EDUCA Flagship Consortium meeting

12.-13.9.2024 Helsinki

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Learning and wellbeing reflect the overall societal change

Understanding the lives of today's children and youth is vital for tomorrow.

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JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ

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Aalto University

HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI

UNIVERSITY OF TURKU

Shaping Education for Tomorrow

- 12,6 milj. eur (1.1.2024 – 30.4.2028)
- 50 professors and around 100 researchers
- 26 international partners and 30 collaborators

THE AIMS OF EDUCA

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CHALLENGES

1. Increasing variability and polarization in learning outcomes at levels of individuals, groups, and contexts

2. Increasing school absence and early school leaving

3. Increasing demands for digitalized teaching and learning environments

RESEARCH

- Creating a transdisciplinary **ecosystemic** platform and **data infrastructure** integrating large scale longitudinal datasets and register data
- To study the effects of educational reforms on students' academic achievement and socioemotional skills using randomized controlled trials (RCTs), within-person experiments and quasi-experimental designs

- **Increase our understanding for example on:**
  - Optimal learning moments
  - Social and individual learning processes
  - School engagement and educational paths
  - Effect of technological solutions for learning
  - Competence and wellbeing of teachers and educational leaders

IMPACT

- **Society level:**

Knowledge management for education systems, solutions, and interventions, learning environments, and teachers' and principals' education

- **Economic level:**
  Collaboration with national and international business partners

Bioecological systems theory

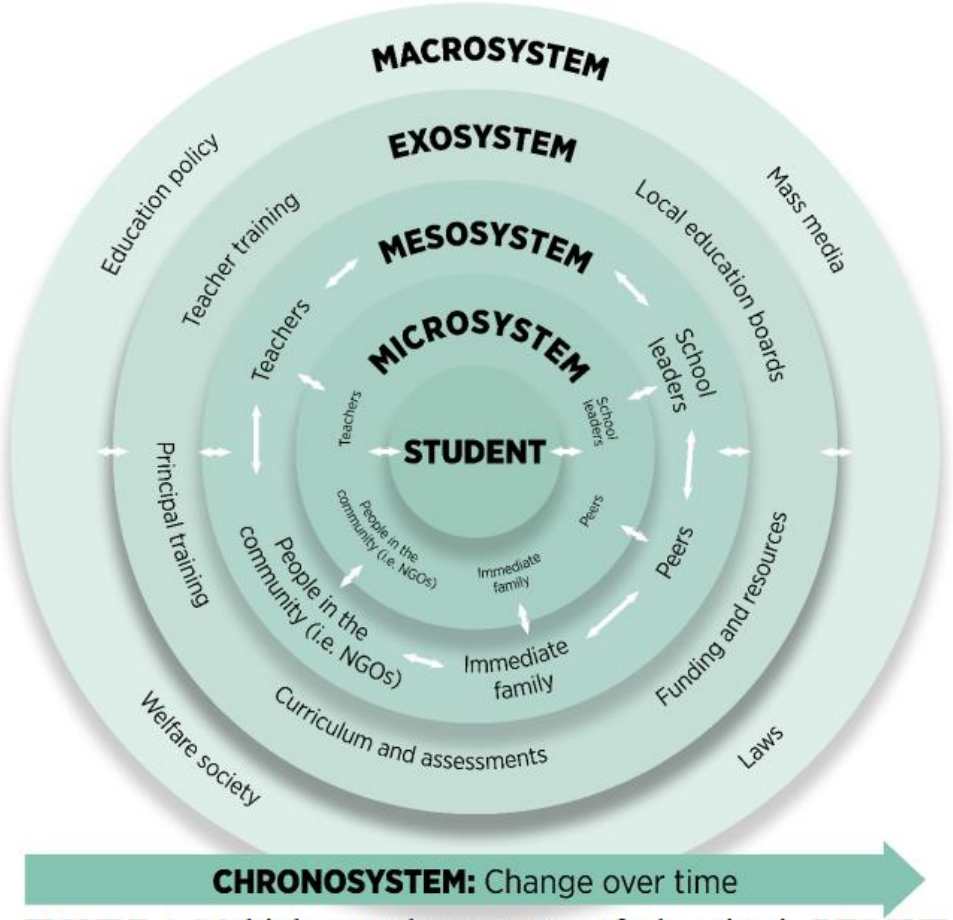

FIGURE 1. Multiple nested ecosystems of education in RESCUE

EDUCA adopts a multisystem perspective on future educational needs. It will focus on ecosystem building at and between different systemic levels:

- the levels of individuals (within-person and -group variation; microsystem),
- communities of learners in different contexts (contextual variability; mesosystem),
- communities of teachers and principals as well as education providers (exosystem),
- levels of policies and resources (macrosystem), and
- change over time (chronosystem).

Bronfenbrenner & Morris (2006). The bioecological model of human development. In R. M. Lerner & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (pp. 793–828). John Wiley & Sons Inc.

RESEACH AREAS

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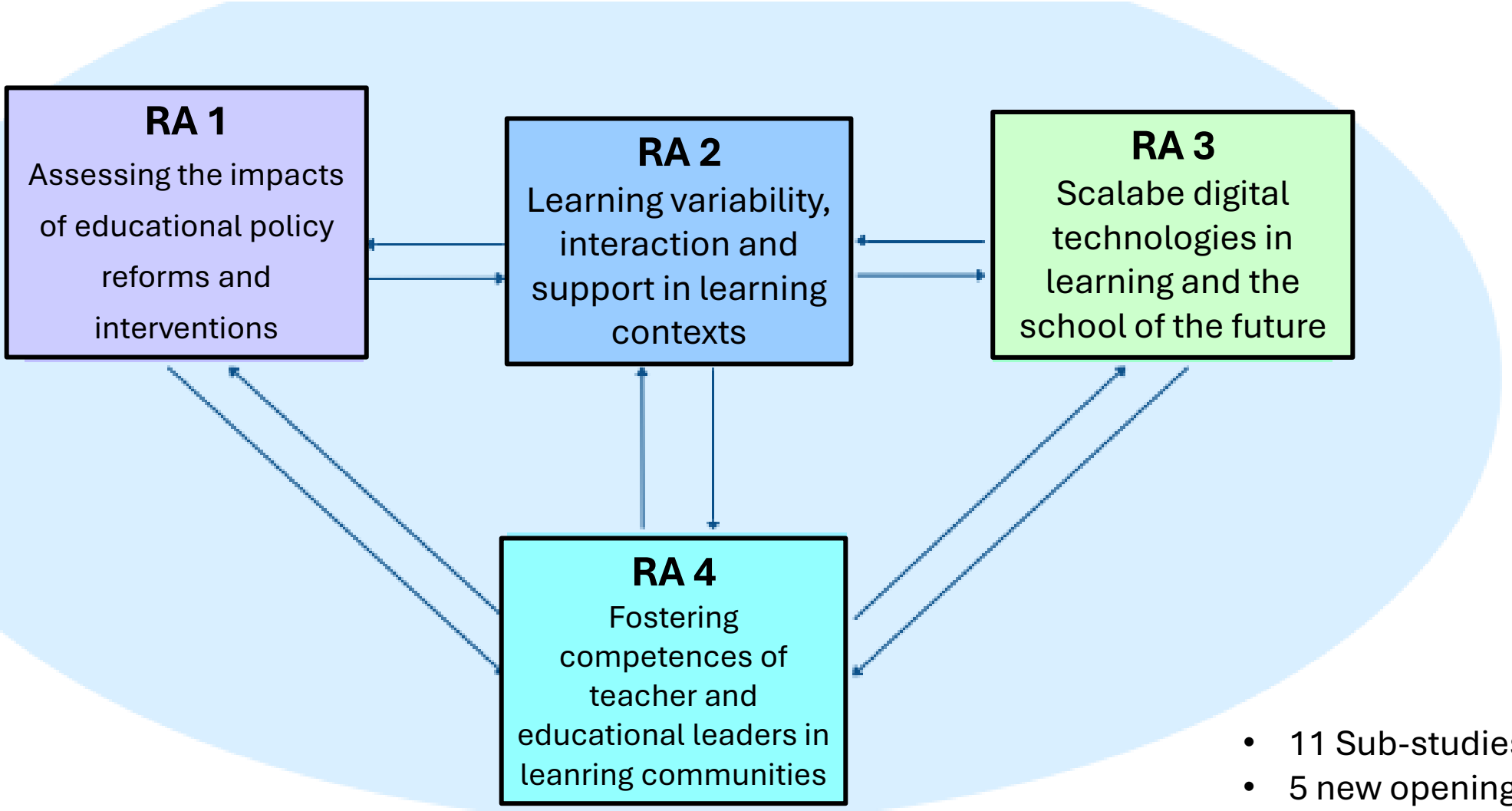

- 11 Sub-studies
- 5 new openings

Multi-level and multi-sited educational policy making

Towards Nationwide Teaching and Learning Research Ecosystem: Large-Scale Research-based Development of Finnish Education System with Learning Analytics & AI

Prof. Mikko-Jussi Laakso, University of Turku

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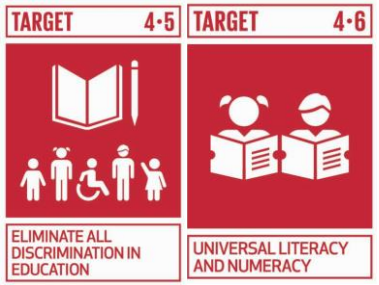
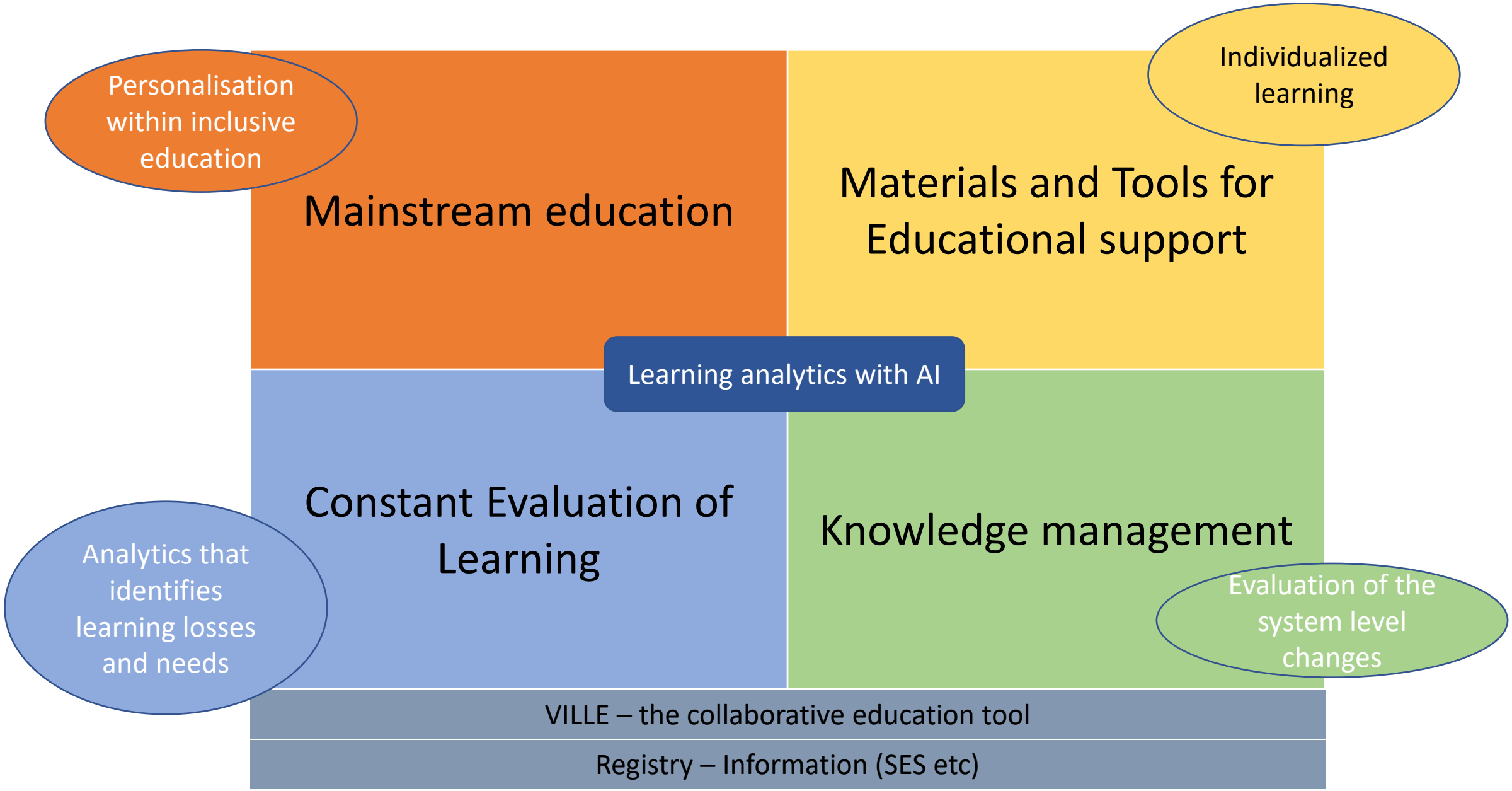
How to build a resilient and proactive education system(s) that are capable of recovering from distributions (like pandemic), the most efficient way?

How to identify, overcome and prevent learning losses and gaps?

How measure the impact of educational changes and investments at large scale? and how to do all of this without overloading the system?

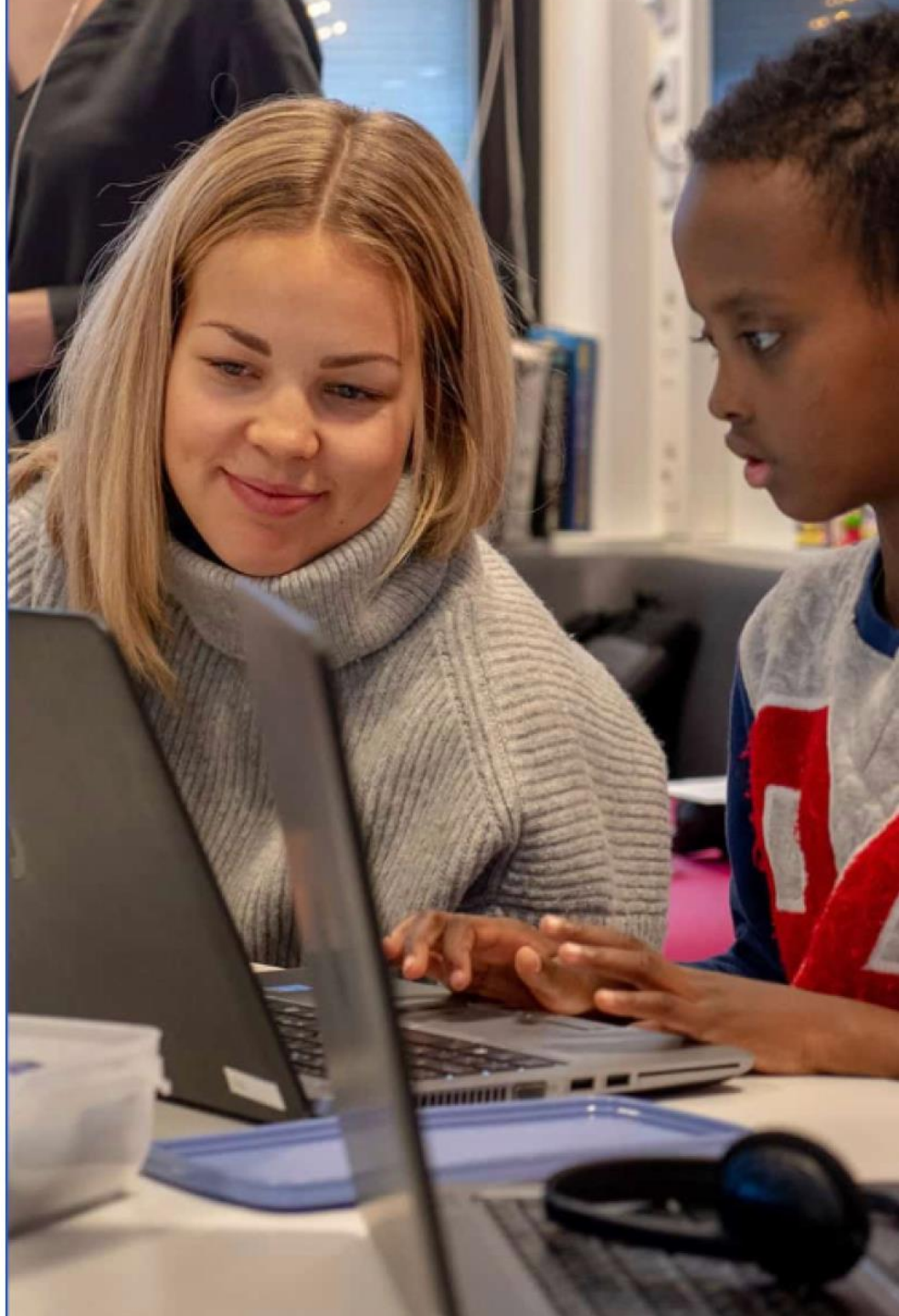


Nationwide Research Ecosystem of Teaching and Learning



From Teachers to Teachers – initiative

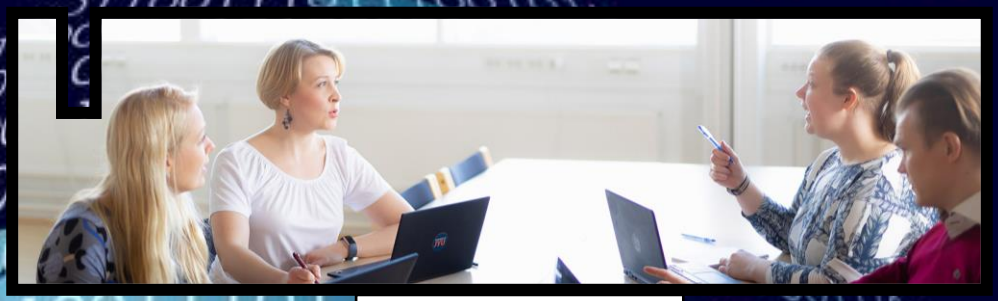
- **Co-design** and **Co-creation** with teachers from day one!
  - Solutions are **aligned with any curricula**
  - **Supports** teachers **existing workflows** and **saves time** for them
  - **Hundreds of millions** solved tasks per year just in Finland
- One of the biggest ”**game changer”** - network in Finnish education system



“To help every learner in need as early as possible with personalized and effective intervention”

@large scale

EDUCA ECOSYSTEM



Researchers

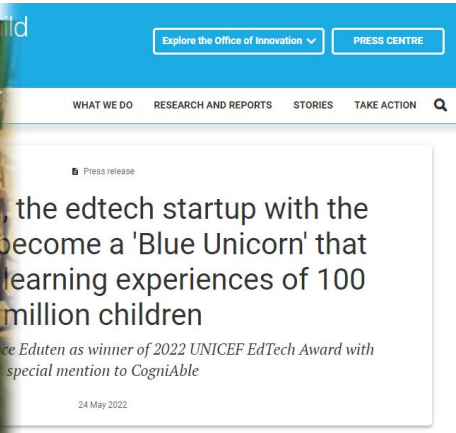
Children and adolescents

Teachers and principals

Stakeholders and business partners

Summary

- Co-creation with the field!
- The use of the data for the good purpose & transparent way
- Equal learning for all @ large scale



© UNICEF/UN0551719/Dejongh
Children learn with tablets and computers in the Public Melen School of Yaoundé, the capital of Cameroon.

Media contacts

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RA1. Assessing the Impacts of Educational Policy Reforms and Interventions

PI Prof. Matti Sarvimäki, Aalto University

Prof. Marja-Kristiina Lerkkanen,University of Jyväskylä
Academy Prof. Katariina Salmela-Aro, University of Helsinki

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RA1: Overview

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- Aims to **rigorously examine the effects** of educational **policy reforms** and **interventions**
  - RCTs and quasi-experimental research designs
  - new, large-scale data linked with register-based data

  and to facilitate iterative decision-making
- Key projects / themes
  1. Two-year preschool experiment
  2. KYTKE antidiscrimination intervention
  3. Targeted funding, transition from lower to upper secondary education

Two-year preschool experiment

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- RCT in collaboration with the Ministry of Education
  - €30m budget, governed by temporary legislation
  - roughly 35,000 children, 1,000 centers, 148 municipalities
- Data
  - assessment of socioemotional and academic skills (N ≈ 60,000)
  - linked with register data (background, grades and long-term outcomes)
  - surveys, interviews, administrative documents
- First results published in 2025
  - last assessment planned for 9th grade (academic year 2033-34)
  - register data through the entire lifecycle and beyond…

KYTKE antidiscrimination intervention

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- RCT in collaboration with an NGO (Walter ry) + J-PAL and FINEEC
  - roughly 30,000 children (5th graders), 92 schools, 12 municipalities
- Data
  - friendship networks, explicit and implicit bias, bullying, empathy and other soft skills etc. (N ≈ 30,000)
  - linked with register data (background, grades and long-term outcomes)
- First results published soon, RCT results in 2025/26
  - follow-up survey planned for 9th grade
  - register data until age 30

Transition from lower to upper secondary education

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- Topics
  - long-term effects of (different types of) upper secondary education
  - effects of targeted funding
  - extension of compulsory schooling age
- Quasi-experimental research designs
  - but likely also some RCTs (one with City of Helsinki already on its way)
- Data
  - population-level register data
  - likely later: survey and assessment data

RA2. Learning variability, interaction, and support in learning contexts

Academy Prof. Katariina Salmela-Aro, University of Helsinki
Prof. Eija Pakarinen, University of Jyväskylä
Prof. Niina Junttila, University of Turku
Dr. Katja Upadyaya, University of Helsinki

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The aim is to create novel understanding of complex mechanisms and interactions between individual and contextual factors underlying learning variability.

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Multiple consequences of learning variability and support on subsequent short- and long-term educational paths are also targeted.

Learning variability is addressed at different levels ranging from moment-to-moment processes to individuals' and groups' experiences and to major contextual changes and environmental influences.

Within-person variability and moment-to-moment processes

- ✓ How do children vary in their skills and motivation over time and what experiences can bring children to the top of their abilities at a given time and to optimal learning moments?
- ✓ Why do children show inconsistent behaviour and skills from one time point to another?
- ✓ What explains such variability and what is its developmental purpose?

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Embracing heterogeneity in group learning settings such as classrooms

- ✓ How can teaching and learning in a social environment take advantage of variability to improve learning for all children?
- ✓ How can learning experiences adapt to individual children's academic and socioemotional states and foster their development?
- ✓ What classroom practices accelerate learning of lower-performing students while maintaining learning of higher-performing students?

Contextual variability and environmental influences

- ✓ The influence of educational transitions, family relationships, peer and social media networks, multiple societal factors, communal support in learning.
- ✓ What skills prepare students to learn in future contexts, how do they interact with each other and the context, and how do we teach and measure those skills?
- ✓ The environment shapes how a child interacts and learns within it. How can environments be modified to promote a child's success?

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In EDUCA we believe that **educational systems that embrace learning variability help children realize their learning potential.**

A better understanding of learning variability can enable policy makers and educators make **decisions that serve more children, more often**.

RA3. Scalable digital technologies in learning and the school of the future

Prof. Päivi Häkkinen, University of Jyväskylä
Prof. Mikko-Jussi Laakso, University of Turku
Ass. Prof. Piia Näykki, University of Jyväskylä

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CHALLENGES

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- Extensive use of apps in leisure time… AI revolution… Polarized public discussion…
- Digital technologies are rarely used for activating learners' minds (e.g. inquiry-based, collaborative approaches)
- Challenges of scaling-up digital interventions
- Lacking a comprehensive, research-based picture, especially from primary school settings and throughout the whole compulsory education

KEY OBJECTIVES

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1. To build a comprehensive picture of **the impact of the ongoing digital transformation in Finnish schools** and to model efficient ways of using technology in education.
2. To explore constraining and moderating factors in **blended and hybrid learning scenarios** of future schooling.
3. To understand **the variability in technology-enhanced learning** and provide adaptive support, including AI-based personalized learning.
4. To study the digital and pedagogical skills of **teachers in integrating AI and LA** into their teaching and future schooling (-> RA4)

Systematic literature review (OPH) and analyses based on existing data (e.g. PISA, ICILS)

Demographic changes in Finland -> research collaboration with research line on education policy and municipal decision-making

Design of a new longitudinal study on the variability of technology-enhanced learning

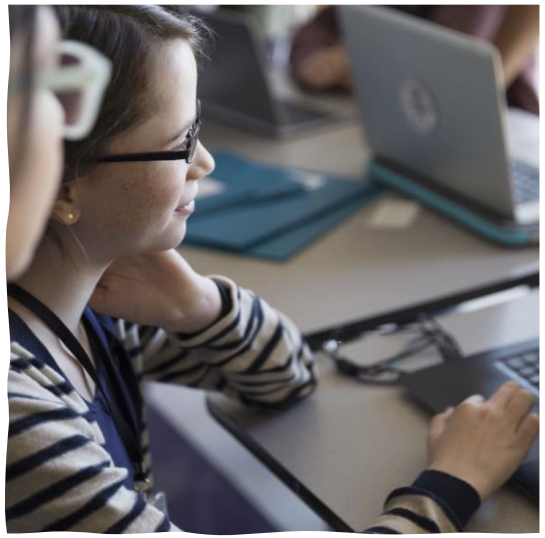
VARIABILITY IN TECHNOLOGY-ENHANCED LEARNING

- ❑ Identifying learning challenges and providing adaptive support using-learning analytics and AI (ViLLE platform)
- ❑ Intensive longitudinal methodology, multimodal data at different levels and time periods
- ❑ From small experimental studies to a large-scale implementation

➢ **Evidence-based guidelines, designs and models for policy making**

The "one-size fits all" model is not sufficient to take into account the increasing variability of students and their environments

Within person, within group, between group and contextual variability



RA4. Teachers, principals and leaders as builders of learning communities

Prof. Anna-Maija Poikkeus, University of Jyväskylä,
Prof. Jari Lavonen, University of Helsinki
Prof. Mirja Tarnanen, University of Jyväskylä

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Research area 4

Fostering Competences of Teachers and Educational Leaders in Learning Communities

→ ***Addressing future learning needs and seeking solutions to challenges***

→ ***Forming collaborative work cultures and learning communities fostering wellbeing***

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Koulutuksen tulevaisuus

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Fostering competences of teachers and educational leaders in learning communities

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Koulutuksen tulevaisuus

1 Effectiveness of national in-service teacher and principals' development projects and teacher education programs

→ **impact** on professional's work and learning (e.g., pedagogy, leadership, and technology practices) in supporting learners in diverse contexts

→ **follow-up** of teachers', principals' and teacher students' professional development and learning (**e.g. barometer data, national data sets**)

2 Models and interventions which engage teachers and educational leaders in co-creation of learning environments and communities

→ utilizing **Educational Design Research (EDR) approaches**

→ taking into account diversity in communities and **regional needs**

→ addressing variability and studying **hybrid modes** of education provision

3 Increasing understanding of factors and approaches which

→ foster work engagement and **agentic transformative action** among principals, and educational leaders

→ allow **crafting of work** in ways that support recovery and reduce risk of burnout and leaving the profession

Scoping reviews (prof development, leadership, supervised teaching practicums), focus group interviews

Multi-level and multi-sited educational policy making

Overarching theme

Research Prof. Taina Saarinen, Finnish Institute for Educational Research
Assoc. Prof. Mira Kalalahti, University of Jyväskylä
Prof. Janne Varjo, University of Helsinki

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PEOPLE ASSUME THAT

POLICY

IS A STRICT PROGRESSION OF *CAUSE* TO *EFFECT*
BUT ACTUALLY, FROM A NON-LINEAR, NON-SUBJECTIVE VIEWPOINT
IT'S MORE LIKE A
BIG BALL
OF WIBBLY-WOBBLY, TIMEY-WIMEY...
STUFF.

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MULTI-LAYERED POLICY MAKING

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- Learning variability challenges educational systems and local policy making
- ”Research based decision making” requires an understanding of not only the research itself, but of how policy is made
- Iteratively
- In multiple places, spaces and times
- Sometimes in contradicting ways

=> Policy is what happens while you’re busy doing something else

EDUCATIONAL POLICY MAKING IN EDUCA

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- Iterative analyses of policy reforms with participants
- Participatory scenario workshops with education policy actors
- Examples from Research areas:
- Analyses of successful municipal decision making
  - RA1 Follow up of educational reforms
  - RA3 Future imaginaries of municipal education in changing demographies
  - RA4 Development of pre- and in-service teachers and educational leadership

CURRENTLY ONGOING

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- Municipal provision of education in the future (Kunnallisalan kehittämissäätiö, PI Varjo) 2023-2024
- Literature review on basic education learning outcomes and possible policy measures related to them in the Nordic countries (Ministry of Education and Culture, PI Saarinen & Lerkkanen, 2024)
- Organization of future basic education in differentiating municipalities (Ministry of Education and Culture, PI Saarinen, 2024 – 2025)

Welcome on board!

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