When Web 2.0 becomes an organizational learning tool: evaluating Web 2.0 tools

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The Web 2.0 era
Web 2.0 is a set of trends and tools for using the internet. These socio-technological innovations have enabled interactivity and gathering of knowledge through experience and practice on a global scale. This combination has the potential to create personalized, yet collective or organizational, learning.

However, there are still questions on how Web 2.0 can be effectively used to support organizational learning. Collaborating publishing, social networks and blogging seem to share collaborative features: is it all just for fun, or do they offer more? Should organizations adopt these tools just because of what they are; and how can they assess them from a learning perspective? These questions represent the challenge of organizations in this “Web 2.0 era”. We have a thirst for knowledge on how to assess Web 2.0 tools and apply them to organizational learning. Such knowledge opens a new insight to the evaluation process for learning tools and contributes to enhancing organizational learning strategies.

Before we explore the link between Web 2.0 and organizational learning, it is useful to differentiate between the functions, tools and web applications to enhance understanding. Functions are the roles that Web 2.0 tools perform, and these tools are themselves classifications of the web software applications or which are normally called websites. For example, Blogger is an application utilizing the concept of Blogs (tool) and performing the “communicative” function. We classify these tools according to their learning functions in Table I.

Web 2.0 facilitates knowledge creation and sharing by involving, engaging and empowering people, and by creating a collaborative environment for social interaction between those who need to seek knowledge and those who hold the knowledge. Categorizing these tools on the basis of their most visible knowledge conversion processes draws us closer to understanding the link between Web 2.0 and organizational learning.

Learning in organizations
Organizations are essentially communities that have mechanisms that create and connect relationships between individuals to work collectively for common organizational goals. Critical among these mechanisms are those that result in sharing information and make the cognitive map of individuals, as employees, accessible for the greater good; thus creating collective knowledge. Organizations learn and create knowledge through dynamic interactions between employees (Nonaka and Takeuchi, 1995). These dynamic
interactions facilitate knowledge conversion processes or social interactions between tacit and explicit knowledge that makes knowledge more accessible at the individual and organizational level. The knowledge conversion processes may occur through four modes:

1. **Socialization.** Tacit to tacit conversion, a process of sharing experiences or through face-to-face communication and creating tacit knowledge such as shared mental models and technical skills.

2. **Externalization.** Tacit to explicit conversion, a process of articulating tacit knowledge into explicit through the use of abstractions, metaphors, analogies, or models;

3. **Combination.** Explicit to explicit conversion, a process of creating explicit knowledge by bringing together other explicit knowledge from a number of sources; and

4. **Internalization.** Explicit to tacit, a process of embodying explicit knowledge into tacit knowledge. Internalization is facilitated if the knowledge is codified or conveyed in terms of explicit knowledge.

The knowledge conversion process is influenced by the pre-knowledge of the individuals and the characteristics of the shared context in which they work. An example of shared context is a software project team; a place where people of different capabilities (pre-knowledge) are brought together in order to generate new knowledge. The shared context provides a platform for the dynamic social interactions or knowledge conversion processes which make knowledge more accessible.

Accessibility comes through storage and retrieval of knowledge in tacit and explicit form. Tools and techniques allow this accessibility in three ways. First, they form part of a means through which pre-knowledge assets are accessed; second, they allow new knowledge to be generated by becoming a medium for dynamic social interactions; and third, they store knowledge for future use. The shared context, be it the whole organization or a department, influences how these tools and techniques are adopted which would directly affect their effectiveness. Our next objective is to examine how Web 2.0 tools can support the accessibility of knowledge and enhance organizational learning processes.

### Learning aspects of Web 2.0

The categories outlined in Table II show how Web 2.0 tools can form part of the means through which pre-knowledge assets are accessed, how they can allow new knowledge to be generated by becoming a medium for dynamic social interactions and how they can...
store knowledge for future use. For example, let us consider Web 2.0 and socialization or combination:

- **Socialization.** Socialization enables employees to focus on extending their ideas and concepts rather than being defensive, or criticizing other employees’ ideas. Web 2.0 tools that are categorized under communicative, collaborative publishing, generative and interactive, support socialization processes separately and in grouping. They enable sharing and capturing of individual knowledge and create a space for interaction between the seekers and the keepers of knowledge.

- **Combination.** Individuals exchange and combine their explicit knowledge through exchange platforms like social interaction processes and information storage mechanisms. Innovative tools of Web 2.0 facilitate integration of different bodies of explicit knowledge into one large accessible system; topping the list are Wikis, Blogs and Mashups. These applications allow better contextualization, organization and accessibility of knowledge.

As shown in Table II, it is relatively difficult to create concrete boundaries around the concepts and tools of Web 2.0 since the functionalities overlap. Hence, we focus on the visible knowledge conversion processes. All knowledge conversion processes may be facilitated by collaborative publishing tools (Wikis), but externalization and combination are the most prominent knowledge conversion processes for collaborative publishing tools. We argue that, as learning tools, Web 2.0 tools should be able to create interaction, enable knowledge sharing, access pre-knowledge, and generate and store new knowledge. Organizations need to assess tools for these characteristics. Such assessment is possible through the framework (Tables I and II) developed.

### The way forward

We propose three recommendations to make our framework applicable in practice in an organizational context. First, there is a need to understand functions, tools and applications associated with Web 2.0. Table I is a good reference point for this. Second, there is a need to understand how learning occurs or knowledge is made accessible in organizations and to evaluate which Web 2.0 tools and applications can support the learning process. Table II is
good reference point for this. Third, these learning processes may differ across organizations – hence organizations need to understand how to adapt the applications to their context. This adaptation process may require an understanding of the organizational factors that influence the learning interventions – both processes and tools.

In conclusion, our constructs are stepping stones towards a complete learning organization. The reality in practice may require more effort and further research.

References

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