Cultivating social-creative knowledge practices: Educational transformations in the digital age

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Contrast between traditional school learning and digital knowledge practices

Traditional educational practices

Acquiring basic knowledge and skills

- Teacher-centered, textbook-driven
- Externally regulated individual learning
- Reproduction of simplied and outdated textbook knowledge

Gaps between super social informal activity and individual learning at classroom

Focused digital practices of learning

Application and creation of knowledge

- Collaborating for solving complex problems
- Deliberate building and creation of knowledge
- Appropriating scientific, engineering, design and entrepreneurial practices

Network of research projects regarding technology-mediated learning

- Future Learning Environments (FLE, 1999-2000, 2000-2001)
- European Collaborative Learning Networks (CL-NET, 1998-1999)
- Innovative Technology for Collaborative Learning (ITCOLE, 2000-2002)
- Integrated Knowledge Practices Laboratory (KP-Lab, 2005-2009)
- Mind the Gap between digital natives and educational practices (2011-2015)
- Laboratory of Co-design, Co-inquiry, Co-teaching and Co-regulation (Co4-Lab, 2015-2019)
- Growing Mind: Personal, social, and institutional renewal at the digital age (Strategic Research, 2018-2023)

- Digital technologies and associated practices function as **agents of educational change**
- Research and development of technology-mediated learning environments by **multi-disciplinary collaboration**
- **Design experiments** that involve iterative efforts of experimenting with innovative ways of learning and teaching at the field

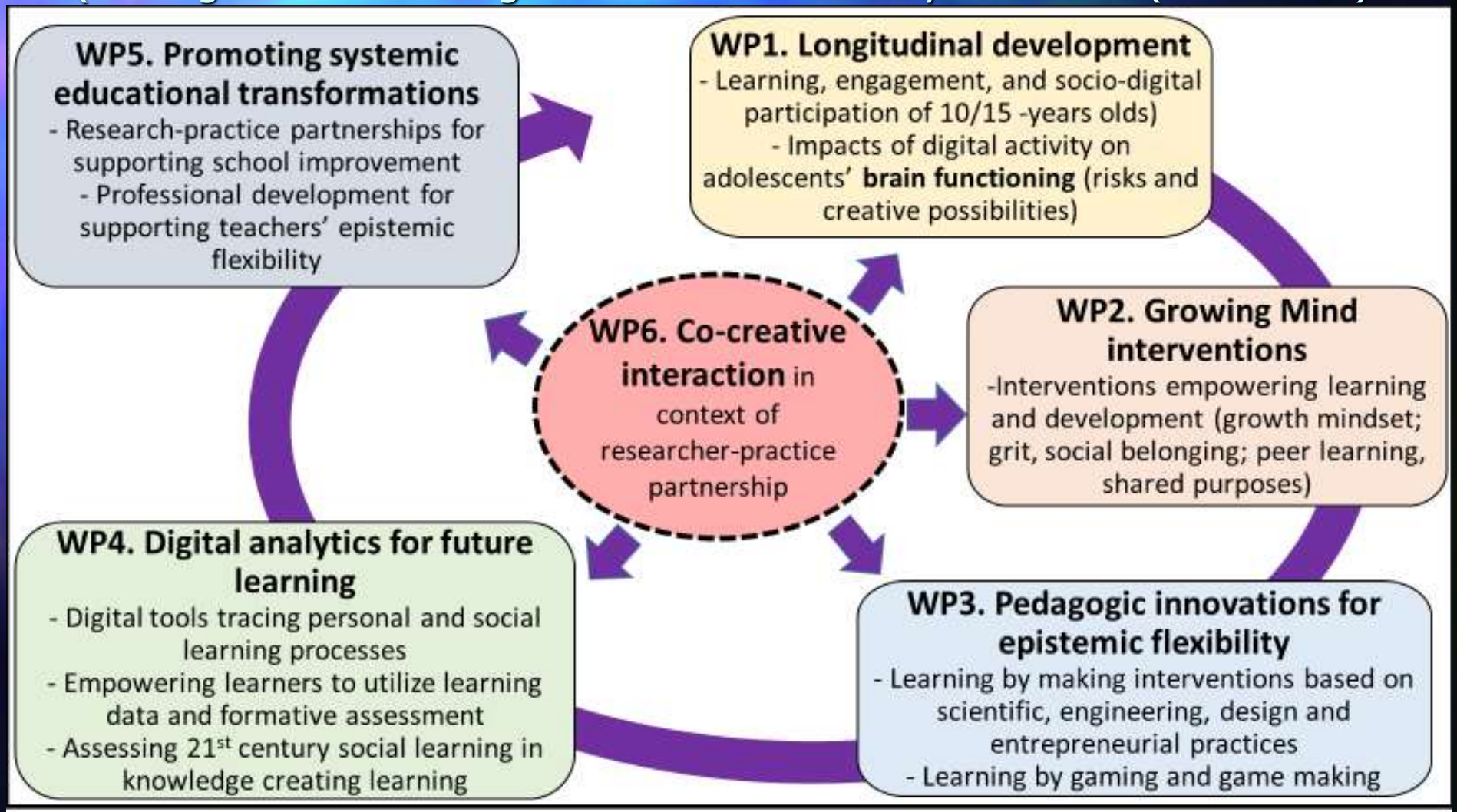
Challenges of integrating digital technologies with educational practices

- After 20 years of efforts, digital technologies did not root as a part of Finnish schools.
- Digitalization of **the matriculation examination** changes the situation considerably
- **Emerging socio-digital ecology** (Mobile and wireless technologies, thousands of adaptable applications, new generation of teachers, and new institutional commitment
- Schools tend to reduce new (**disruptive**) innovations to ones **sustaining** their prevailing practices (research-practice partnership)

Educational innovations require systemic change that involves cultivating new practices of working with knowledge and media (**knowledge practices**)

Growing Mind: Personal, social, and institutional renewal at the digital age

(Strategic Research Programme of the Academy of Finland (2018-2023)



Multi-disciplinary network of educational research, craft science, developmental psychology, computer science, game studies, and neuroscience

Growing Mind consortium

- PI **Kai Hakkarainen** (education, University of Helsinki)
- Co-PI **Erno Lehtinen** (education, University of Turku)

Research partners:

- **Kimmo Alho** (Neuroscience, University of Helsinki)
- **Tapio Salakoski** (computer science, University of Turku
- **Jari Lavonen** (science education, University of Helsinki)
- **Frans Mäyrä**, game research, University of Tampere)
- **Kirsti Lonka** (interaction coordinator, University of Helsinki

strategic RESEARCH
research-based knowledge to support society

Strategic Research Council of the Academy of Finland (Keys to sustainable growth program 2018-2023)

- **Tiina Korhonen,** Innokas network)
- **Liisa Pohjolainen & Pasi Silander** (Helsinki City Department of Education)
- **Growing Mind Academic Network** extending to all continents
- **Growing Mind Business Network** consisting of big and SMS enterprises and startups