Engaging learning environments for the future

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DESIGNING SOCIETY THROUGH THINKING

PASSION TO LEARN
Adapting new ways of collective learning for better results.

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DESIGNING SOCIETY THROUGH THINKING
INTEGRATED COMPETENCE
- as the goal of higher education

- Knowledge
- Skills
- Self-regulation
- Scientific thinking
- Ethics
- Communication
- Emotions and motivation
- Technology as a natural part of life
Sociocultural ideas of human mind

Learning always takes place in a context (Biggs, 1996; Bruner, 1996; Lave & Wenger, 1991).

The context relies on culturally and historically developed structures (Vygotsky, 1978).

Human mind or brain does not simply “grow up” biologically, but it is opportunistic to nurturing in a human-like environment (Bruner, 1996)
The Bulimic Learning Model?

The aim of instruction is to fill in a container (human mind)

Take in knowledge, spread it on the exam paper, then forget

The goals are defined in quantitative terms

"Students know 60 %"

How do such practices shape our minds?
Modern ideas of learning

Modern theories of learning see the learner as central in the creation of meaning, not the teacher, as the transmitter of knowledge (Biggs, 1996).

In general, learning is viewed as an active, constructive process rather than a passive, reproductive process (Lonka, Joram & Bryson, 1996).

How do these ideas really apply in higher education practices?
What is epistemic agency? (Scardamalia, 2002)

The students themselves deal with problems of goals, evaluation, and long-range planning that are normally left to teachers or managers.

Instead of studying for isolated courses and credit units, students engage in personally meaningful study projects.

Epistemic agency and self-regulated learning are valuable aspects of higher education.
Technology is a part of our social and knowledge practices…
...but the spaces for learning remain the same.
Blended learning environments combine physical, virtual, social, mobile and mental spaces of learning.
Activating and diagnosing, catching interest, setting context and goals, starting the process.

Assessing change, deepening interest – what new was created? – what should be developed?

The goal, summative evaluation

Activating and diagnosing, catching interest, setting context and goals, starting the process.

Fostering the learning process and reflective thinking, maintaining interest, (face to face, P2P, virtually etc.), creating new knowledge or new practices.
WHAT IS INTEREST?

Interest is a psychological state including an affective component of positive emotion and a cognitive component of concentration (Hidi & Renninger, 2006).

Interaction between a person and surrounding context.

Prior knowledge is related to interest experience (Alexander, Jetton & Kullikowich, 1995).

Students who experienced more interest also showed more persistence, and performed better in a recall test (Ainley, Hillman & Hidi, 2002).
THE FOUR-PHASE MODEL OF INTEREST
(Hidi & Renninger, 2006)

Situational interest (CATCH)
a) triggered
b) maintained

Individual interest (HOLD)
a) emerging
b) well-developed
INSTRUCTION PROMOTING INTEREST?
(Tsai et al, 2008)

If the teachers control too much, students’ emotions are less positive

Cognitive autonomy support gives students an enhanced sense of control

Cognitive autonomy is supported during lessons where students’ prior knowledge and understanding are activated and the aims are transparent

Such lessons are associated with more enjoyment and interest!
THE FOUR-CHANNEL MODEL OF FLOW (Csikszentmihalyi, 1993)

COMPETENCE

CHALLENGE

FLOW

ANXIETY

APATHY

RELAXATION/BOREDOM

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FLOW - THE OPTIMAL MOTIVATIONAL EXPERIENCE (Csikszentmihalyi, 1988)

High challenge combined with feeling of competence

Engagement

Absorption, loosing sense of time

Promotes intellectual evolution

Part of normal daily experience
FLOW IS THE DYNAMIC FORCE IN INTELLECTUAL EVOLUTION

Flow typically occurs in clearly structured activities in which the level of challenges and skills can be varied and controlled.

No activity guarantees constant flow, because the challenge is always relative to the current level of skill.

Such activities are optimal for flow experiences, where the level of expertise and the criteria for success are constantly developing and transforming.
STUDENT EXPERIENCES (Muukkonen et al., 2008) – DATA COLLECTED BY USING A MOBILE PHONE SYSTEM (CASS)
What do our studies show so far?

- Even mass education can be engaging and promote flow (Lonka & Ketonen, in press)

- Academic emotions, especially interest, predict cognitive academic outcomes (Ketonen, 2011)

- On the basis of our measurements, we can group students into clusters that react differently in instructional settings: “cook-book learners”, “theorists” and “reflective professionals” (Heiskanen et al. 2012)

- During an engaging lecture, optimism, reflective thinking, and study engagement may increase (Heiskanen et al. 2012)
Creating new knowledge practices

Collectively cultivated knowledge practices have their impact on the nature of learning

“Knowledge practices’ are social practices related to working with knowledge, i.e., personal, collaborative, and institutional routines; these include repeated procedures for carrying out learning tasks, solving problems, completing assignments, and creating new artifacts, such as project reports (Hakkarainen, 2009)

In order to change our ways of learning, we need to transform our knowledge practices – technology is only one tool for doing this
The generation of young people, who were born around 1990s, may be called "digital natives", since they were born together with Internet and mobile technologies (Prensky, 2005; 2012).

Typical knowledge practices for this generation are multi-tasking, reading from the screen, being fond of computer games, using social media extensively, and chatting.

Young people outsource many cognitive functions to different technological tools.
Collaborative knowledge construction
Connecting people and ideas!
Puzzles
Creation
COLLABORATIVE KNOWLEDGE CONSTRUCTION IN A LARGE GROUP

• SMART podium maintains eye contact with the audience

• We use Flinga application so that the students can join collaborative knowledge construction during workshops and lectures

• Also the products of e-learning can be shared here
New practices call for new tools
Also the practices of informatics have drastically changed

Libraries may support a range of student activities in a flexible learning environment. The library’s physical space may provide unique learning experience to the students as well as allowing a new level of social interaction.

(e.g., Bryant, Matthews. & Walto, 2009)
How to promote flow and meaningful learning?

Activating a meaningful context
Supporting the learning process
Promoting flow and interest
Understanding the interplay between emotions and intelligent action
Peer-to-peer interaction and collaborative learning
Blended learning environments
Designing physical, social, virtual, and mental learning spaces to engage both teachers and students
More information

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