Towards the digital support of lifelong learning for all

September 18, 2012, Cádiz, Spain
ECER, emerging researchers
Prof. Peter B. Sloep
preamble, the OUNL

- OUNL, university for open and distance education: in computer science, educational science, environmental science, humanities, law, management.

- since 1983, state funded
preamble, CELSTEC

• CELSTEC, Centre for Learning Sciences and Technologies

• master in educational science, research groups in learning & cognition and in technology enhanced learning

• some 90 staff, including support and PhDs
focus of today

• how to support lifelong learners?

• looking at tools that meet their needs (to give away the clue, social networks will feature large) - TEL group

• preparing people for a career as lifelong learner - L&C group
L&C research foci

• effective learning strategies
• learning autonomously in hypermedia environments
• digital competences
• searching, finding, assessing, using information
L&C research foci

- development of expertise
- expert modelling, task performance, knowledge use and structuring in professional domains
- brain, learning styles and learning
overview rest of talk

1. societal changes and new demands for learning
2. networked learning
3. social media as learning technology
4. conclusion
societal changes & new demands for learning
Manuel Castells: network society, information society


Alvin Toffler: third wave


Peter Drucker: knowledge worker
Knowledge workers in today's workforce are individuals who are valued for their ability to act and communicate with knowledge within a specific subject area. ... Fueled by their expertise and insight, they work to solve those problems, in an effort to influence company decisions, priorities and strategies. What differentiates knowledge work from other forms of work is its primary task of “non-routine” problem solving that requires a combination of convergent, divergent, and creative thinking.

Knowledge workers ‘require new work styles [...] localisation, selection and combination [of] artefacts (e.g. information, tools, software) and of other people [...]’, ‘find themselves operating in distributed, dynamically-changing and technologically-mediated [...] ill-defined, non-hierarchical environments within expanding geographical and time horizons; developing and maintaining networks with peers and expert communities and collaborating in culturally diverse and geographically distributed teams [...] (learning) goals are emergent [...] there is no longer any one authority that can tell you what you need to learn and when. [...] the ability to self-regulate one’s learning [...]'.

complex, authentic, ‘wicked’ problems
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European Council (2010) *Key Competences for a Changing World; 2010 joint progress report of the Council and the Commission on the implementation of the "Education & Training 2010 work programme".*
two facts and an hypothesis

• *fact* schools are unable to educate knowledge workers who can solve the complex problems of the knowledge society

• *fact* nor can people on their own

• *hypothesis* but networked people who learn and create together may be up to it
networked learning
overview

- two kinds of networks for learning
- theoretical underpinnings: network dynamics
- theoretical underpinnings: pedagogy
two kinds of learning networks
managed networks

www.biekbracht.nl
www.handover.ou.nl/
person-centric networks

pbsloep.blogspot.com
www.scoop.it/
www.mendeley.com/profiles/peter-sloep/

On another kind of blended learning
This is a short note on two forms of blended learning. The first one is generally accepted, but seems to be mostly more cost effective. The other one seems to be interesting from a pedagogical point of view mainly.

There’s little point in reviewing extensively what blended learning customarily refers to, but it seems that it predominantly means the mixing of different learning environments, in particular an environment for formal, face-to-face teaching with an environment for formal e-learning. The former is an environment in which the teacher is personally present, which implies that students need to be present as well, at a certain place and time, in order to be taught in the classroom, lecture theatre or hotel room hired for training purposes. The latter environment is an online environment that students access through their computer, (smart) phone, tablet, from wherever they want and whenever they want. Note that I said nothing yet about pedagogy and that is deliberate.

The characterisation is primarily one of logistics; blended learning in the sense of mixing learning environments is attractive because of its promise to save costs or be more convenient, not because it offers a superior pedagogy. The fact that people can access the learning environment also from home, allows one to let students study at

My take on Learning Networks
Learning Networks are online social networks that have been designed with the intent to blend informal learning and deliberate instruction in degrees that suit the learner’s needs best. Learning Networks are designed. They could be built from scratch, could make use of a blend of existing social software tools only, or could be designed as a mix of existing and custom-made social software tools. Learning Network research focuses on learning, on professional development and innovation enhancement. Of particular interest is the social affordances and their technical implementation in services that make learning in such environments effective, efficient, accessible, enjoyable and sustainable.

Blog Archive
- 2012 (7)
  - June (1)
- 2011 (5)
  - May (1)
  - April (6)
- 2010 (4)

learning networks - networked learning

Collaboration in social networks.
Luca Dall’asta, Matteo Marsili, Peter Piet in Proceedings of the National Academy of Sciences of the United States of America (2012)

The very notion of social network implies that linked individuals interact repeatedly with each other. This notion allows them not only to learn from each other but also to condition each other’s behavior on the behavior of...

Added: 2 days ago

Charting Collective Knowledge: Supporting Self-Regulated Learning in the Workplace

The aim of this paper is to propose an approach to enhancing self-regulated learning in the workplace. Drawing from social cognitive theories of self-regulated learning, we argue that current, individualised concepts/conceptions of self-regulated...

Added: 1 week ago

9 readers
underpinning theory
network dynamics
Conclusions: Theory

- Collaboration in repeated prisoners dilemma as a graph theoretical problem:
  1- make sure enough neighbors collaborate
  2- not credible to monitor more neighbors
  3- checks should be reciprocal

- If incentives to defect (x)
  - is small then cooperation is easy
  - is large
    - i) collaboration requires critical mass
    - ii) Nash equilibria are fragile
    - iii) effect of defection are non-local

- Topology: Collaboration is easier on
  - i) trees
  - ii) densely connected graphs
Collaboration is harder on networks which can be disconnected
  (e.g. quasi 1d graphs)
COalitions in COOperation Networks (COCOON)

Social Network Analysis and Game Theory to Enhance Cooperation Networks

by RORY SIE
• learning is most intense in loosely organised teams of knowledge workers (*collaborative learning*)

• organised in ad-hoc, transient peer groups the members of which support each other (*cooperative learning*)

• groups are part of larger, online, content-specific social networks (*social capital*)

One way to grow a networked teacher, is to grow a networked learner, by Joyce Seitzinger
learning network
underpinning theory pedagogy
• Connectionism by Siemens en Downes is often mentioned

• Massive Open Online Courses, cMOOCs

• Self-regulated/self-directed learning

• task analysis, goal setting, self-reflection, adaptation

assimilate (interpret, analyse, classify those insights)

learn (gather new insights)

requirements for becoming competent, for ultimately becoming an expert

anticipate (learn to deal with novel situations)

act in the world (effectively & efficiently)
assimilate (interpret, analyse, classify those insights)

act in the world (effectively & efficiently)

requirements for becoming competent, for ultimately becoming an expert

anticipate (learn to deal with novel situations)

Drivers:

learn (gather new insights)

Critical friends: tacit knowledge, personal, still internalised

Online Content: frozen, depersonalised knowledge, externalised by various people
• search engines, wikipedia, blogs, twitter, scoop.it, RSS feeds, ...

• Open Educational Resources, cMOOCs

• Open Data, Open Journals, Open ...

• issue: how to differentiate between amateurs and experts?


• fora, blogs, microblogs, ...

• generic social networks such as Facebook, Google+, LinkedIn, Plaxo, Yammer, Netvibes, ....

• specific social networks such as Mendeley, Academia.org, ...

• issue: trust and privacy


networked learning

- not passively ‘downloading’, but being active
  - organise: make fit with what you know
  - extend: build upon what you know
  - interact: do so with critical friends
- issues with trust and privacy
social media as innovative learning technology
technology
push and pull
WANT TO CREATE A VIRTUAL CLASSROOM?
MITx will offer a portfolio of MIT courses for free to a virtual community of learners around the world. It will also enhance the educational experience of its on-campus students, offering them online tools that supplement and enrich their classroom and laboratory experiences.

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Schrijf in voor de conferentie "Leren en doceren in de 21e eeuw" (vrijdag 5 oktober, 11.00 – 17.00).

Schrijf nu in voor de OpenU Kennisnet Masterclass "Hoe maak je gebruik van tablets voor leren?" (26 september t/m 3 oktober)

Onderwijs- en Leerwetenschappen

- Portaal Onderwijs- en Leerwetenschappen

Hierin vindt u onder meer:

- Nieuws
- Evenementen
- Gratis tijdschriften
- Werken

- Topic websites
- Online masterclasses
- Gratis cursussen

[Link] CELTEC website (Engelstalig)

Topics

Dit overzicht is alleen zichtbaar voor CELTEC docenten en CELTEC medewerkers

- Topic Demo
- Topics die nog geleased moeten worden:
  - Topic Assessment (NL)
  - Topic curriculuminnovatie
- Topics die nog geïntegreerd moeten worden in leren in netwerken:
  - Topic Social Media for Learning (ENG)
  - Topic Leren van professionals (NL)
- Topic IPO: infopunt docenten (competentie doceren) evt. opnemen
- Topic Informatica: Scala

Voor ingeschreven studenten

Informatica

- Portaal Informatica

Via ons Portaal vindt u alles van de faculteit Informatica, onder meer:

- Podium (nieuws, activiteiten, blogs)
- Studeren (cursussen, korte studies, opleidingen)
- Onderzoek
- Partner voor bedrijven
- Werk (beroepen en cursussen)
- Hot topics
- Gratis cursussen
- Snapshots (gratis cursusfragmenten)

Managementwetenschappen

- Portaal Managementwetenschappen
lesson 1: innovation strategy

• technology should be allowed to push and pull at the same time

• educational innovation that is sensible looks at what social media are capable of and what education needs
lesson 2: interpretative flexibility

- technology is not a pure instrument, technological artefacts are socially construed
- intended versus actual use
- a good design empowers the user rather than restricts the user

conclusion
• information society and knowledge workers (lifelong learners) demand non-formal modes of learning

• networked learning promises to be one

• it uses a mix of existing and custom-made social media, based on a mix of theoretical underpinnings
Questions, follow up

mail: peter.sloep <at> ou.nl
my publications: www.mendeley.com/
profiles/peter-sloep
CELSTEC publications - dspace.ou.nl
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