

## Hybrid Model of Web 2.0 Technology Tools with Knowledge Management System

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**Abstract:** Web 2.0 is debatable term derived controversial. Although, one opinion about this term, Web 2.0 tools such as blogs, wikis, social bookmarking, podcasts and RSS feeds heavily used in learning environments. This study proposes a hybrid model which accommodates the services of Web 2.0 technology tools with the knowledge management. All types of learning providers including consulting university and other education organizations can use this model. The proposed model has purposes of taking both tacit and explicit knowledge as well as knowledge sharing and delivery devices. As a conclusion, the hybrid model puts the life of components of Web 2.0 technology tools and major features of KM together which make this model very useful for both academic and different organizations institutions including business and commerce.

**Key words:** Web 2.0 tools, knowledge management, blog, wiki, podcast, RSS, social bookmarking

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### INTRODUCTION

e-Learning is a window renewed to offer a variety of educational programs check the interaction between the teacher and the learner, regarding information and communication technology contributed significantly to the promotion of education (Madar and Willis, 2014).

From this, it follows by many researchers that the discovery of Web 2.0 is the next generation of personal communications between (London, 2007). Web 2.0 supports interaction and cooperation with the media and social dialogue and user-generated content which includes social networking sites, namely, wikis, blogs and web applications, folksonomies and composers and video sharing and Instant Messaging (IM) and hosted service (Lellingner, 2010). Web 2.0 has caused drastic changes in internet technology and e-Commerce, some types of known and widely used in the Web 2.0 web sites including popular blogs, wikis and social networking sites, share files (Ramadan and Qirim, 2014).

Is a collection of new technologies and web applications that have changed the world wide web "internet" behavior. The word "Web 2.0" I heard for the first time in a debate cycle between Orly Company (O'Reilly Media) known and media life group (Media Live) international information technology in Web development conference held in San Francisco in 2003 (O'Reilly, 2005; Darwish and Lakhtaria, 2011).

Nonaka and Takeuchi (1995) explain that intangible assets such as values and the mental image of the organization, intuition, metaphors and insight, the most valuable asset that should take care and attention because it is the added value for daily operations of the organization (Nonaka and Takeuchi, 1995).

The knowledge management model for knowledge management in business organizations design to reach the diffusion and socialization both implicit and explicit knowledge. The concept of knowledge management and includes any processes and practices involved in the creation and acquisition, capture, exchange and use of knowledge, skills and experience (Nichols and Anderson, 2005).

Knowledge management tools and Web 2.0 technology both dealing with the same mission essential tasks that facilitate the learning process in a business organization. Similarities between knowledge management and Web 2.0 related to the process of management of technology tools understanding partners easier for business organizations and institutions that have recognized its importance (Alvi and Leidner, 2001).

As a result of the evolution of the internet and enhance the speed of change in the notion of e-Learning and ways to view and interact with to include aspects of more interactive, leading to the development of the so-called second generation of e-Learning Web 2.0 and this type of learning is interested in employing social programs such as blogs, wikis, social bookmarking, podcasts and RSS feeds heavily used in learning environments (Sankar and Bouchard, 2009).

**Literature review:** Madar *et al.* (2015) proposed integrated framework of Web 2.0 and CL allows users to exploit the educational materials/instructional maximum at the same understanding of upsurges educated on the subject of knowledge. If the proposed structure used efficiently also allows users at all levels create a personalized learning environment that suits the perspective of teaching/learning patterns of users. Apart

from the academic achievement or improvements in education and learning processes, the proposed framework also would help learners to develop general skills which are imperative in the workplace. Because of this, fast and technically independent learning depends on about the teaching of technology-based ways and in this case, this model proposed two dimensions which is very crucial to enrich the student's learning activities (Madar *et al.*, 2015).

Madar and Willis (2014) this study focused a hybrid model with a capacity for services of e-Learning and knowledge management at one time. All types of education providers including consulting firms and other educational institutions can use this form. The proposed model has functions to capture tacit knowledge is both clear and as well as the exchange of knowledge and implementation tools. As a conclusion, the hybrid model puts the lives of e-Learning components and key features for KM together, making this model is very useful for academic institutions and non-academic alike including people in business and service providers (Madar and Willis, 2014).

Qwaider (2014) and explore the role of e-Learning 2.0 in knowledge management. One of the goals in the investigation of how e-Learning 2.0 helps organizations to improve the transfer of tacit knowledge administration and e-Learning 2.0 to increase representation and knowledge management of its employees. This study blends e-Learning and knowledge management systems and technology to improve the organization and arrest the study including tries to investigate how organizations and e-Learning management 2.0 to provide a sustainable competitive advantage. It is expected that this study will present to the area of knowledge management; also it will be very helpful for business managers to identify sectors that are suitable for e-Learning 2.0 (Qwaider, 2014).

Darwish in 2011, this study explains how Web 2.0 technology has been vigorously used as a supplement to the practice of communication in the communities. Moreover, this study explores the impact of SNS communications, Web 2.0 technologies and the internet, in particular, has been credited shareholder democracy and freedom of countries widely. It was also reviewed some of the challenges of the SNS and Web 2.0. Also, the role of these techniques in the Tunisian and Egyptian revolutions in 2011 and that has been pointed out and highlighted in this work has been affected (Darwish and Lakhtaria, 2011). Ramadan and Qirim (2014), it is shown in this study that Web 2.0 can help organizations improve their business processes and employee productivity, communication and information exchange. However, the widespread use of Web 2.0 has raised the need to regulate

such IT infrastructure and integrated information required to investigate the decisions of Web 2.0 adoption. This requires the development of Governing Information Technology (ITG) framework for Web 2.0 adoption of resolution considerations: accountability, implementation factors and regulatory policies, procedures, guidelines and framework of the existing ITG organizational. And address the effects of the contributions arising from the structure as well (Ramadan and Qirim, 2014).

Scherp *et al.* (2009) discusses the use of Web 2.0 as a new means for knowledge management for professional organizations in general and for emergency response in particular. It is argued that there is no clear understanding of how traditional knowledge management and Web 2.0 methods align. Therefore, this study analyses traditional knowledge management processes in the connection of Web 2.0 methods and presents an arrangement in a conventional knowledge management model. The typical example clearly records where any Web 2.0 process can be applied and thus the different components of the Web 2.0 and organizational processes can be taken into account. Finally, we examine the application of Web 2.0-based knowledge management for accident response and perform the initial work on developing a tool to support knowledge management in emergency response. This tool is embedded in the context of the research project that aims at examining how Web 2.0 techniques for example user generated content, question and answering and social networking can be applied in the emergency response domain (Scherp *et al.*, 2009).

**Knowledge management system:** Made many researchers of different models of knowledge management as these models have taken many forms and offers a simplified experience and it was the goal of every researcher directing organizations to build cognitive strategies that help organizations to achieve their goals and solve a problem era that even in line with the changes in addition to the advantage of the greatest, staff) of the organization of human capital (even these organizations reach a stage father farewell models and competition, it is this among the first researchers who had had a clear impact in establishing the theory of knowledge of the organization when he stressed the importance of strategic knowledge as a source of competitive advantage (Kogut and Zander, 1992).

The theoretical work focuses on the idea that "what you do best organizations of the markets is the production and transfer of knowledge within the organization". Knowledge management consists of information and managerial not held only by individuals but also expressed in the regularities that members

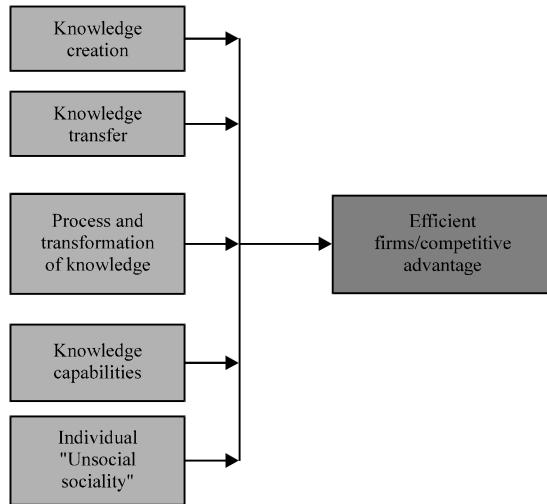


Fig. 1: Knowledge management model

cooperate in a social community. Companies such social communities as a “warehouse capacity” determined by the social knowledge management is an integral part of the personal permanent structured relations by the principles of an organization (Kogut and Zander, 1992). Called principles of the organization as the “organizational knowledge that define and coordinate the context of discourse between individuals and people with differing experience and re-regulate and control the passage of time in correspondence to the changing expectations and the identity of its members” (Kogut and Zander, 1996).

Kogut and Zander (1992), organizations are active by which is knowledge management model, shown in Fig. 1. Created and transfer of knowledge among individuals. Developed model through a shared understanding of persons and groups in organizations through frequent interaction for the transfer of knowledge from ideas to reality in production processes and markets. Organization does not work depending on market failure but rather working efficiency in the process of transformation for other organizations. Determined by the group limits by individuals knowledge of their employers and be an integral part of the capabilities between the Creator and users (owned with complementary skills) and not rely on failure market.

Kogut and Zander (1996) also discussed the concept of identity by asserting that individuals are “non-social social behavior” both regarding people wanting to become a member of society and at the same time they also have the desire to maintain and uphold personage own any privacy (Kogut and Zander, 1992). Organizations also provide criteria to identify the members of the teamwork, coordination, communication and learning

within organizations which cost far less than allow more knowledge to be shared and created within organizations.

**Web 2.0 technology tools:** The concept of e-Learning as a result of the evolution of the internet and increase the speed and change methods of view and interact with more interactive, leading to the emergence of the so-called second generation of e-Learning Web 2.0 and this type of learning is interested in employing social programs such as blogs, wikis, social bookmarking, podcasts and RSS in the educational process shown in Fig. 2.

Many applications of Web 2.0 technologies are relatively mature including blogs, wikis, multimedia sharing services, standardization of content, broadcasting and content services marks. Also, what these services are still of significance are used although the emergence of new features and capabilities are being added to this application (Anderson, 2007) and second-generation tools are shown in Fig. 3.

**Blogs:** Know the code as a page (Blogs) a blogging internet dynamic change in time according to themes and content raised in the code which required subjects sequentially appear at the beginning of the code by release date where he was the history of modern publishing first and then after which thus constitutes a sequential as that blogging may it gained great popularity among users for their ease of use without difficulty so that any person who is not a programmer can in web design work has a blog within a short time due to the presence of sites offer additional services and work for free such as blogging site and an Arab publisher globally Blogger.

Blogs also said more than increased access and recognized the quality of the information required and to increase interaction between the members of the community. It also helps students to assume creative risks and demonstrate critical thinking, creativity and continuously advanced elements of language, design and utilization. It also increases the chance of the student get creative and critical, creative and communicative and collaborative skills that may be useful in scientific and professional same perspective (Duffy and Bruns, 2006).

**Wikis:** A program that helps to write en masse, so anyone can edit content and pages and add them quickly and without restrictions can as is the Wikipedia open multiple languages. One of the most famous wikis software applications. Wikipedia is a leader, a wiki that has defined the concept of the wiki and in fact spread in the era of 2.0. It can be established to provide Wikipedia definition: “a wiki is an interface or set of interfaces or




Individual activities					
	Blogs	Wikis	Podcast	Social bookmarking	Rich Site Summary (RSS)

Fig. 2: Some Web 2.0 technology tools

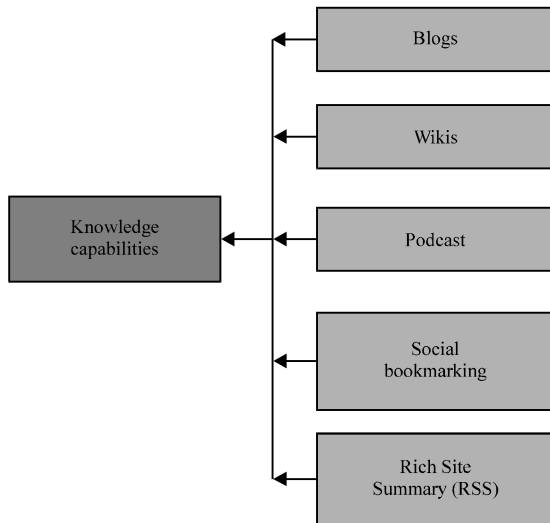


Fig. 3: Web 2.0 tools model

web pages designed to enable anyone can make any modification to the content. Wikis are also used to establish community collaborative sites.

**Podcast:** The word podcast consists of two parts; the first part (Pod) is taken from the popular iPod device from Apple Inc. and used to save audio files and the second part (Cast) means publishing. In late 2004, the radio stations on the internet embraced the idea of podcasts to spread broadcast contents (Petter *et al.*, 2005).

Information technology allows the sound recording-by-recording audio files in MP3 format to perform any listener downloaded and then listen to it at any time. Technology voice recording application for the idea of internet radio in the way it works in the Bible, internet radio user process must work on the sound flow seamlessly vary if the user of the movement for one reason or another it means that it will lose radio program, who was listening to him and therefore cannot return. On the contrary, podcasts technique that allows downloading audio files to be download by the user on his machine through triggers MP3 and listen to it at any time, podcast need to be blended with blogs, online simulations and other channels more interactive and effect.

**Social bookmarking:** Are sites offer online storage sites addresses with the addition of the Somme serve to describe the site content store. Advantages of favorite sites and social sites allow an internet user to store positions personal addresses to display in service database and refer to the preferred site has anywhere in the world using any computer. From the most important potential, post favorite someone with other individuals and marking the sites that are stored to be able to refer to it later at any time.

The social bookmarking system has some common traits where the person can configure different groups of bookmarking and this information can be shared with others. The user can use markers (a song was freely chosen that are assigned to a piece of information) for the classification of signals. These signs have made the organization and display signs with meaningful labels. Marking also facilitates the people to keep bookmarks in some categories which makes nonhierarchical and comprehensive (Golder and Huberman, 2006). It can be a confusing situation arises when some services are separate tags with commas others with the word multiple signs, some areas of supply and some offer an underscore (Guy and Tonkin, 2006).

**Rich Site Summary (RSS):** RSS is one of the formulas used in feed technology where feeds are used to identify the most relevant sites that provide feeds updates, allowing the opportunity for the user to follow up a large number of websites such as news sites, sports blogs without a visit all the sites. RSS is also used to publish content between different locations modern automated fashion shows what post a site in several other areas sites, these sites free as services or appear as a means of selling content as you do news agencies.

Technically, organize and coordinate data based on XML represent RSS for sites to exchange files containing the dissemination of information and summaries of the contents of the different site. In fact, it was understood to stand for RSS-rich site review at the earliest manifestations (Doctorow, 2002).

**MATERIALS AND METHODS**

**Hybrid model of Web 2.0 technology with KMS tools:** Figure 4 shown knowledge management and Web 2.0

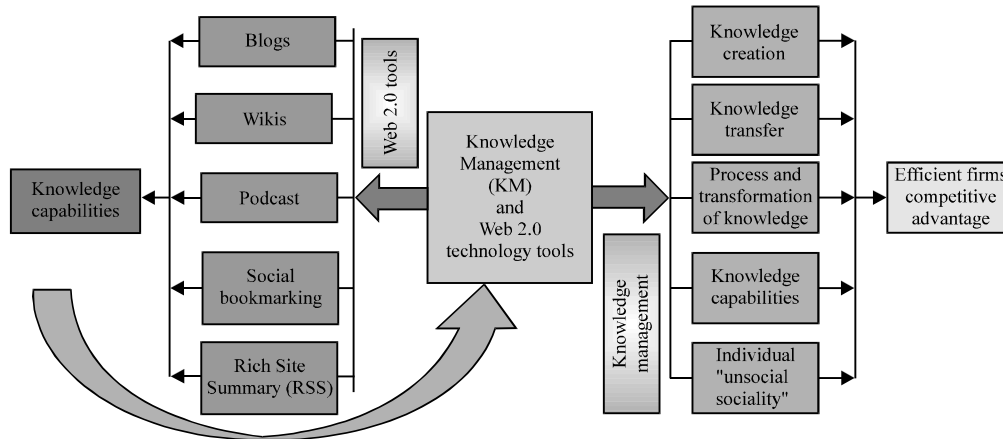


Fig. 4: Hybrid model of KM and Web 2.0 tools

Table 1: Integrated Web 2.0 technology with KM process

Knowledge management system tools				
Web 2.0 tools	Knowledge creation	Process and transformation of knowledge	Knowledge capabilities	Individual "unsocial sociality"
Knowledge syndication		Blogs, podcasts, social bookmarking		
Collaborative knowledge creation	Wikis	Wikis	Wikis	
Collaborative knowledge exchange		Social bookmarking		Social bookmarking
Knowledge and meta-knowledge sharing		RSS sharing and tagging of content	RSS sharing and tagging of content	
Social Networking (SN)	SN implementation	SN implementation	SN implementation	
Knowledge orchestration	Blending	Blending		Blending

technology works and its tools in two different models where all the various functions of the other design leads but use the same technology with different specialization requirements and which offer by the company's organizations (Nonaka and Takeuchi, 1995). As explained by the objective knowledge of the KM model and its application in solving problems is paramount for organizations that use them.

In the context of the model and Web 2.0 technology and tools is quite different from the knowledge management and the goal of Web 2.0 technology major and tools is the transfer of knowledge to the people and learners where the content is displayed and delivered using appropriate technology such as blogs, wikis, social bookmarking, podcasts and RSS feeds heavily used in learning environments. Apart from the common denominators between knowledge and technology management model of Web 2.0, tools and again they almost use the same technology. Given the similarities between the two, there is another innovative way that organizations or businesses benefit from both systems and models in their work. This study provides a new design which includes elements of knowledge management and technology Web 2.0 and here is referred to as a hybrid model.

**Web 2.0 enhancements to KMS process:** Table 1 shows the Web 2.0 integrated with knowledge management, where six operations to identify Web 2.0 applications have a link to the four basic operations of kilometers. The horizontal axis shows the KM four operations: knowledge creation process and transformation of knowledge, knowledge capabilities and individual "unsocial sociality" and the vertical axis of Web 2.0 activities. Due to this matrix, the majority of Web 2.0 support is how to transfer knowledge.

Note, we find all Web 2.0 applications feet. It is supporting the process of creating knowledge, capabilities, storage knowledge and knowledge retrieval by a smaller number of applications of Web 2.0. Both can be facilitated by the wiki and social networking applications. While creating knowledge and supported by additional knowledge synchronize, store and retrieve knowledge can improve the sharing of knowledge and science know-how. Finally, the 2.0 can also assist in the implementation of education by the methods of collaborative knowledge sharing and synchronization of knowledge. Note or a majority of knowledge management processes based on by Web 2.0 application and therefore conclude that the sleeve can benefit from the Web 2.0. Involving Web 2.0 combines the exciting aspects and knowledge in professional organizations.

## RESULTS AND DISCUSSION

Knowledge and technology Web 2.0 tools management are two different systems with similar functions, information technology but are used for different purposes. It was identified two models used in this study, the first model is the second model KM technology Web 2.0 tools and there is no better model which is supposed to include the functions of the two. Knowledge management model and technology Web 2.0 tools share a similar design with every one of them has functional elements for which differ from each other. These models have been developed to achieve the goals and objectives of business organizations, companies and academic side and is used by the user at all organizational levels. On the other hand, knowledge management in businesses and business organizations used to increase production and service operation and high quality are all of these agencies to retain the knowledge implicitly and explicit. Structurally, most models of knowledge management within regulatory limits. Whereas, Web 2.0 tools such as blogs, wikis, social bookmarking, podcasts and RSS feeds heavily used in learning environments. For the purpose of knowledge circulating extensor literary and teaching delivery methods. The proposed hybrid model designed to perform all the skills and technology management Web 2.0 tools. Can business organizations and providers of educational services to use this model to capture the tacit knowledge of both the explicit knowledge of the owners and design programs used in the educational process or programs to business organizations and so on.

## CONCLUSION

The hybrid model of Web 2.0 technology tools with knowledge management system can be used to educate the company's partners, customers, suppliers and employees of the enterprise. In contrast for both educational services providers and businesses to generate new knowledge through the use Web 2.0 technology tools for example blogs, wikis, social bookmarking, podcasts and RSS feeds heavily used in learning environments which make this model very useful for both academic and different organizations institutions including business and commerce.

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