From trial to policy: Finland's pre-primary education expansion experiment

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Social inclusion and diversity in Nordic ECEC
Sept 24th, 2025

Background: Finland's Government Sponsored RCTs

In 2015, newly elected government committed to increasing experimentation

- many small experiments, variable quality
- \+ Basic Income Experiment

Finland's new leaders in May 2015: Foreign Secretary Timo Soini, the Finns Party (left), Prime Minister Juha Sipilä, the Centre Party (center), and Minister of Finance Alexander Stubb, the National Coalition Party (right).

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Also adopted by the next government

- small experiments, improving quality
- \+ **Two-year pre-primary education** (today)
  - randomized field experiment
  - governed by a temporary law
  - $N \approx 35{,}000$; roughly 40% treated
  - budget: €30m

Finland's new leaders in Dec 2019: Minister of Education Li Andersson (the Left Alliance), Minister of Finance Katri Kulmuni (the Centre Party), Prime Minister Sanna Marin (Social Democrats), Minister of Justice Anna-Maja Henriksson (the Swedish People's Party), and Minister of Interior Maria Ohisalo (the Greens)

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Respected by the current government

- committed to wait for the results before deciding on whether to implement the reform at the national level

Finland's new leaders in June 2023: Minister of Agriculture Sari Essayah (the Christian Democrats), Minister of Finance Riikka Purra (the Finns Party), Prime Minister Petteri Orpo (the National Coalition Party), Minister of Education Anna-Maja Henriksson (the Swedish People's Party).

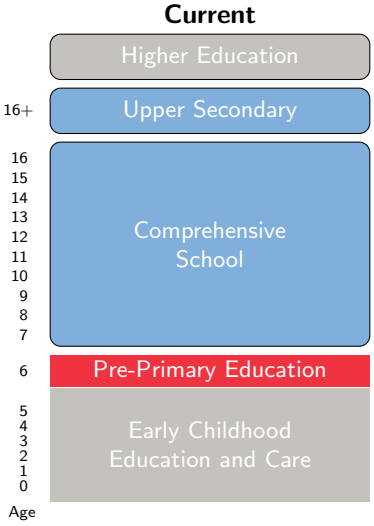
Potential reform: One-year extension of pre-primary education

Aims of pre-primary education

- prepare children for primary school
- improve social skills and healthy self-esteem

Content

- 4h/day "through play, movement, creativity, experimentation, observation and questioning"
- rest of the day normal daycare
- quasi-mandatory, free for families
  - 99% participation rate



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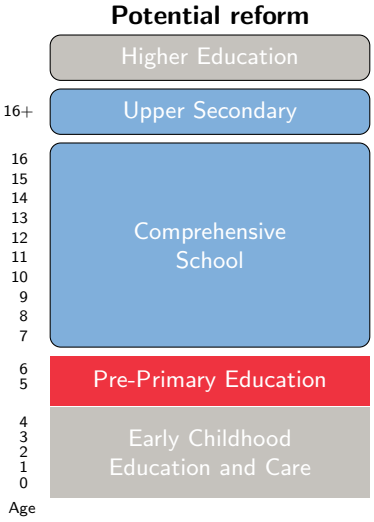
Potential reform: starting all this one year earlier. Counterfactuals:

- standard ECEC ($\approx$ 90% of children)
- home ($\approx$ 10% of childred)

Results published in Nov/Dec 2025



Data

Collected for the RCT:

- Evaluations of children's academic and socioemotional skills at ages 5, 6 and 7 (will continue until age 16)
- New register to match children to daycare centers, teachers, and child groups
- Teacher surveys (teacher qualifications, group composition, staffing, time use)

Statistics Finland Register Data:

- Parent-child links
- Socio-economic and demographic variables for children, parents and teachers

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Today: What else can we learn from these data?

Ongoing secondary use of the experimental data

Descriptive analysis

- Emergence of skill gaps and variability
- Gender gaps in special needs education
- Teacher value-added and its predictors

Quasi-experimental designs

- Unit size
- Peer effects
- Language proficiency

Tools for educators

- Teacher feedback

These are just a few examples. Over time, the data will likely be used in hundreds of studies.

1. **Introduction**
2. **Experimental design**
   - What was done and why?
3. **Modes of implementation and practices**
   - How did the days of children in the treatment and control groups differ?
4. **Assessments of children's skills**
   - What is assessed and how?
5. **Average skills by background characteristics**
   - How do baseline results vary across groups?
6. **Conclusions**

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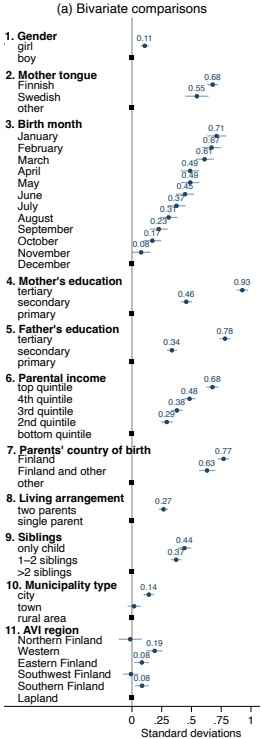
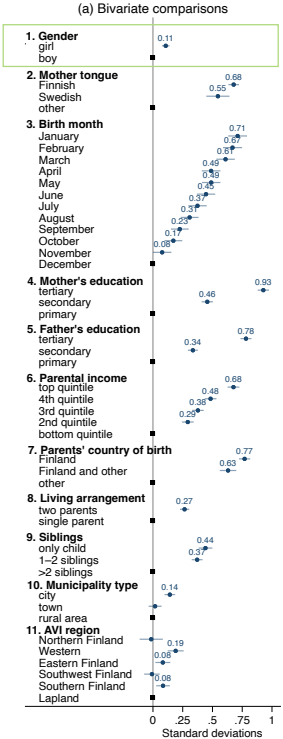
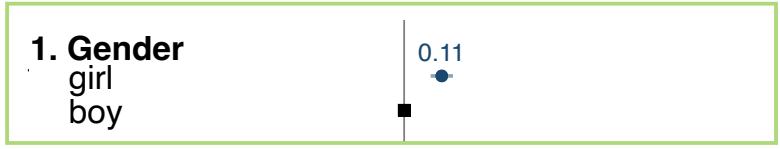
Foundational literacy skills at age 5



Differences in average skills across background characteristics.

Foundational literacy skills at age 5





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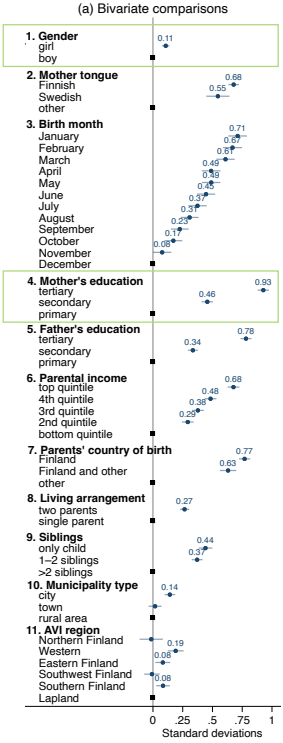

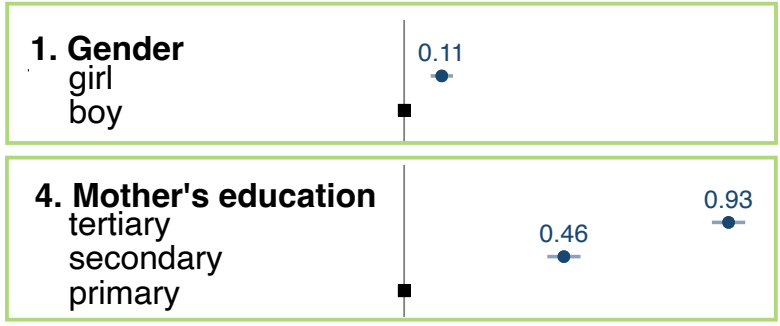

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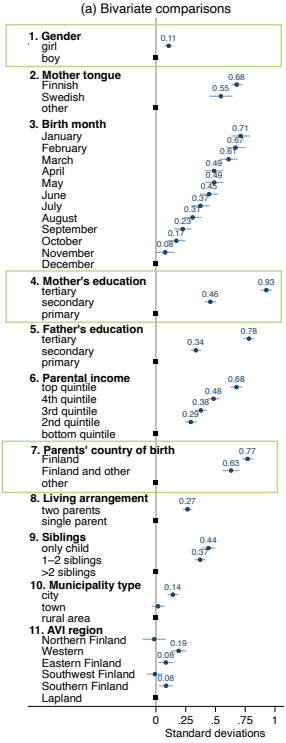

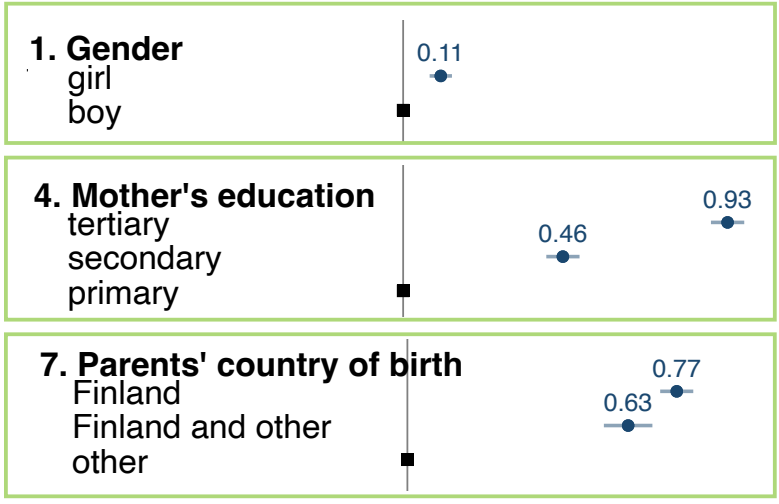

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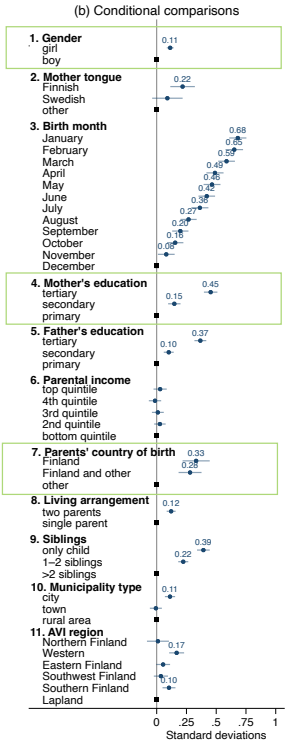

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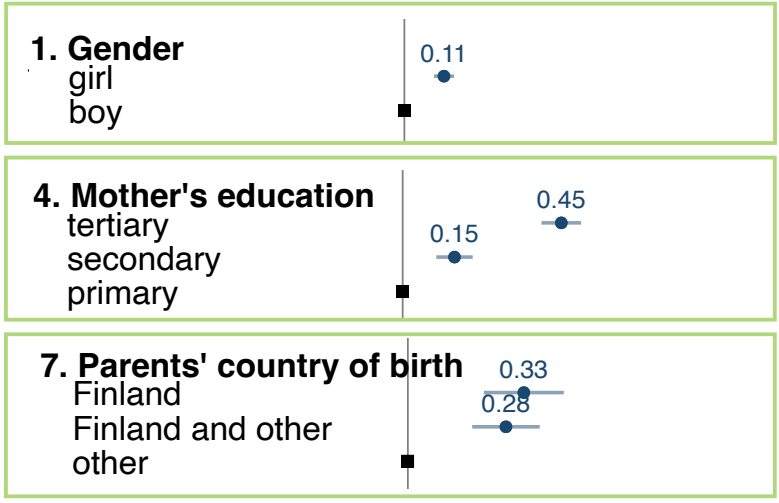
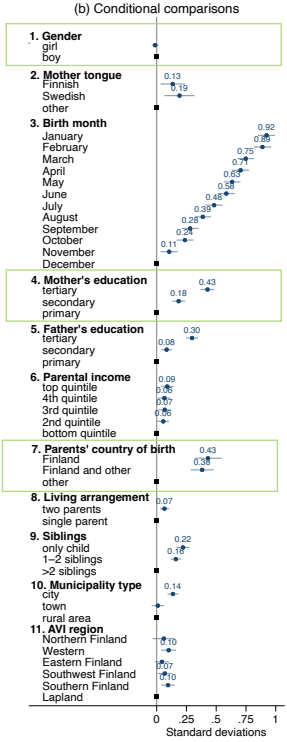
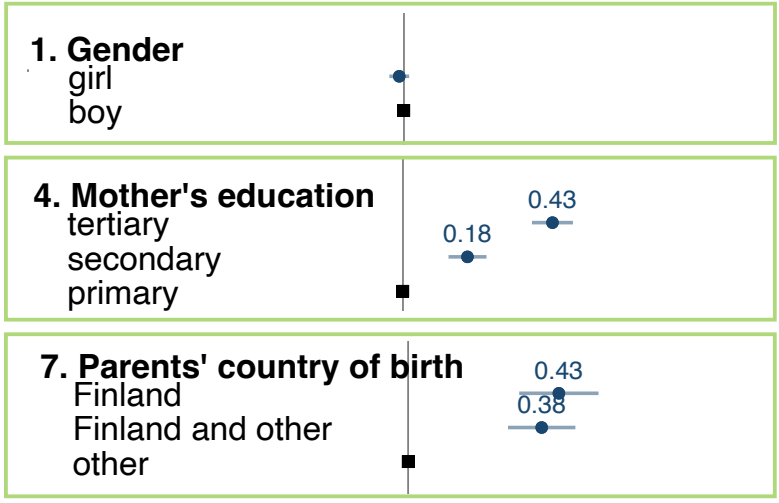


Differences in average skills across background characteristics **conditional on the other observed characteristics**.



Foundational numeracy skills at age 5



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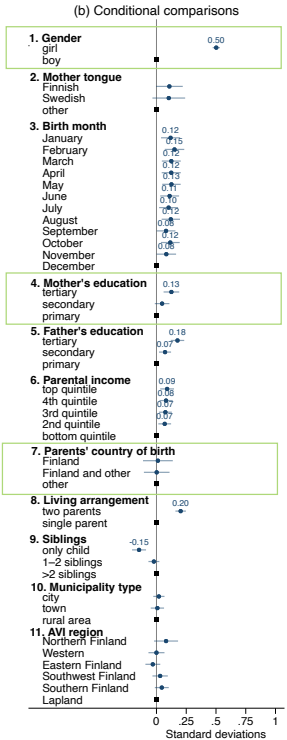

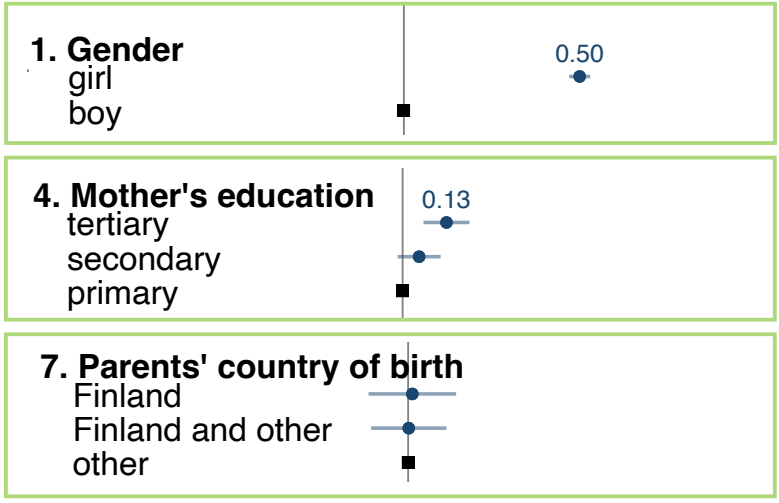

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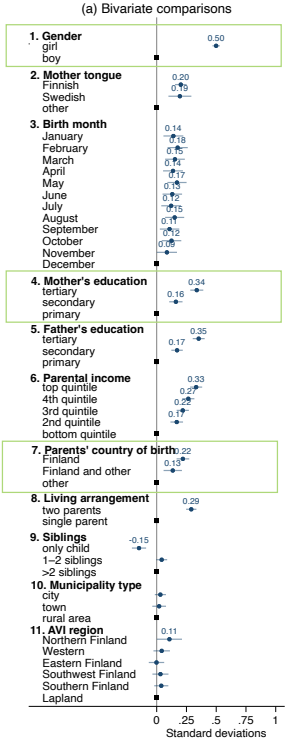

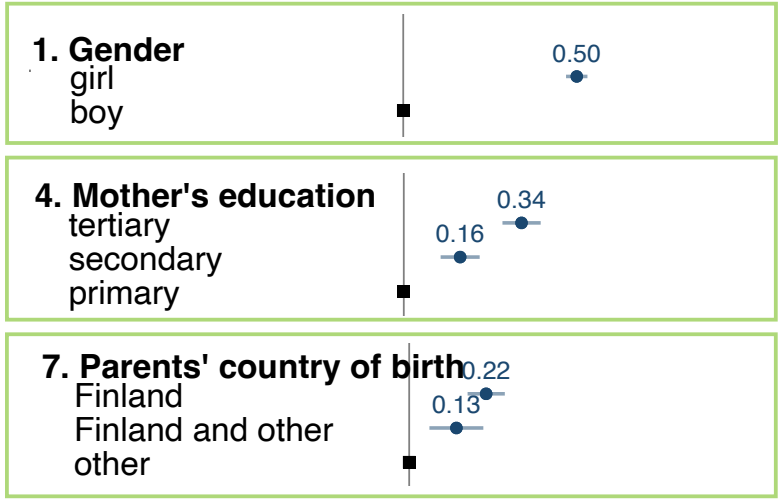

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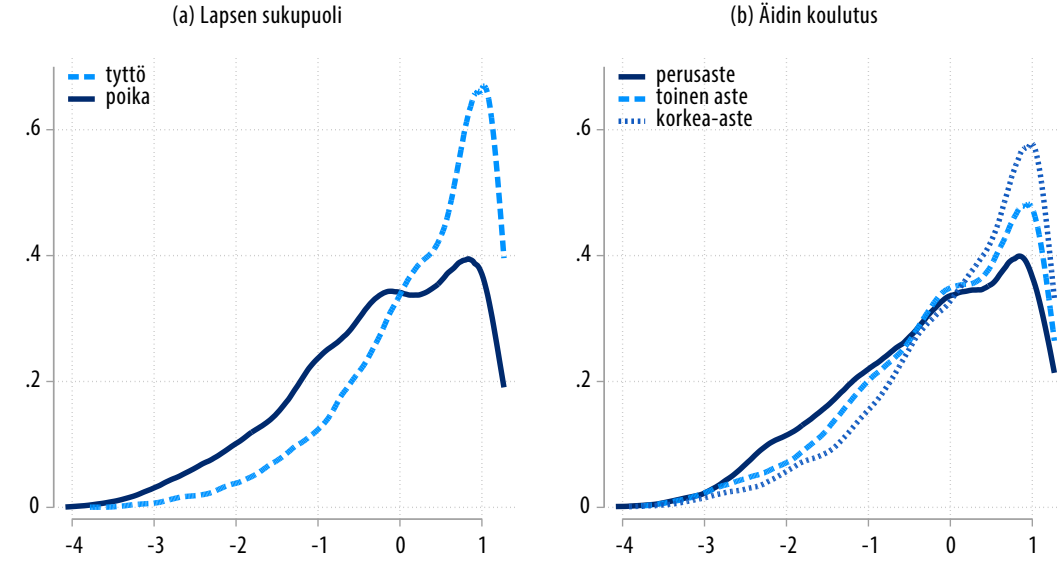
Kuvio 7. Sosiaalisten taitojen jakaumat sukupuolen ja äidin koulutuksen mukaan



Take-aways

Broad message: Running large-scale experiments is valuable

- inform policy-makers and the public prior to scaling up major reforms
- creates data and collaborations that are suitable for studying *many* questions

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Narrow message: Important skill gaps have emerged already at age 5

- gaps between children of natives and immigrants are partially attributable to differences in education, income and other background characteristics

Appendix

Child Evaluations

- Conducted electronically in an online platform each fall by teachers
- Teachers completed remote training with video and written instructions

At daycare/pre-primary education

back

Child Evaluations

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At school

back

Academic Skills

- Components: arithmetics, quantities, number comparison, quantity comparison, counting, alphabets, vocabulary, phonology, reading, spatial reasoning
- Pre-registered graded response model (IRT) for latent **numeracy** and **literacy** skills
  - Some analyses average them to a single **academic skill** measure

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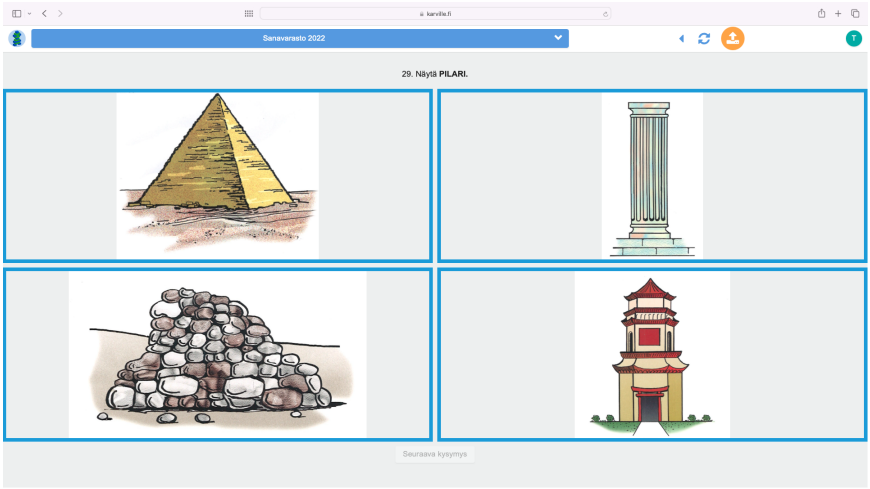

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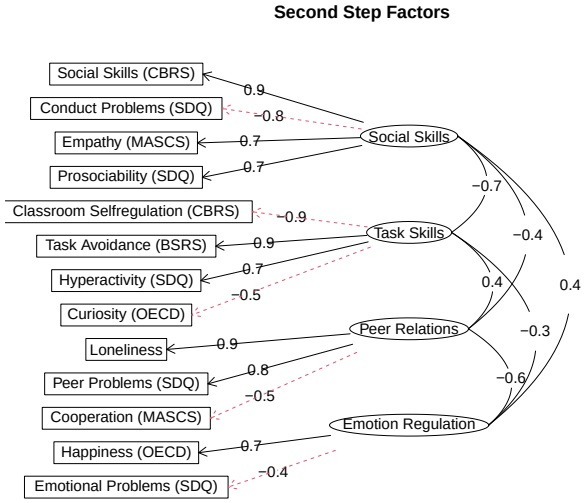
Teacher-Assessed Child Behavior Dimensions

- For each child, teachers were asked 62 Likert scale questions about child behavior and social-emotional profile
  Child Behavior Rating Scale (CBRS), Strengths and Difficulties Questionnaire (SDQ), Multisource Assessment of Children's Social Competence (MASCS), Behavioral Strategy Rating Scale (BSRS)
- The items are reduced to four pre-registered dimensions using EFA: **social skills, task skills, peer relations and emotion regulation**
- Some analyses average the four dimensions into a single **socio-emotional** scale



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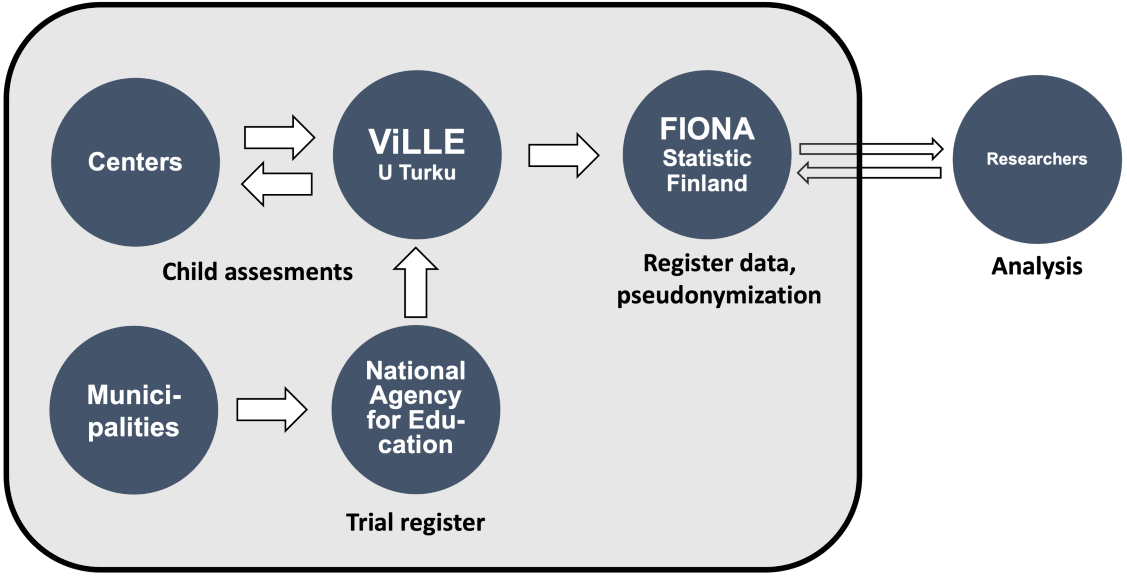
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Researchers
Child assesments
Register data,
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