Teacher Quality, Instructional Quality, and Student Outcomes

-across cohorts, time and countries

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Rationale, Theoretical framework, findings, discussion
The quality of teachers + their instruction = key determinants to student outcome

Previous research: single country studies, western countries, cross-sectional.

The complex educational context and its dynamics over time are rarely accounted for

(Klieme et al., 2009; Seidel & Shavelson, 2007; Pianta & Hamre, 2009; Kane & Cantrell, 2012; Creemers and Kyriikides, 2008; Goe, 2007; Baumert et al., 2010; Wayne & Youngs, 2003; Boyd et al., 2009; Hill et al., 2005; Clotfelter et al., 2007; Kee, 2012; Goldsmith et al., 2014; Desimone et al., 2011; Fauth et al., 2014)
1. the complexity of educational systems with many hierarchical levels and interwoven relationships
2. the complexity of relationships within and between each level with direct and indirect effects
3. the variation of these relationships across countries
4. their development over time.

(Scheerens & Bosker, 1997; Creemers & Kyriakides, 2008)
ILSA data provide the opportunity for:

- multi-level analysis
- trend design
- representative samples

TIMSS: data on the class level
- explore relations across cohorts, time and countries from all continents.
What are the relations between teacher quality, instructional quality and student outcome - when taking the educational context (i.e. school climate and student characteristics) and its dynamics into account?
Based on Creemers & Kyriakides, 2008

**School Climate**
- Safe and Orderly schools, School Emphasis on Academic Success

**Teachers and teaching**

- **Teacher Quality**
  - Education, Experience, Professional development
  - Self-efficacy, Motivation, Confidence,

- **Instructional Quality**
  - Supportive climate
  - Clarity of instruction
  - Cognitive activation
  - Classroom management

**Student outcome**
- Achievement and affective outcomes

**Student background and characteristics**
Chapter 4

School climate, teacher quality and achievement.

(Gustafsson & Nilsen)

• Longitudinal approach: 2007-2011

• Teachers’ attained level of education ➔ achievement

• Professional development ➔ achievement

• Insignificant: Teacher self-efficacy (preparedness), experience and major academic discipline studied

• School emphasis on academic success (parts of it) ➔ achievement
Chapter 5

Instructional quality, reading and math achievement

(Nordtvedt, Gustafsson, Lehre)

Instructional Quality

17 countries

17 countries

6 countries

Reading comprehension

Mathematics achievement

0.82-0.99
International model: higher instructional quality was associated with lower rates of bullying.

Educational-system level: significant in 21 countries of 48

Girls and students who were more attached to their school: fewer incidences of bullying victimization.
Discussion

• Our findings supports and strengthen previous studies, but:

• Heterogeneous samples, large cultural differences and difference between educational systems, especially in grade 8. → cluster analysis and multi-group approach

• Narrow measures of instructional quality (few items), new scale national option 10 countries (ECER 2016, IRC 2017)

• SEAS: better measures in TIMSS 2015, multi-dimensional

• Longitudinal approach at the country level?
Questions

• Would it be possible to provide the teacher questionnaire to only one teacher per class?

• Include instructional quality?
  – strong theory
  – e.g. classroom management (TIMSS measure teachers reports about students in their school)

• Proxy to prior achievement: grades?
Thank you!