Web 2.0 and Higher Education

Pedagogical Implications

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Main Topics

A. Higher Education and the Social Web

B. The new Publics of Higher Education

C. Learning in a Connected World

Knowledge

Major component of any activity, and the **driving force of change and innovation**

(UNESCO, 2005)

Globalization of ICT

ICT is relevant to any society
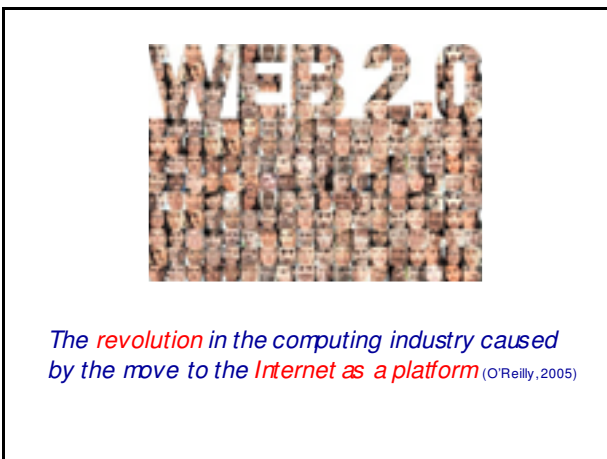NOT just *western* societies

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Globalization of ICT

Worldwide Development Oportunity

Development of knowledge societies offers a unique chance for less developed countries to catch up with industrialized countries, taking advantage of ICT

(UNESCO, 2005).

The revolution in the computing industry caused by the move to the Internet as a platform (O'Reilly, 2005)

Content production
opened to all users

User interactions *side effect* = improvement of service

Web 2.0 is a *participatory* Web

Community of Practice (LAVE & WENGER, 1991)

Community of Practice

Learners seen as *participants* of a framework that has *social structure*

Peer-pressure for performance and participation *promotes ethics* and *competence*

Who cares?

Need for dynamic and adaptable workforce

Employers now realize that learning outcomes they need from university graduates are lacking

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Who cares?

Nations, employers and governments require graduates who are able to build communities, and to communicate in innovative ways, in the realm of their profession (HERRINGTON & HERRINGTON, 2005).
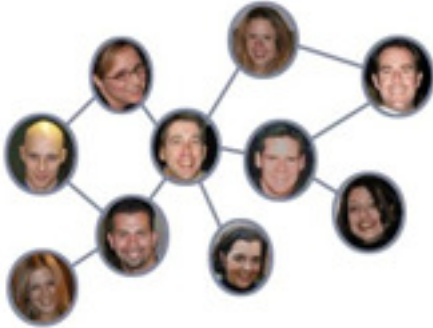

Collaborative Learning

Making of meaning in the context of joint activity

Learning not merely acquired *through* interaction

Learning consists *of* the interactions that occur between participants

(STAHL, KOSCHMANN, & SUTHERS, 2006).

Connectivism

Connectivism (Siemens, 2004)


A. knowledge is the diversity of individual perspectives

B. learning is a process of connecting nodes (e.g. people, databases)

C. learning may reside in non-human appliances

D. organizational and personal learning are integrated

E. the capacity to know more is more critical than what is currently known
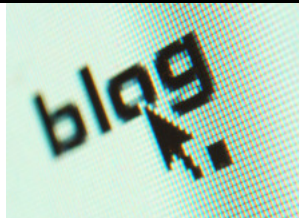

Connectivism (Siemens, 2004)
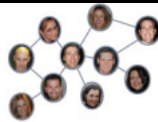
E. Core skill: form connections between ideas and concepts

F. Goal: maintain and enhance connections with nodes in network

G. Decision making process should be dynamic

Social Constructivism VYGOTSKY (1978)
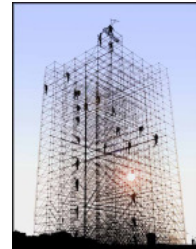
The learner benefits from the support of a teacher or colleague who is at a higher level of development

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Web 2.0: easy publishing

When students knows that their work will be available on the Internet, they do it with much greater interest and effort (CRUZ & CARVALHO, 2006; EÇA, 1998)

This effect is even more enhanced if there are channels through which the student can receive direct commentary on his/her work (e.g via a Blog).

Net Generation

1. Multitasking capabilities

2. Preference toward knowledge construction (rather than instruction)

3. Little tolerance for delays: technology allows immediacy

4. Easiness in interactive settings: actors, not just viewers

(TAPSCOTT, 1997)

Digital Native vs Digital Immigrants

A *Digital Immigrant* compares to a *Digital Native* in the same way a native English speaker compares to a person who starts using English in his/her adolescence or adulthood

(PRENSKY, 2002)

Non-traditional Students and Life-long Learning

Web 2.0 allows establishment of *Learning Networks*: networks of people and organizations that create, share, support and study learning resources ('units of learning') in specific knowledge domains. (KOPLER & SLOEP, 2003).

These technologies allow students to participate in activities they enjoy, and learning may then come as a by-product of participation

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Learning in a Connected World

***Discussion*,** a process by which members of a group present their ideas to others and receive feedback, provides the cognitive scaffolding necessary for higher-level thinking (VYGOTSKY, 1978)

Learning Society (Hutchins, 1995)

Limits on *where* and *when* knowledge could be transmitted no longer apply.

Human actor at the heart of the process of knowledge acquisition and communication.

Pedagogical Implications of Web 2.0

Focus is the relationship between learning *and* the whole social and personal spheres

Community appears as the centre of social life, and the main reference framework for each individual

Learning is not a goal in itself, but rather *one* feature more on the full experience of participating on a Community of Practice

Pedagogical Implications of Web 2.0

Simply adding technology to previously existing activities in the classroom **does not** produce positive results in student learning, if the habitual teaching practices remain the same (JONASSEN, 1996)

Education Media, *per se*, **will never be determinant** of student performance (CLARK, 1994)

Pedagogical Implications of Web 2.0

Benefits of using a given technology in teaching only arises when a **wholehearted** approach is used, in which teachers and students fully take the technology into the centre of the educative process

The full potential of the new tools derives from allowing challenging and **creative activities**

Pedagogical Implications of Web 2.0

True ***education must come from life***, and that the teacher must exemplify the relevance of the learning material by using it herself as a productive member of Society (Vygotsky, 1978)

Pedagogical Implications of Web 2.0

Web 2.0 enhances **social interactions**

It **can have** a **profound impact** on the course of development of students

Expected to exert a **radical change** in the way in which people **perceive** both the world and themselves

Example: the development of cognitive structures depends largely on the ability of ***cognitive decentration***, which can be exemplified by being able to cooperate with others, and to argue and counter-argue in Blogs, or in the making of a Wiki

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Pedagogical Implications of Web 2.0

The participatory, dynamic and collaborative nature of Web 2.0 is where the promise of the new tools resides.

The move toward read/write connective technologies is changing the way in which goods and services are being produced (TAPSCOTT & WILLIAMS, 2006)

Pedagogical Implications of Web 2.0

Students can alternate with teachers in the role of being active and leading the processes of learning and knowledge construction (ROBERTS, 2005)

Final Recommendations

1. To take advantage of the *network effects* of these tools in Higher Education, open, participatory architectures for ICT systems must be in use

2. Students must be allowed and encouraged to produce their own content.

3. Use Web 2.0 to enhance the dynamics of communication between life, work and school, thus creating meaningful educational experiences