Learning 2.0

The use of social computing to enhance lifelong learning

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http://is.jrc.ec.europa.eu/
http://ipts.jrc.ec.europa.eu/
I. Background: IPTS and its Learning 2.0 project
II. Perspectives on Learning 2.0 in HE
III. Areas in which SC enhances learning
IV. Factors influencing the outcome of Learning 2.0
V. Outlook on the Future of Learning
**IPTS**: Part of DG JRC of the EC: 7 Research Institutes across Europe

**Mission**: “to provide customer-driven support to the EU policy-making process by researching science-based responses to policy challenges that have both a socio-economic as well as a scientific or technological dimension”

**Modus operandi**: desk research, expert groups, FP7 consortia, outsourcing
Learning 2.0 Studie Outline

Desk Research
Literature Overview & Analysis of Existing Practice

Literature Review of Learning 2.0 practices in Europe

Long List of Cases
Database containing a variety of cases

In depth case studies
To assess good practice

Focus: Innovation
8 cases

Focus: Inclusion
8 cases

Assessment of the Impact of Social Computing on Learning

Validation Workshop

Development of Policy Options

I – Background
Social computing applications enable interaction and collaboration:
  → Users are participants (co-creators not end-users)
  → Networks of individuals & communities become collective resources

Social computing comprises:
  → Digital applications for social networking (e.g. Facebook);
  → video-sharing (e.g. YouTube);
  → photo-sharing (e.g. Flickr);
  → user-generated content (e.g. Wikipedia);
  → multiplayer virtual online worlds (e.g. Second Life);
  → Blogging;
  → Tagging, etc.

Open approach:
- Not only SC technologies & applications but also the “attitude” of SC
- Depends also on how SC applications are used
The Dimensions of Learning 2.0

Learning Setting

Learning 2.0
Use of SC for Learning

Social Computing tool

Innovation

Perspectives on Learning 2.0

New ways of teaching
New ways of communicating
Institutional change
Personalisation & empowerment

Other LLL contexts
Vocational training
Workplace learning
Higher education
Primary education
Secondary education

blogs
wikis
Pod-/vodcasts
Tagging
Social networking
Media sharing
Second life
...
How are SC tools used in HE?

The institutional stance
Make the university more accessible (and attractive) to current and prospective students; meet the students on their territory.

The networking stance
Offer new and improved ways of informal knowledge exchange; improve communication between students & staff (& among students).

The learning stance
Improve learning & teaching processes & results.
The institutional stance: Examples

http://www.myspace.com/warwickuniversity
http://admission.case.edu/secondlife.asp
http://www.youtube.com/ucberkeley
The networking stance: Community approach

Community Approach based on OSN

Community@Brighton is a social networking system for students and staff at the University of Brighton. Feel free to explore the site, and you will be able to view anything the owner has chosen to make publicly available. If you need to use this system, please speak to your University of Brighton contact to arrange access. General enquiries should use the feedback form.

Key Places:
- Explore
- Feedback
- Help
- Careers Centre
- Tag Cloud

Hot Topics:
- Anyone got halls in Paddock Field...
- Anyone else going to the househunting event on 11th-12th September?
- Double room to rent - bargain (female preferred)
- When's everyone moving into halls?

Communities to join:
- URUB - University Radio in University of Brighton
- DAP Group A
- Atheists Corner

Recent News

10 most recent posts for you:

From Alt-C keynote: David Cavallo, Chief Learning Architect for One Laptop Per Child

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The new maths: multiplying by 1-to-1 to reduce a division
Notes: David is on his way to Ulaan Batar, Mongol...
The social networking stance: Blogs

Leeds Elgg Home Page
Learning Landscape

Introduction

This website introduces the Leeds Elgg Learning Landscape project. This offers staff and students the opportunity to have a personal weblog (blog) and to form and join communities of staff and students with similar interests and concerns where ideas and resources of various sorts can be shared and discussed. The goals of the Elgg system are to facilitate reflective learning and aid the development of communities and networks of 'learners' (academic staff, students and researchers).

The heart of the Elgg learning landscape is the context of education, research and study that is driven by an individual. The entries in the learning logs, a reflective learning log, which are all or some of these things, create the Web, a way of creating a record of what is being done, of activities which are of interest to the individual, to all or some of these things, creating a personal history.

To have a quick preview of the blog entries and comment on entries.

https://elgg.leeds.ac.uk/

http://www.lts.leeds.ac.uk/elgg/
The networking stance: Integrated approach

Welcome to Connect

This is Connect, the University of Westminster’s social network.

Connect is a pilot project to create a social network for students and staff at the University of Westminster - a democratic space where you can blog, share files and videos, meet new friends and talk about your life and studies.

Meet the Connect community

Say “hello”, “Bonjour”, “hola” or “ahlan” to some random users with public profiles!

https://connect.wmin.ac.uk/
The learning stance

SC tools can directly enhance learning and teaching processes and outcomes.

Encyclopaedia of famous Sociologists, wiki-project at the University of Salzburg, Austria
http://itec610porto.blogspot.com/

Course blog by Prof. Stella Porto, Graduate School of Management & Technology, University of Maryland University College
http://www.podcast.de/

Podcasting platform for research institutions in Germany, Austria, Switzerland

III – Areas in which SC enhances learning
The learning stance: Opportunities

Supply of learning material

Personal knowledge management

Subject specific skills

Higher order skills
- reflection
- meta-cognition
- motivation

Podcasts
- Wikis
- Collaborative blogs

Wikis
- Folksonomies
- Blogs

3D worlds
- Media sharing
- Blogs
- Wikis

Blogs
- Wikis
- Collaboration

⇒ Empowerment of the learner

III – Areas in which SC enhances learning
SC tools can be used as platforms for the distribution of learning materials
→ **Podcasts are attractive to learners:** learning at one's own pace, listening to the content as many times as necessary, anywhere & anytime (Morales & Moses, 2006).

→ **Podcasts effective in exam revision:** Study by Evans (2008):
  - Students believed podcasts to be more effective than textbooks & own notes;
  - Students were more receptive to audio learning material; in the form of a podcast than a traditional lecture or textbook.
  - Students needed less revision time, were able to take in more information and were more flexible in when, where and how to learn.

→ **Podcasts contribute to better achievement:** Study by Cramer (2007): Students using lecture recordings extensively scored 15% higher in their second than in their first midterm exam.
Personal knowledge management: Examples

- **Penntags (University of Pennsylvania):**
  Social bookmarking for students & staff

- **Public Administration School of Catalonia (Spain):**
  Sharing e-learning material among teaching staff

→ **SC tools can be used to gather the collective knowledge of a group, empowering the individual to become author of content, at the same time integrating her into a network of peer reflection, revision and support.**
Advantages of SC for coursework:

→ Students appreciate the **ease** of building up a substantial knowledge base and the **collaborative mode** of operation (Barth, 2007)

→ Individual & the group **performance** can be significantly increased by collaborative work with SC (Liaw et al., 2008).

→ Wikis can handle **different forms of knowledge** (Barth, 2007).

Findings on students’ research strategies:

→ Students are already using and combining SC tools on their own account for research network building (Conole et al., 2008).

→ Students use blogs to support self-regulated learning in various ways (Baggetun & Wasson, 2006), e.g.

   (1) by **reflecting** publicly on a topic,

   (2) as filters for links, building a **personal knowledge base**, 

   (3) as a knowledge **repositories**.
Subject specific skills: Examples

RWTH Aachen, Germany: School of Architecture

WISE
Research Platform at RWTH Aachen University

SecondReif is the virtual extension of the RWTH Aachen University’s architecture campus. It offers the environments and tools through which students and faculty can communicate and work together productively in new ways. The project establishes three distinct, vertically stacked zones:

University of British Columbia, Canada: Ancient History & Culture; Arts

http://ancient.arts.ubc.ca/

SecondReif

Welcome to AncientSpaces

Welcome to the Project

Using the technology behind online video games, we want to help you discover, research and explore the ancient civilizations of Greece, Egypt, and the Americas. Do you want to converse with Spartans in the Agora? Have about rebuilding the pyramids, the Parthenon, or the Temple of Jerusalem? Have you wondered what life would be like in an ancient gladiator village? Would you like to join Julius Caesar’s campaigns?

Our Mission

If every major history and culture class included the opportunity for students to create a high-quality online 3D environment that could be deployed as an asset for a popular video game - or as a component of a cluster of massively multiplayer worlds available online - we might discover a new way of making academic research available to a wide public, and broaden the horizons of cultural experience in the process.

XXL Workbench, a scale 1:1 modelling environment

http://www.manuelglasl.de/index.php?article_id=6

http://artsmetaverse.arts.ubc.ca/

III – Areas in which SC enhances learning
→ 3D virtual worlds, like Second Life, are suited to replicate and investigate a three-dimensional reality as is done in architecture, geography, art history and the study of metaphysics. (Reihman, 2007; Rauch & Wang, 2007)

→ Media sharing supports a more active student engagement in arts, design, music, composition, etc. (NMC & educause, 2008; Reid, 2008)

→ Wikis and blogs support writing and foreign language skills. (Ducate & Lomicka, 2008; Hirvela, 2007)
Online writing (blogs, wikis, etc.)

→ increases reflective thinking levels (Xie et al., 2008);

→ encourages active participation, meta-cognition and critical thinking (Antoniou & Siskos, 2007);

→ supports reflective activities & the development of meta-competences (Carletti et al., 2008).

However, a clear structure is necessary to attain higher order cognitive skills (Kanuka et al., 2007; Carletti et al., 2008)
The building blocks of Learning 2.0

- Supply of material
  - Podcasts
  - Wikis
  - Collaborative blogs

- Personal knowledge management
  - Wikis
  - Folksonomies
  - Blogs

- Subject specific skills
  - 3D worlds
  - Media sharing
  - Blogs
  - Wikis

- Higher order skills
  - Blogs
  - Wikis
  - Online writing

- Multi-media
- Collaboration
- Learner as producer

III – Areas in which SC enhances learning
Scaffolding Learning 2.0

Even advanced users need time & assistance to familiarise with learning 2.0 tools, functions & options.

→ Start simple, be patient;
→ provide ample (technical) support;
→ fit SC tool to learning objectives.

(1) Students' attitudes influence acceptance and performance
(2) SC can be used in very personal ways \(\rightarrow\) individual learning pathways

→ Allow & encourage appropriation tailored to individuals’ needs;
→ Develop ways for personalized assessment.

Preconditions for SC collaboration:
(1) propensity & willingness to contribute
(2) team cohesiveness
(3) minimum level of prior knowledge

→ Provide incentives for collaboration;
→ Promote open, friendly & supportive working atmosphere;
→ pay attention to weak students’ needs.

⇒ Structured Approach:
→ SC tools fitted to objectives, learners’ experiences, attitudes and interaction patterns;
→ Tasks need to be transparent, relevant and targeted;
→ Tools need to be embedded in a supportive environment of guidance and support.

⇒ Importance of Teacher as designer, coordinator, moderator, mediator & mentor

IV – Factors influencing Learning 2.0
Future Learning Spaces

The institutional stance
Make the university more accessible (and attractive) to current and prospective students

The networking stance
Offer new and improved ways of informal knowledge exchange; Improve communication between students & staff (& among students)

The learning stance
Improve learning & teaching processes & results
The IPTS LS vision: Key foundations

- Teaching
- Learning as a social process
- Learners at the centre, as co-producers
- Learning by doing
- Informal learning: anyone, anywhere, anytime
- Multiple ways of certification/validation
- Importance of guidance & interaction
- Hierarchical
- Heterarchical
- Exclusive
- Inclusive
Thank you very much for your attention!

Questions?

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