IMPLICATIONS OF IMPLEMENTING WEB 2.0 ON EDUCATION

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ABSTRACT

The Knowledge Society has altered the way humanity works, learns and amuses itself; from here the rise of the so called e-learning, an educational modality whose "innovation" has been questioned because of the tendency to simulate traditional ways to educate. This paper explores the concept of e-learning 2.0, the implications of implementing e-learning 2.0 in higher education, in terms of challenges, opportunities, and student readiness for this educational modality.

1. INTRODUCTION

We live in a knowledge-based society, a society that revolves around information in all its presentations. Due to major advances in information technologies, society certainly relies heavily on information that flows in bytes. People who live in this society, and do not belong to the so-called net generation, had to add a lot of words and concepts to their vocabulary: Internet, Web 2.0, blogs, wikis, RSS reader, folksonomies, tags, podcasts, online social networks, hackers, spam, and so on. However, for the net generation, students who were born in the 1980s, this learning have been an easy process, one intrinsic to their own development. For them, Twitter, Skype, Facebook, and YouTube are just tools of everyday life. In this context, the academic world is trying to adapt its teaching and learning methods to the new needs of the marketplace, the technological advances, and the way students grasp these technologies in their process of knowledge generation.

2. BODY OF PAPER

2.1 Literature Review

The term Web 2.0 is used to describe applications that distinguish themselves from previous software generations, by a set of principles that take advantage of Web-based networks. Such applications encourage participation; and they are inherently and socially open. Even though Web 2.0 is not characterized by a change in technology, in recent years the Web has changed from being a reading Web to be a read-write Web (Borau et al., 2008).

The collaborative nature of Web 2.0 is consistent with educational theories such as constructivism and Connectivism. This makes Web 2.0 applications attractive to students and instructors. Wikis, blogs, and social bookmarking are now commonly used in learning. The popularity of Web 2.0 is growing and so are the number and variety of applications (Borau et al., 2008). For McLoughlin and Lee (2008), the advent of Web 2.0 invites us to reflect on how social software tools can transform industrialized models of learning, to a model focused on students' individual achievement based on collaboration, network communication, and interaction. A new concept has been growing as a result of a better understanding of the possibilities of Web 2.0 in education: e-learning 2.0.

The e-learning 2.0 concept aspires to become the next generation of e-learning by incorporating the theory of Connectivism and social software in education (Hauttekeete, Méchant, Veevaete, & De Wever, 2007; Reig, 2008; Siemens, 2004). Instructors are beginning to explore the potential of blogs, multimedia sharing services, and other social programs, which, although not designed specifically for e-learning, can be used to motivate students and create new and exciting learning opportunities (O'Hear, 2006). By using the new Web services, e-learning has the potential to become more personal, social, and flexible. For O'Hear, e-learning 2.0 combines the use of Web tools and services that complement the creation of fitted learning communities, such as blogs, wikis, and other social programs.

Traditional e-learning resembles the typical classroom with an instructor and students. The instructor provides high quality content, accessible through a learning management system (LMS). The learning process is carried out through communication tools and interactive exercises. The traditional way of teaching is accomplished through new media (Ebner, 2007).

Ebner (2007) warns that by simply adding Web 2.0 to e-learning will not take us to e-learning 2.0. For him, there is a third component that we should take into account: the human factor. Firstly, there is a learning curve for Web 2.0; these social tools are relatively new and only a small percentage of people know how to use them. Secondly, changing the behavior of teaching and learning that has been used for decades will be much more problematic than generating new applications.

2.2 Challenges, Benefits and Preparation for Web 2.0

With the interest of understanding the implications of implementing e-learning 2.0 at a college level, three questions were explored:

- What are the major challenges or problems that professors have to face when using Web 2.0 and e-learning tools for learning purposes?
- What are the major advantages that professors have when using Web 2.0 and e-learning tools for learning purposes?
- How ready do you think students are to take advantage of the Web 2.0 and e-learning tools for learning purposes? In spite of the common beliefs of young generations, do you think students have the knowledge for using such tools in an effective way?

2.2.1 Challenges for the Implementation of e-learning 2.0

The major challenge in implementing e-learning 2.0 is not so much the development of students' computer science skills, but the development of general skills.

To the challenge of promoting e-learning 2.0:

- Develop an attitude of innovation. Try to really change the current academic paradigm, in which the professor normally is the one producing knowledge and the students are receptive of it; and not just do the same paradigm with modern tools. A common temptation is to implement what is new out there but still in the traditional way, so professors tend to do what they always do now through new technology.
- Construct a good instructional design. The key to efficient use of new technologies lies in the capacity to make base what is taught on an appropriate instructional design. Networks and Web 2.0 per se are not merely academic tools, with the exception that a user directs them to achieve a learning objective. It is even possible professors get lost if they are not capable to give students the proper guidelines to where we want to take them, to where we want to lead them.
- Help students to focus on the academic subject matter. The challenge is to make things not related with the class appear. The key can be found into taking advantage of the playful environment, while assuring the effectiveness of learning.
- Have the capacity of using technological tools of Web 2.0. It is important that professors know how to use Web 2.0 tools in an academic environment, since in that way students will fulfill their learning objectives.

In relation to e-learning challenges faced by academic administrators:

- Provide access to Web 2.0 tools. One in which all students have access e-learning 2.0 tools, through sufficient bandwidth to use multimedia.
- Have an open mind regarding implementation of new technologies. Sometimes managers of the infrastructures oppose to use that type of technologies because they require computational resources.

In relation to implementing e-learning 2.0:

- Social skills. Students who engage in e-learning 2.0 may lose interpersonal skills. One of the challenges is that several social skills do not get lost but strengthen. These social skills that were referred by the participants included the ones of communicating, listening, perception and willingness to serve others.
- Interest. The use of Web 2.0 to arouse and maintain students' interest and engagement in class issues.
- Intellectual property issues. A challenge for professors is to ensure students avoid unauthorized use of copyrighted materials and infringement of others' privacy.

2.2.2 Benefits of Web 2.0 Tools in Learning

Although many challenges were identified in order to implement Web 2.0 in learning, there are many benefits that make it worthwhile to tackle such challenges. Among these advantages are the following:

- Permanence of evidence. These tools allow students to create a sort of learning evidence portfolio. For example, the use of blogs as a periodical portfolio of learning reflections.
- Communities' creation. This sort of tools is conducive to community creation, as students go on identifying for example, through the profile or trough certain types of content, similar interests.
- Multiple resources. Such tools provide access to a variety of information resources: presentations, documents, videos, images, etc. These resources often provide some learning activities.
- Massive and rapid scope. Students often access them several times a day, which is not usually the case with traditional learning platforms (LMS) or with the use of email address use for academic affairs.
- Creating and sharing knowledge. These tools help to foster the desire to create and share their knowledge with peers. By using these tools all peers see what each student does is important, because in the process the students feel more involved in their own learning, while contributing to the generation of knowledge in the course and sharing it with their colleagues.
- Playful environment. For students, a tool such as YouTube or Facebook makes them feel in their own environment, or at least in a neutral space, and not in an institutional one, a place where besides connecting with colleagues and friends for any given social event, you can also find out about other official activities.

2.2.3 Preparing for College Students for e-learning 2.0

In relation to the question of whether college students were prepared for e-learning 2.0:

- Sometimes, college students are prepared for e-learning 2.0. College students are ready for this type of learning because they know how to use technology and they have the necessary attitude to take advantage of it. The environment of e-learning 2.0 is natural to the students because, in addition, the new educative models go on preparing them, for example, in their own knowledge management.
- Sometimes, college students are prepared for e-learning 2.0, but professors are not. Many college students are prepared for e-learning 2.0, but very few professors are. The greatest challenge to implementation of e-learning 2.0 is more the professor than the student. Besides the lack of technological skills, many professors do not have the necessary attitude needed for this type of learning.
- Sometimes, college students are not prepared for e-learning 2.0. Although college students have no problems in terms of technology skills, professors perceive them to lack sufficient maturity to cope with the responsibility of e-learning 2.0.

3. CONCLUSION

The e-learning 2.0 implies that those who learn, rather than the those who teach, are the ones who contribute with content and discuss those contributions with their contacts, whether these are classmates, professors or friends; engages their contacts as repositories of information; and socializes to strengthen bonds of trust with their contacts. Above all, learning is self-managed, with students deciding what is good for them to learn and identifying who to contact regarding that knowledge.

Any person, registered or not in an educational institution, can take advantage of Web 2.0 technologies, and specifically in online social networks to favor their learning. For this matter, a fundamental requirement is that the student and professor have the necessary computer science skills. Some professors tend to think that college students have computer science skills because they heavily use information technologies. However, while college students have the ability to quickly learn the technological skills required, they are not always aware of what technology skills are needed. Moreover, the computer skills needed to participate effectively in the e-learning 2.0 are not just technological. Cognitive and attitudinal skills are also required. It is in this area where professors face a greater challenge.

Apparently, now only a few students understand the philosophy of Web 2.0 tools. However, once the students understand how these tools work, they will have the ability to make efficient use of them in their learning process. Professors themselves must understand the nature of these tools to obtain tangible benefits..

We face significant challenges if we want to implement Web 2.0 tools in formal learning initiatives – challenges for both administrators and professors to enable students to make efficient use of Web 2.0 tools. None the less, it seems that there are greater benefits that could be achieved by implementing e-learning 2.0 initiatives.

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