



The Future of Learning, Knowledge and Skills

Background and preparations for a joint call with CONICYT

Dr. Risto Vilkkö



Learning is in flux

- New forms of communication and culture are shaping the way people live and work. However, as yet we have only limited knowledge about how profoundly all this is impacting people's world views, their knowledge and skills, and, consequently, the very foundations of society. Relevant research issues range from brain function to the conditions for learning, changing cultural values, forms of social activity, and the possibilities of information technology.

Academy of Finland Research Programmes

- Respond to topical issues in science and the grand challenges faced by society.
- Are multidisciplinary clusters of research projects focused on a defined subject area or a set of problems, funded for a fixed term and operated under a coordinated management.
→ Yield greater added value than normal project-based funding.
- Provide high-impact platforms for collaboration between researchers in different disciplines, end-users of research knowledge and research funding agencies.
- **Promote international cooperation.**

The Future of Learning, Knowledge and Skills (TULOS)

- A multidisciplinary and internationally oriented research programme for 2014-2017. Academy of Finland in cooperation with the Finnish Work Environment Fund and the Kone Foundation.
- Supports targeted basic research in learning sciences, educational assessment, psychology, neuroscience, computational science, computer science, media, information and communication research.
- The programme:
 - integrates behavioural research interests associated with learning and education, and the development of teaching technologies and the search for software solutions.
 - addresses neuroscience research into learning and more generally research concerned with the well-being of children and young people.

Future of Learning, Knowledge and Skills (TULOS)

Themes:

- Demands arising from changes in society to learning, skills and teaching
- Learning analytics and multilevel assessment of learning
- Future learning environments and user-driven contents
- Learning environments in developing societies
- Improving individual conditions for learning at different ages

Goals:

- Provide new knowledge and understanding
- **Support** national and **international research collaboration**
- Encourage the development of new methods and methodologies
- Influence public discussion and dissemination of research results

Forthcoming international activities

- Funding for 5 consortia and 6 individual projects. Altogether 19 research projects.
 - Universities of Helsinki, Jyväskylä, Oulu, Tampere, and Turku, Aalto University, University of Eastern Finland, Tampere University of Technology, the Niilo Mäki Institute
- Foreseeable international cooperation with Chile, USA, the Nordic countries.
- At the moment: NSF Call Partnerships for International Research and Education (*PIRE*) . AF as one of the partner organizations.
- **Forthcoming bilateral call with CONICYT in 2015, “New Learning Environments and Technologies”.**
- “Finnish-Norwegian Workshop in Learning Analytics”, 21-22 May 2015, Helsinki.

Academy of Finland and CONICYT (Chile) joint call in Education research 2009-10

- Memorandum of Understanding between AKA and CONICYT in June 2009.
- Call open for applications in October 2009, including themes in *education policies, quality of education, priorities in teacher training and school development, learning and skills development (especially maths and science), ICT for education and the sociology of education.*
- Result: 15 joint applications by Chilean and Finnish research teams, evaluated using international peer review, organised by AKA.
- Four bilateral joint projects funded for three years (2010-2013).

Chilean-Finnish joint projects in Education research, co-funded by AKA and CONICYT 2010-2013:

- Ismo Koponen (University of Helsinki) and Mario Quintanilla Gatica (Universidad Católica de Chile): *Development of teacher students' thinking skills and its relation to acquisition of pedagogical content knowledge*
- Heikki Lyytinen (University of Jyväskylä) and Ricardo Rosas (Universidad Católica de Chile): *Predicting and supporting reading acquisition via computer games for children at risk for dyslexia*
- Erkki Pehkonen (University of Helsinki) and Maria Leonor Varas (Universidad de Chile): *On the development of pupils' and teachers' mathematical understanding and performance when dealing with open-ended problems*
- Hannu Simola (University of Helsinki) and Dagmar Raczynski Von Oppen (Universidad Católica de Chile): *Parents and school choice: Family strategies, segregation and school policies in Chilean and Finnish basic schooling*

Call for research proposals with CONICYT in 2015 on “New Learning Environments and Technologies”

Workshop in Santiago on 24-25 March 2015.

Participants: distinguished researchers from Finland and Chile, experts from the administration offices of the CONICYT and the Academy of Finland.

Themes for the working groups:

- Future Learning Practices
- Future Learning Environments
- Future Skills Knowledge
- Future Joint Research & Education Policies

Goals of the workshop:

- agreement concerning the scope of the call (researchers)
- agreement concerning the process and time-table of the call (administrators)