MIND THE GAP

Between digital natives and educational practices

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SUOMEN AKATEMIA

HELSINGIN YLIOPISTO

Turun yliopisto
University of Turku

JYVÄSKYLÄN YLIOPISTO

QUESTIONS TO BE ADDRESSED

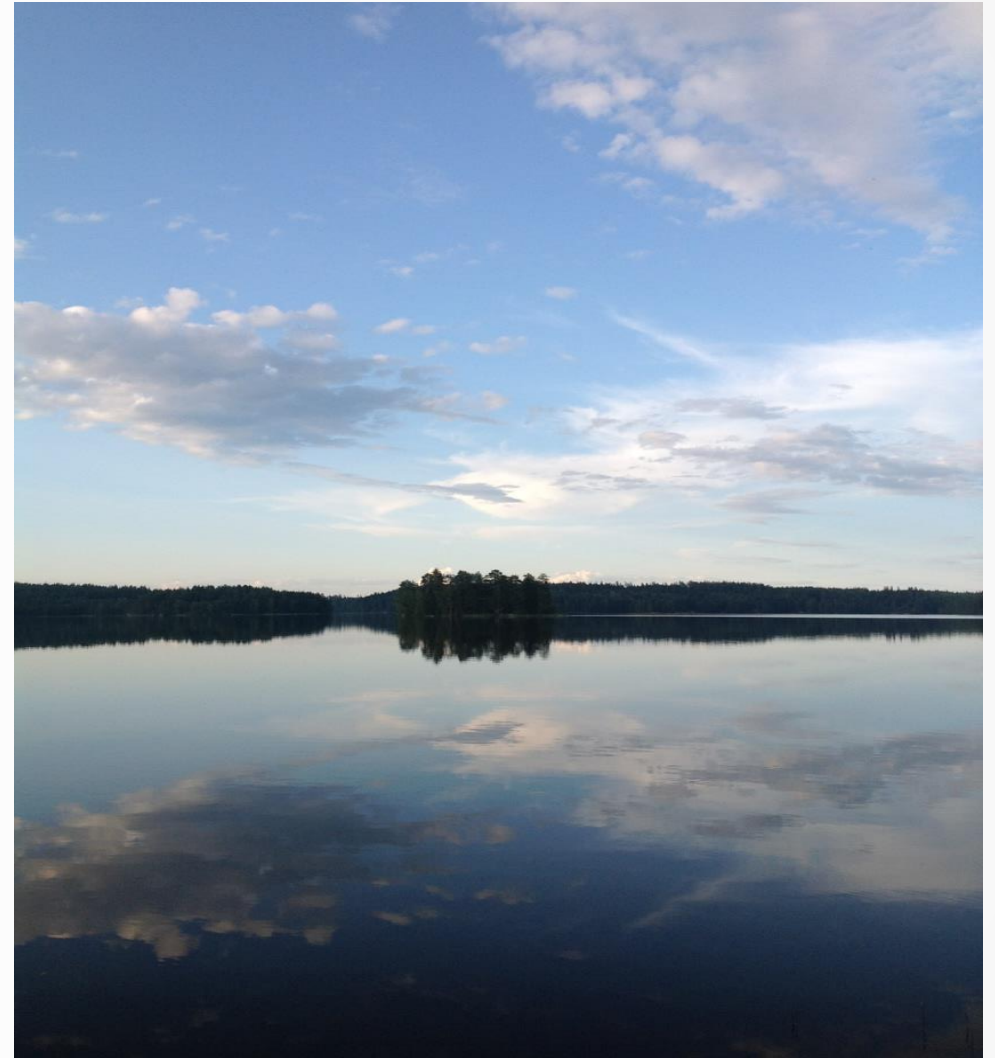Some typical features of Finnish (teacher) education

Current trends in Finnish educational system:

Phenomenon-based learning and 21st century skills

The digital challenge

Changing the physical spaces and social interaction

FINNISH TEACHER TRAINING AT THE UNIVERSITY LEVEL

The training of subject matter teachers has been conducted at the university level since the early 19th century (Master's degree plus pedagogical studies)

The training of class teachers (primary) was transferred over to be carried out by universities in the early 1970s (Master's degree)

The training of kindergarten teachers in universities began in 1995 (BA, also MA)

SUMMARY AND BACKGROUND

The level of teacher education in Finland is highest in the world – Master's degree is the requirement

Statistically, more difficult to get in to class teacher education programs (elementary school) than to medical or law school

Elementary teachers stay with the same children for several years – they have 13 subjects to master, even they specialise in two

Music, arts, handicraft, domestic skills and sports are all included in the study plans

Autonomous teachers, short school days, long holidays, hardly any standardised tests until the age of 18
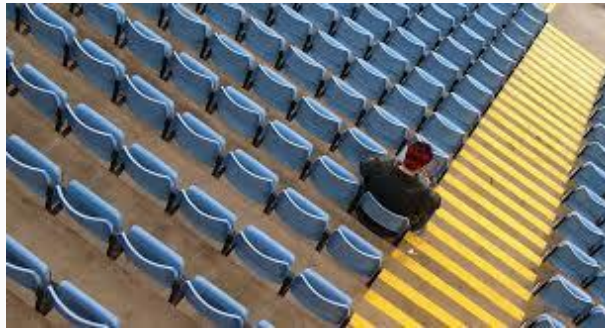
School started at the age of 7 (preschool between 3-6 yrs)

CURRENT TRENDS AND CHALLENGES

Late evening
In August, 2013

HOW TO CREATE NEW CULTURES FOR STUDY AND ACADEMIC WORK?

VS

Work life calls for collaborative knowledge creation

- We need creative and active citizens, able to solve fuzzy problems in teams

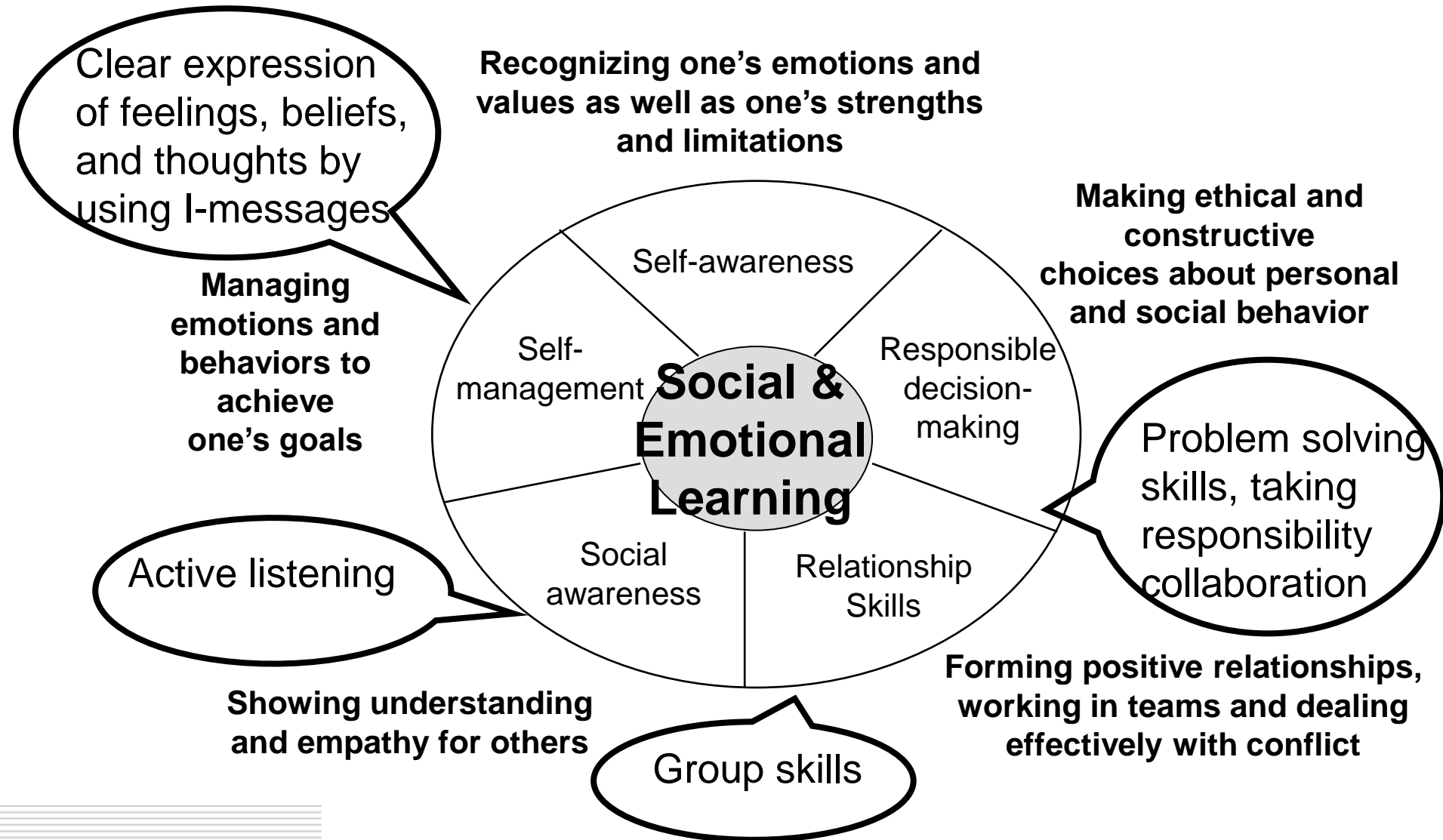- Physical spaces, social settings and technologies need renewal

New skills are needed!

The Finnish 21ˢᵗ Century Skills

1) Thinking skills and learning to learn

2) Cultural competencies, communications skills and self-expression

3) Taking care of oneself and everyday skills

4) Multiple literacies

5) ICT competencies

6) Work life skills and entrepreneurship

Basis for National Core Curriculum 2016 to be implemented in school-specific curricula locally.

What Does SEL Address?

(Adapted by Lintunen & Gould (2014) from Elias & al. (1997) / Casel)

Clear expression of feelings, beliefs, and thoughts by using I-messages

Recognizing one's emotions and values as well as one's strengths and limitations

Making ethical and constructive choices about personal and social behavior

Managing emotions and behaviors to achieve one's goals

Self-awareness

Self-management

Social & Emotional Learning

Responsible decision-making

Problem solving skills, taking responsibility collaboration

Active listening

Social awareness

Relationship Skills

Showing understanding and empathy for others

Group skills

Forming positive relationships, working in teams and dealing effectively with conflict

Phenomenon-based learning?

- **Extensive form of project-based learning**
- **Starts from a large phenomenon, such as 'Life and Death' or 'Peace and War'**
- **Integrates topics across disciplines and 21st century skills**
- **Humanities, arts, science, technology**

The importance of play, handicraft, sports, music and art – fostering well-being and brain/ cognitive development and SEL

DESIGNING SOCIETY THROUGH THINKING

WORLD DESIGN CAPITAL HELSINKI 2012

PASSION TO LEARN

Adapting new ways of collective learning for better results.

UNIVERSITY OF HELSINKI

Prof Kirsti Lonka

THE DIGITAL CHALLENGE

Prof Kirsti Lonka

Engagement of Finnish 12 yr. olds

Our results thus revealed that almost half (46%) of the elementary students felt some degree of cynicism towards school, thereby supporting our gap hypothesis: **these groups of cynical students reported that they would be more engaged at school if socio-digital technologies were used at school.** These results indicate that one engagement might be to offer pupils the possibility to make greater use of socio-digital technologies at school.

Salmela et al. (2016) Article available online:

http://www.tandfonline.com/doi/full/10.1080/17405629.2015.1107542

Knowledge Practices of
"Digital Natives" (Prensky, 2001; Hakkarainen et al., 2015)

Multi-tasking

Reading from screen

Chatting

Gaming

Socio-digital
networking

Constantly online

Dependent on mobile
devices

Generation Clash?

Baby Boomers

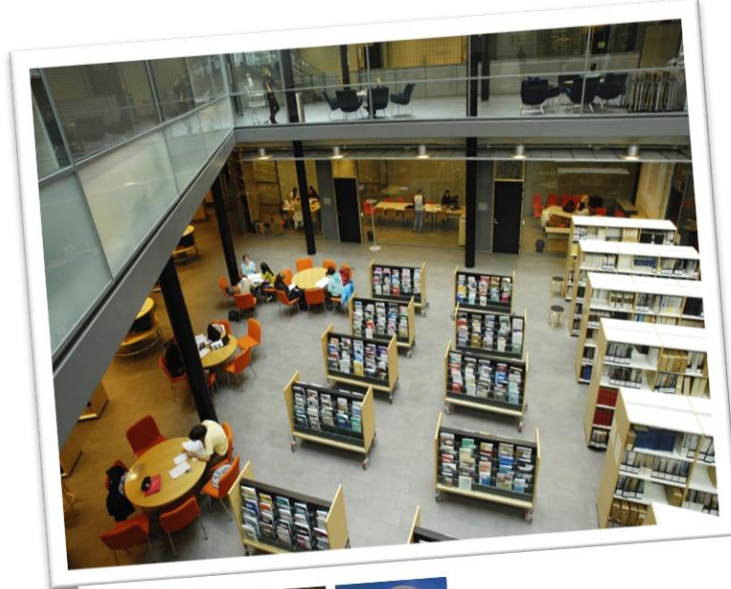**Generation Y**

Generation X

Digital Natives Z - Millenials

THE PHYSICAL CHALLENGE

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Engaging learning environments in physical, virtual, social, mobile and mental spaces of learning

11.11.2020

Prof Kirsti Lonka

Engaging Learning Environment - Minerva Plaza (Lonka, 2012)

WORLD DESIGN CAPITAL

HELSINKI 2012

SY Sisäympäristö
Indoor Environment

INDOOR ENVIRONMENT - Science based solutions for indoor life quality

Prof Kirsti Lonka

Video by
Mikko.I.Halonen

**ENGAGING
LEARNING
ENVIRONMENT**

**FOR FUTURE
TEACHERS**

Prof Kirsti Lonka

Minerva
Learning
Spaces
in 2016

Prof. Kirsti Lonka

WE ALREADY DESIGNED
ENGAGING LEARNING
ENVIRONMENTS

11.11.2020

Prof. Kirsti Lonka

Our own EWE - Engaging Working Environment

PHOTOS
Luukas and Lauri Vaara

Social space

Silent room

Interactive studio

11.11.2020

Prof Kirsti Lonka
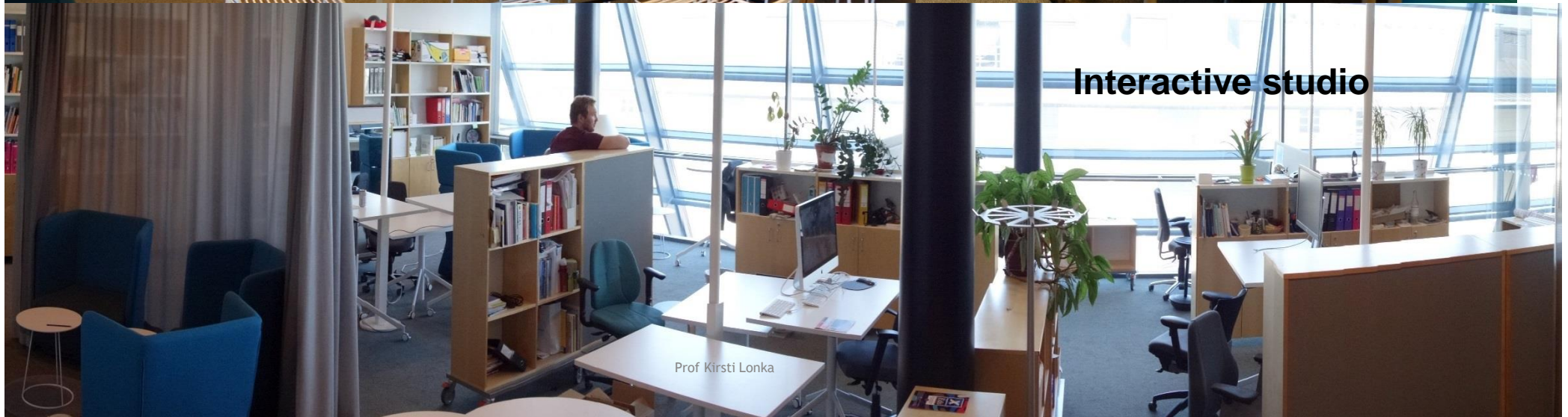
How to change the culture of schools, universities and workplaces?

Transform

- Physical spaces
- Social practices
- Virtual ways of interacting
- Pedagogical interaction
- Shared ideas of learning
- Technological solutions and software

From monological culture towards collaborative knowledge creation
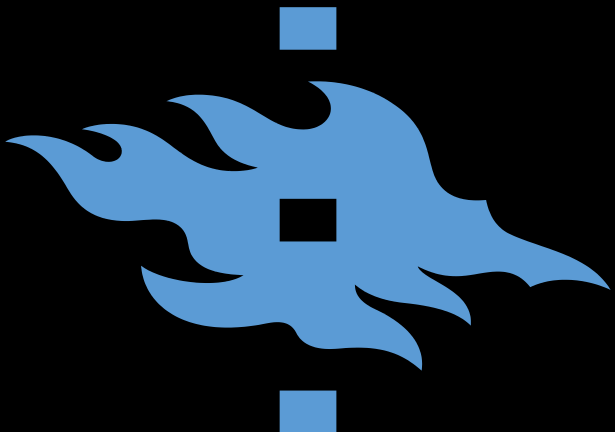
THE SOLUTIONS NEED NOT TO BE EXPENSIVE...
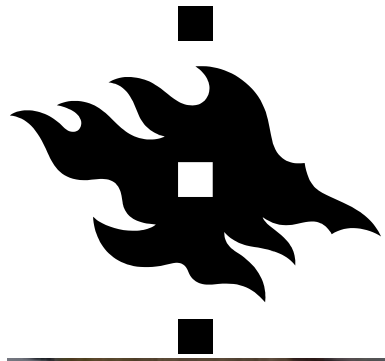
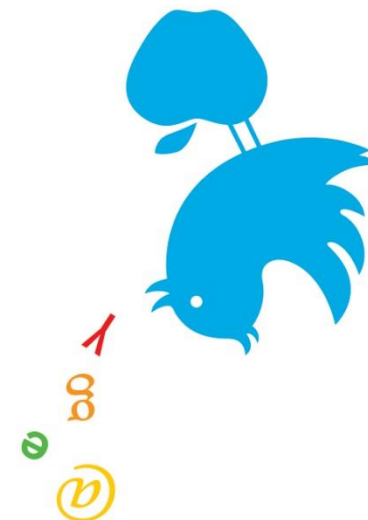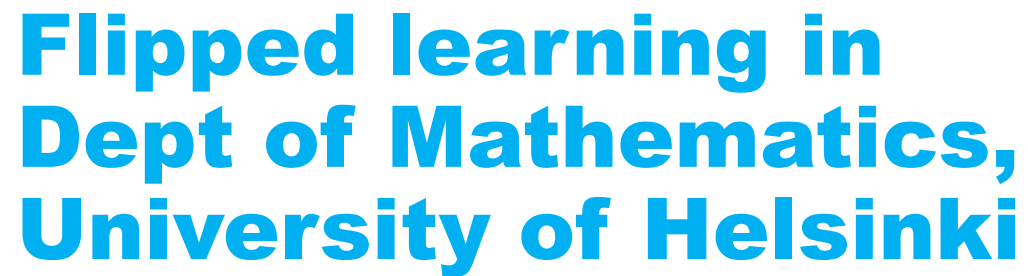# Flexible places for learning project (2015-2016) IN ESPOO, FINLAND

AFTER

BEFORE

Prof Kirsti Lonka

Flipped learning in Dept of Mathematics, University of Helsinki

Theory is learned from the net, but students come to solve problems together. Freshmen tutored by advanced students
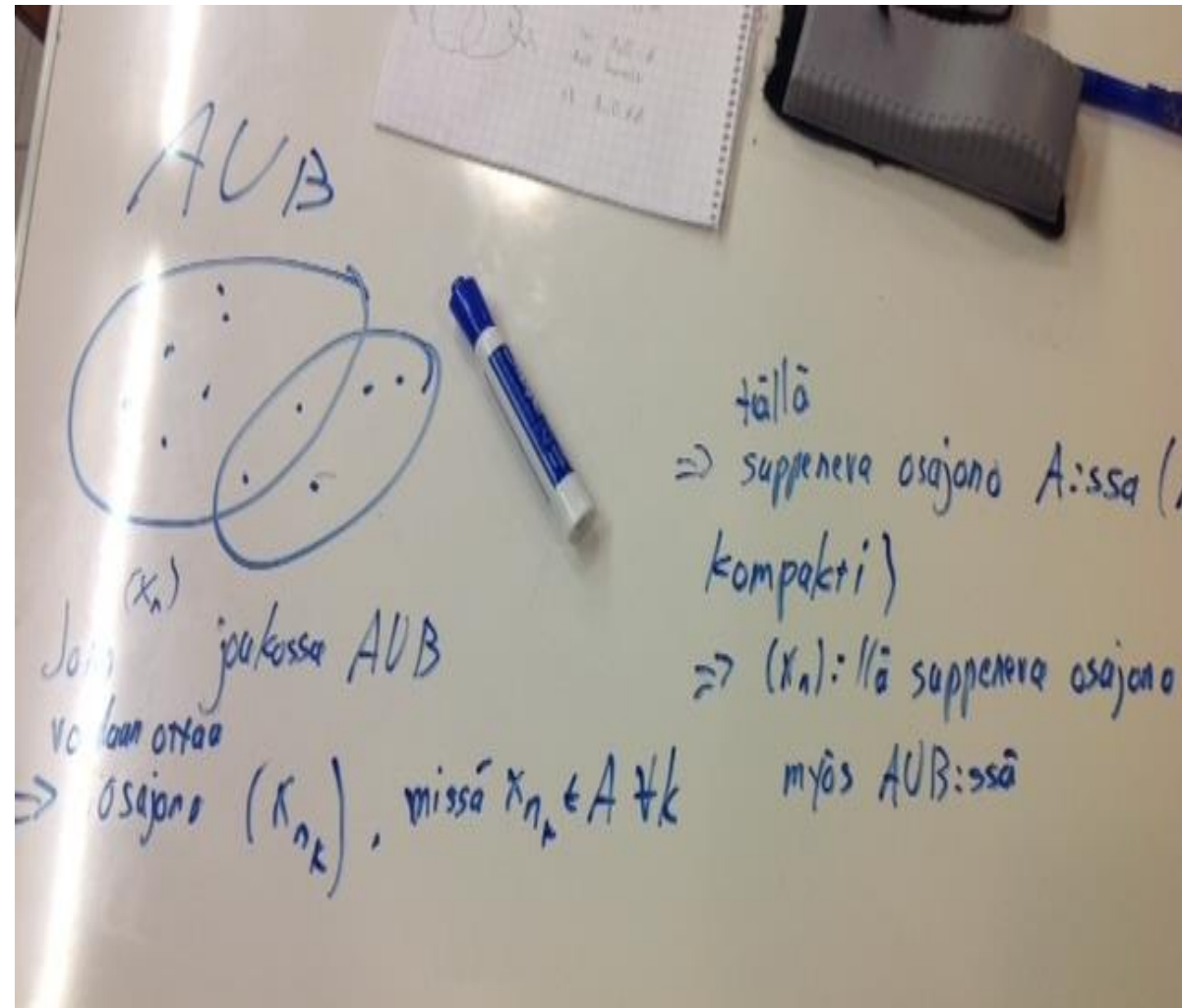
Prof Kirsti Lonka

Tutoring is available.
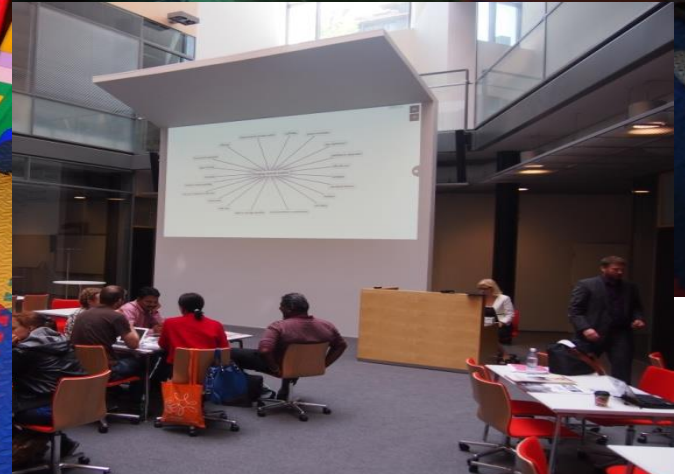
NO HIGH-TECH SOLUTION ☺

All walls and tables of the corridors are painted so that you may draw on them.
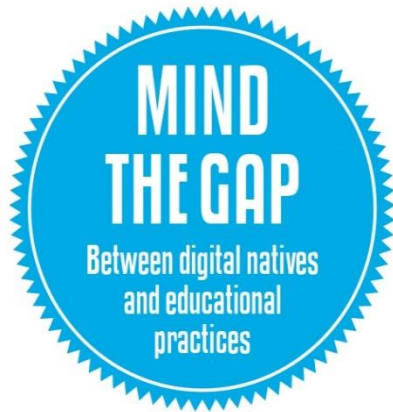
Advanced students study on corridoors.

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MOOV – How unemployed learn to design web sites in Orange Farm, South Africa

Prof Kirsti Lonka

blogs.helsinki.fi/mindthegap

facebook.com/mindthegaptutkimus

http://vimeo.com/hufbs/timelapse

Kirstilonka.fi/publications

www.wiredminds.fi/projects/

facebook.com/wiredmindshub

twitter.com/wiredmindshub @kirstilonka #mindga

www.rym.fi

European Parliament (Ed.). 2015. *Innovative Schools: Teaching & Learning in the Digital Era – Workshop Documentation*. Brussels: European Parliament. Pages 5-46.

Slides on page 73.

Link on kirstilonka.fi/publications:

http://www.europarl.europa.eu/RegData/etudes/STUD/2015/563389/IPOL_STU%282015%29563389_EN.pd

Some references

- Hakkarainen, K. (2009). A knowledge-practice perspective on technology-mediated learning. *International Journal of Computer-Supported Collaborative Learning, 4(2)*, 213-231.
- Hietajärvi, L., Nuorteva, M., Tuominen-Soini, H., Hakkarainen, K., Salmela-Aro, K., & Lonka, K. (2014). Kuudesluokkalaisten nuorten sosiodigitaalinen osallistuminen, kiinnostuksen kohteet ja kouluhyvinvointi. [Sixth-graders' socio-digital participation, interests and academic well-being]. *Kasvatus [The Finnish Journal of Education], 45*, 429–443.
- Hietajärvi, L., Tuominen-Soini, H., Hakkarainen, K., Salmela-Aro, K. & Lonka, K. (2015). Is student motivation related to socio-digital participation? A person-oriented approach. *Elsevier Procedia - Social and Behavioral Sciences*.
- Litmanen, T., Lonka, K., Inkinen, M., Lipponen, L. & Hakkarainen, K. (2012). Capturing teacher students' emotional experiences in context: does inquiry-based learning make a difference? Instructional Science, 40, 1083–1101.
- Lonka, K. (2011) In S. Tierney (Ed.) Innovate! Collective wisdom for innovative schools (pp. 32-35) USA: Partners in Learning School Program. Worldwide Public Sector Education, Microsoft.

- Lonka, K. (2012) Engaging Learning Environments for the Future. The 2012 Elizabeth W. Stone Lecture. In R. Gwyer, R. Stubbiftgs,& Graham Walton (Eds.) The road to information literacy. Librarians as facilitators of learning. IFLA (The International Federation of Library Associations and Institutions). (p. 15-30.) Publications 157. De Gruyter Saur.

  http://www.ifla.org/news/new-publication-the-road-to-information-literacy-librarians-as-facilitators-of-learning

- Lonka, K. & Ketonen, E. (2012). How to make a lecture course an engaging learning experience? Studies for the Learning Society, 2, 63–74. http://versita.metapress.com/content/6604263706320662/fulltext.pdf

- Paavola, S., Lipponen, L., & Hakkarainen, K. (2004). Models of innovative knowledge communities and three metaphors of learning. *Review of Educational Research*, *74*(4), 557-576.

- Tolvanen, A., Kiuru, N., Hakkarainen, K. Lonka, K.,Inkinen, M & Salmela-Aro,K. (2011) Estimation of nonlinear growth component in multilevel modeling: A research application in the daily dynamics of competence, challenge and affects. International Journal of Behavioral Development, 35(4), 370-379.

- Doctoral dissertations (https://ethesis.helsinki.fi/): Search by name: Annamari Heikkilä (2011), Juha Nieminen (2011), Jenni Stubb (2012), Jenna Vekkaila (2014), Markus Talvio (2014) Topi Litmanen (8/2015), Amandeep Dhir 6/2015, Jaakko Hilppö (2016), Antti Rajala (2016)

Some latest 2016 publications

- Dhir, A.,Kaur, P., Chen, S. & Lonka, K. (accepted with revisions) Understanding Online Regret Experience in Facebook Use - Effects of Community Participation, Technology Accessibility & Problematic Use. *Computers in Human Behavior*.

- Dhir, A., Kaur, P., Lonka, K., & Nieminen, M. (2016). Why do adolescents untag photos on Facebook? *Computers in Human Behavior*, *55*, 1106-1115.

- Salmela-Aro, K., Muotka, J., Alho, K., Hakkarainen, K. & Lonka, K. (in press). School burnout and engagement profiles among digital natives in Finland: a person-oriented approach. *European Journal of Developmental Psychology*. DOI: http://dx.doi.org/10.1080/17405629.2015.1107542

- Sandström, N., Eriksson, R., Lonka, K. & Nenonen, S. (2016). Usability and Affordances for Inquiry-Based Learning in a Blended Learning Environment. *Facilities, 34,* 7/8.

- Moisala, M., V. Salmela, L. Hietajärvi, E. Salo, S. Carlson, O. Salonen, K. Lonka, K. Hakkarainen, Katariina Salmela-Aro, and Alho, K. (2016) Media multitasking is associated with distractibility and increased prefrontal activity in adolescents and young adults. *NeuroImage* 134, 113-121.

- Salmela-Aro, K., Upadyaya, K., Hakkarainen, K., Lonka, K., & Alho, K. (2016). The dark side of internet use: two longitudinal studies of excessive internet use, depressive symptoms, school burnout and engagement among Finnish early and late adolescents. *Journal of youth and adolescence*, 1-15.

- Talvio, M., Lonka, K., Komulainen, E., Kuusela, M., and Lintunen, T. (in press). The development of teachers' responses to challenging situations during interactions training. *Teacher Development*, *19 (1)*, 97–115. DOI: http://dx.doi.org/10.1080/13664530.2014.979298

- Talvio, M., Berg, M., Komulainen, E. & Lonka, K. (in press). Exploring the coherence of the goals achieved through a youth development programme. *Procedia: Social and Behavioral Sciences*, 1877-0428.