web and the internet in the educational setting has received wide acceptance all over the world while the internet is a godsend to some, it is also fair to say that some cultures find the ease of technology as having a negative impact on face-to-face interactions (Barker, 2005). As a result of the huge growth in the e-learning sector, development skills are now in incredibly short supply in the educational institutions. The process of e-learning has grown exponentially in the developed country's universities, and efforts needed for individuals who understand Internet technology as well as education, training and development. To get the most value from the organization's intellectual assets, KM practitioners maintain that knowledge must be shared and serve as the foundation for collaboration (Immad, and Amjad, 2009). Yet, better collaboration is not an end in itself, without an overarching education context, KM is meaningless at best and harmful at worst. Educational institutions should recognize that e-learning vendors and KM vendors both have to accept that they will become increasingly dependent on each other, and that standards for system interoperability will become increasingly important. Universities who are seeking to implement integrated KM and e-learning solutions are both seeking strategic alliances already (Keulartz, and Schermer, 2004). E-learning institutions should focus on learning, neither on training nor knowledge. Therefore, the e–learning dimension stands for the ability of an e-learning system that supports the achievement of different educational goals.

Educational institutions need staff who can do their job and understand their duties, and they are fit to do the job before they are allowed to do it, therefore, in this respect they need to build a culture, commitment and behaviors so that academics and administrative employees actually achieve what they are supposed to perform. Wheeler (2003), in her study of Internet use in Kuwait youth, found that elders within the community believed the Internet took young people away from quality time usually spent with family members. In a culture where family and community are revered, the Internet is a major clash with the values that are so strong within this society. The way that learners are engaged in learning scenarios through a remote control or an advanced keyboard is not as simple as it sounds (Zairi, and Al-Mashari, 2005). Thus, KM has addressed learning mostly as part of knowledge sharing processes on providing access to learning resources or experts. The e-learning initiative both in corporate and academic environment defines new ways of improving performance. The researcher's concluded from their discussion that some of the participants in the sample are aware and realizes that KM is mainly about facilitating purpose-oriented learning in organizations.

The learning effectiveness, is a concept with various quality factors included, has a direct relation to the technological complexity of the e-learning environment.

Technology provides the means for the achievement of learning goals but the performance of learning has to be measured in learning terms. The compromise of functionality and sophistication in e-learning applications very often is decided according to technological limitations (Vinaja, 2009). Bratianu and Orzea (2004), argued that knowledge resources are key to a scholarly teaching-learning environment. However, with the proliferation of knowledge and information, which made ever more accessible through the Internet, professors and students are being challenged to navigate the sea of information. In general, learning is considered to be a fundamental part of KM because employees must internalize, or learn, shared knowledge before they can use it to perform specific tasks (McNeish, and Mann, 2010).

Considering the integration of e-learning and km

E-learning is a new concept for example to the Arab educational institutions, and therefore little emphasis has been placed in these universities on developing the e-learning process and pedagogical knowledge development and management systems, which includes explicit and implicit knowledge rather than a core advanced and an experimental one. KM and e-learning serve both the same purpose: facilitating learning and competence development in organizations (Sammour, Schreurs, Al-Zoubi, and Vanhoof, 2008). The integration between KM and e-learning may at least enhance their effectiveness over common characteristics that in general simulate the traditional way of teaching. E-learning is not a technological phenomenon. It is mainly a social phenomenon, since learning is the key issue and not the technology. The higher the engagement is the higher the motivation and the willingness of learners to pay for learning services in the universities.

Figure 1. The e-learning Strategy.
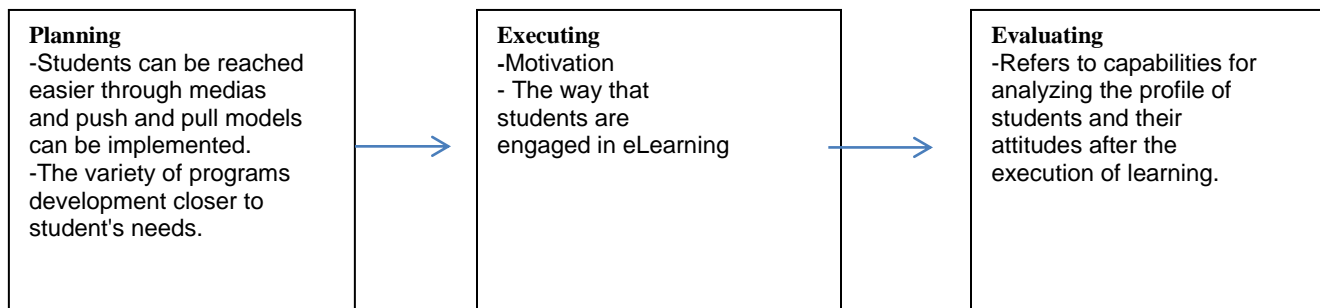
Technology is a facilitator or an enabler that requires a systematic interactive between the two perceptions. There is a need for developing a better understanding of KM as enablers of information strategy for the e-learning of education. The e-learning initiative both in corporate and academic environment defines new ways of improving performance (Ayiro, and Sang, 2010). Therefore, academicians need to recognize that e-learning courses and KM systems are both here to stay. Such perception should be recognized by the KM specialists. Thus, KM is a mean to have employees gain knowledge and experience important in their organization and to help change a more product-oriented organization towards a more service-oriented organization. In fact the boundary between the two is actually becoming increasingly blurred, (Wang, 2007). For Hodgins (2014), the strategy of learning is separated in three stages, namely planning, implementing and evaluating (Figure 1). Although the scenarios and the ideas behind KM and e-learning may look like a lot of change, we believe that integrating efforts brings us back to the nature of learning as a blend of different experience. A skill is essentially some adaptation that a person has in relation to performing some cognitive tasks. The skill level that academician have is a reflection of that person's ability to perform that task effectively and efficiently (Alireza, et al., 2010). Evaluation teaching process refers then to the capability for analyzing the profile of the students' attitudes after the execution of learning. The researcher expect that in the next several years ad hoc software will develop into comprehensive, knowledge aware enterprise management systems. KM and e-learning will converge into knowledge collaboration portals that will efficiently transfer knowledge in an interdisciplinary and cross functional environment.

In organizations where KM and e-Learning systems are used, most working processes are very knowledge intensive and involve many people working at different locations and on different tasks. KM theories, learning theories and information systems practices, are determining a complex context of interrelations (Pee, and Kankanhalli, 2009). Thus, students may develop competencies that enable them to perform competently in a broad area range of situations within their e-learning process and not just for the current situation they are currently in. The pillars of performance in e-learning are another critical issue. KM, EL pedagogy and application integration formulate a triptych of analysis. In the next couple of years the estimation for the market growth of e-learning is extraordinary (Anantatmula, and. Stankosky, 2008). The context in which people are working is changing constantly through changing work processes, different tasks or problems to be solved. These facts require continuous competence development. In general there are several open issues for e-learning to consider. Interactivity, codification, personalization, customization, motivation, collaboration and technology are key variables for the enhancement of performance for KM and EL integration. The selection of technologies that will allow the highest possible performance is a research question. Still, the success of teaching strategies will largely depend upon the students' demands and preferences to use this module of learning (Manuel, 2008).

The research findings

A total of 16 participants are universities' academic staff was interviewed followed by a discussion through the telephone when more clarifications are needed.

Table 1: Type of Barrier

No.	Type of Barrier	Percentage %
1.	Technical	85 %
2.	Interactivity Level	80 %
3.	Learning Process Negligence	79 %
4.	Guidance Efforts	75%
5.	Process of Continuous Adaptation	70%
6.	Presentation of Content Not Adequate	68%
7.	Others	-

The participants' background was: computer science, IT, as well as instructional design. All those participants are engaged mainly in the learning domain. Some participants, (about a half) mentioned that they are aware of what KM and e-learning are. The mix up of different interests, and expertise brought up many important findings have been gathered. An interview based study demonstrated that perceived connections between KM and e-Learning are not operational zed the results reveal that these integration ideas are rarely implemented in practice. Table 1 presents types of barriers according to their importance to the EE expressed by the interviewees in the sample.

Refer to Table 1.

The interviewees were asked to identify the barriers of integration between KM and e-learning. Technical barriers are the most problematic issue. It is interesting to note that most the interviewees (85%) expressed that variables such as work, learning, and knowledge space may implement on different technical systems are the main barriers for integration. Examples of these spaces include e-Learning platforms, and the Intranet. Each of these variables has its own systems or structure, which makes the integration of the systems more difficult.

It is crucial to formulate a framework that will take into consideration the learning tasks of the educational institutions as the information chunks in KM systems are usually not designed for instruction and this is important characteristic of good instructional design. In this sample (80 %) said that information chunks need to be embedded in interactive learning activities. In this respect the academic staff roles and knowledge to create constructive learning environment should be effective. Their effectiveness will motivate learners and improve the way of teaching. We could state that these systems secure the growth of the so-called distance learning in the EE even though the learner satisfaction from such a system is very limited. Interviews have shown that learning process negligence is another barrier for the integration process as (79 %) mentioned that KM systems focus on knowledge acquisition, and sharing and they do not explicitly address learning processes themselves, which is essential for effective learning competency.

Skills and, competence development process is largely relies on the learner's / students' own initiative which requires certain skills and expertise in the issue. This is considered by (75%) of the interviewees as one of the barriers for an integration of KM and e-learning. Courses in e-learning should provide guidance for the learners achieving their self-directed learning from the huge of much guidance offered by the e-learning process whereas KM systems sometimes provide little or no guidance to inexperienced learners/students.

Interviewees (70%) have shown that the adaptivity of the implemented e-learning systems may not prepared for dynamic selection and sequencing of learning material yet. Such adaptation may create courses suited to the needs of the students based on a static student model before they encounter it, and might help to re-use existing information in KM systems for instruction. The integration process between KM an e-learning is not an easy work, and entails some difficult problems, because e-learning specifically puts much more emphasis on delivering personalized content and relations, across references existing within the learning material.

Therefore, presentation of content not adequate were considered important and a barrier for (68%) of the interviewees. Through the discussion with staff in the sample the researcher's that there are some problems which concluded from these discussions, such as lack of interactivity and context neglect are perceived as barriers for the integration between the two perceptions.

The rules of instructors/academics staff in creating interactive environment stems from their ability to work with the students, and providing an ongoing feedback that enables constructive learning process. Such feedback may help in tailoring the content of teaching strategy to the learner's/students' needs and preferences. Within such environment and involvement often increase motivation and learning outcomes.

Instructor's tasks depend mainly on the situation and the environment they are working and performed in. In fact they are influenced by the characteristics and relationships of the context (Azudin, Ismail and Taherali, 2009). Therefore, the environment's delivery method should take the context into account, for example through tailoring content for learning on long term strategic learning. This will enable the management to meet defined pedagogical as well as psychological objectives, and to follow a learning systems that provide learners/students with a wide range of services in order to assist and facilitate knowledge construction (Wang, 2007), in order to create a consistency between learners/students perception and management learning method.

The researchers' recognized that those in the sample are aware of removing these or other barriers in an attempt to reduce the gaps in implementation such issue towards a beneficial integration between the fields of e-learning and KM. KM technologies can support the learners' needs and individual learning processes in building standards. Therefore more exploratory research in e-learning is needed in which a learner/student may systematically gather information from Internet sources. E-learning institutions should tailoring content for learning on demand or long term strategic learning in order to improve learning process in the organization. This may be achieved through the collaboration between employee working on a learning process level and the learning management. Such incorporation of context-awareness of employees will improve the teaching quality, and collaboration solutions on a technical level. On the other hand, using the existing KM technology (systems) as it is one of the institutions' assets may be regarded as a solution of reducing integrations' barrier that should be considered and extending learning management systems.

Also existing material use in a constructive way may improve the learning process. This is may be a way for a diagnosis in terms of skills that might be used by students or faculty members to access instructional resources.
Management competency can be used for deciding the types and developing training programs in order to meet the defined pedagogical as well as psychological objectives. Management function is here to facilitate learning with KM systems through the controlling the learning process rather than a centrally-managed development initiative. An ongoing evaluation process is needed through a lessons-learned meeting at the end of a project, or asking supervisors and experts for advice. Competency may be achieved through the capitalization on the integration of KM and e-learning and as a solution for better job performance through learning. Interactivity, customization, motivation, collaboration and technology are the key variables for the enhancement of performance.

Conclusion

The potential KM and e-learning integration serve both facilitating learning and competence development in the EE. This paper argues that integration between EL and KM can facilitate e-learning process, and also add value to this practice in the universities in Iraq. Interviews with 16 academics have shown that perceived connections between KM and e-learning are not reflected at the implementation level: different functions are responsible for supporting e-learning, activities and systems to support learning are hardly related.
We may conclude that KM and learning practitioners need motivation, time and effort to find common language, to overcome organizational barriers, and to link interventions and technological infrastructures aimed to support learning in different forms. The researcher expects that this paper will form the basis for a more extensive study of the issues that affect the EE to support the e-learning process. Management must provide content for learning purposes and support learners in finding appropriate content.

Limitation of the study

The researcher believes is that any university as an educational institution should align between KM, information technology (IT), and the learning development within its organizational hierarchy, as these department/variables are often in different parts of their hierarchies. This needs further research.

Another limitation for this research is that perceptions of the academic staff working at universities practicing e-learning process may be included in this paper.

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