Context assessment in international Large Scale Studies: From student background information to the quality of schooling

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Educational Research
and Educational Information

Center for Research on Educational Testing
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Overview

1. **Main goal of Large Scale Studies:**

   Providing indicators for educational monitoring

2. **Designing questionnaires as a data source for indicators:**

   Evolution of the questionnaire design for PISA

3. **Example of policy area studied in LSA:**

   Covering assessment & evaluation policies in PISA 2015

4. **Explanatory power of Large Scale Studies**

5. **Conclusions**

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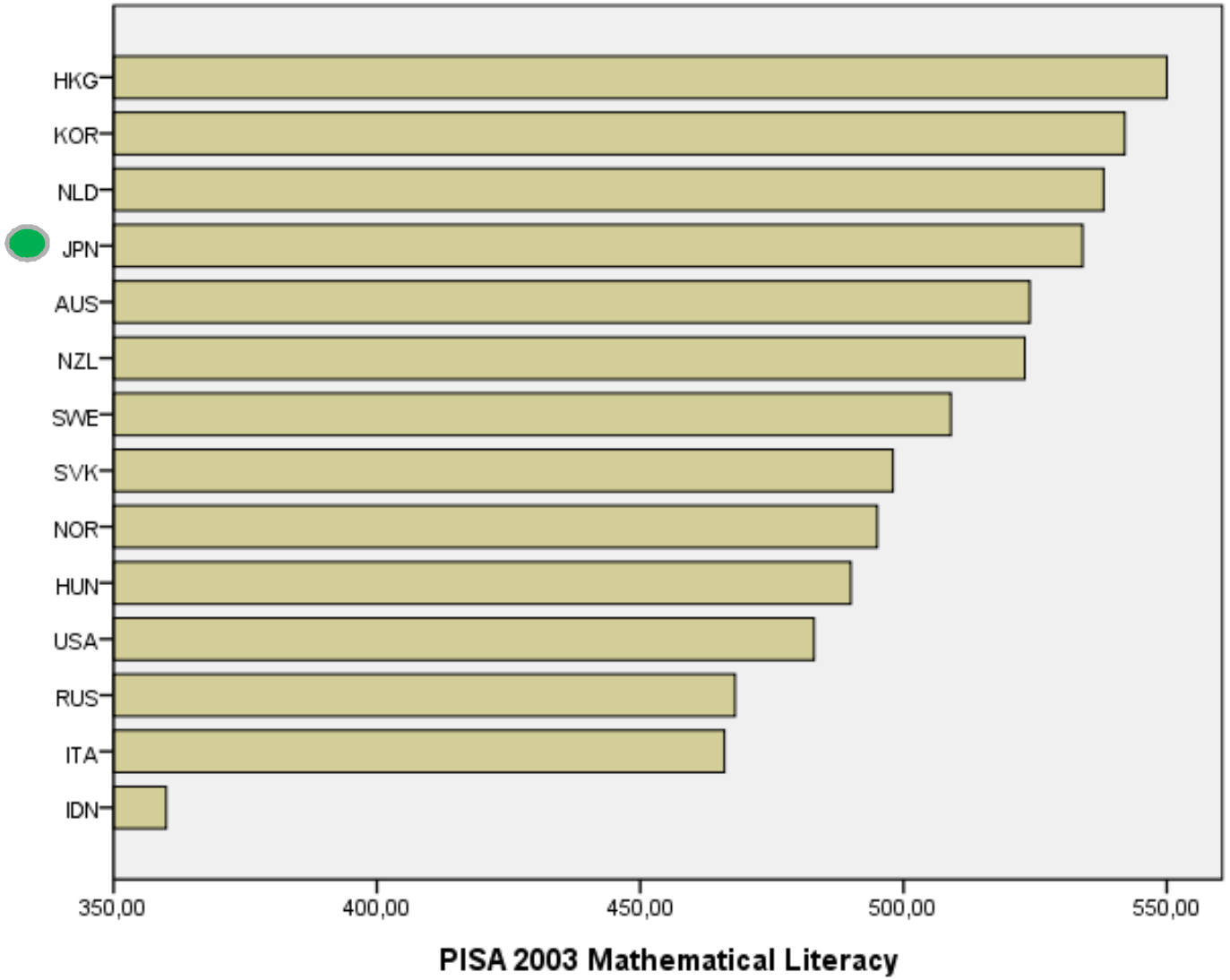
Indicators: 1) Achievement



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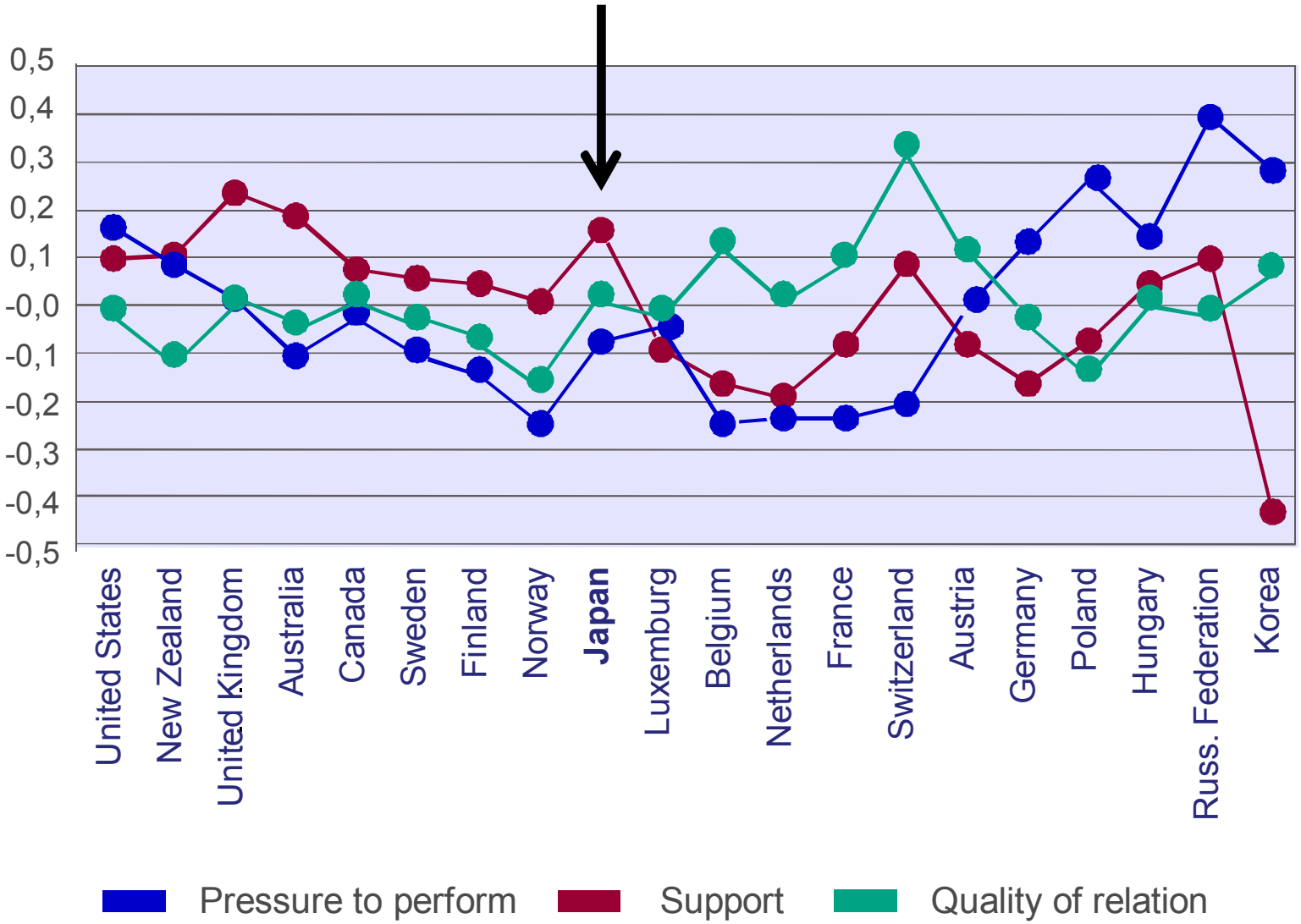
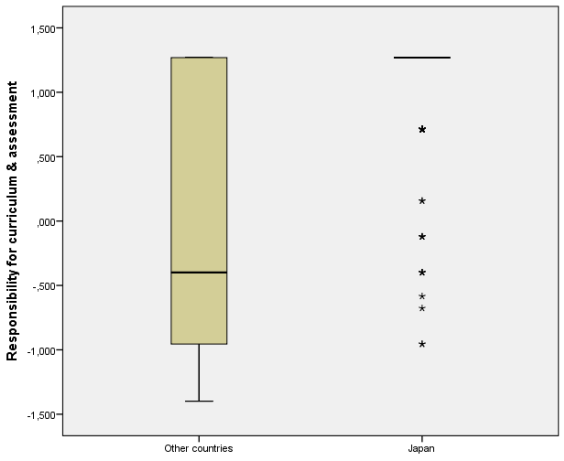
Indicators: 2) School climate



Indicators: 3) School policies

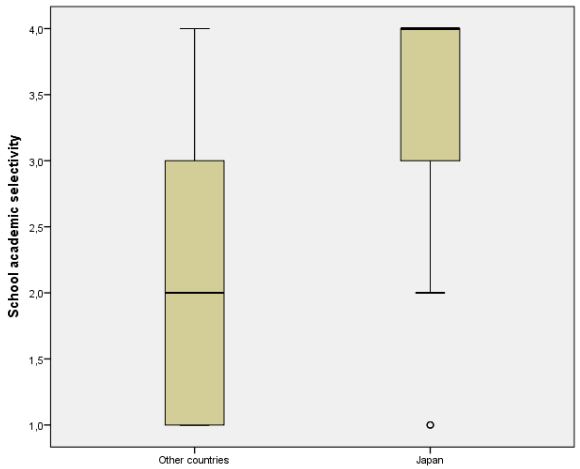
School autonomy reg. currriculum & assessment

others Japan



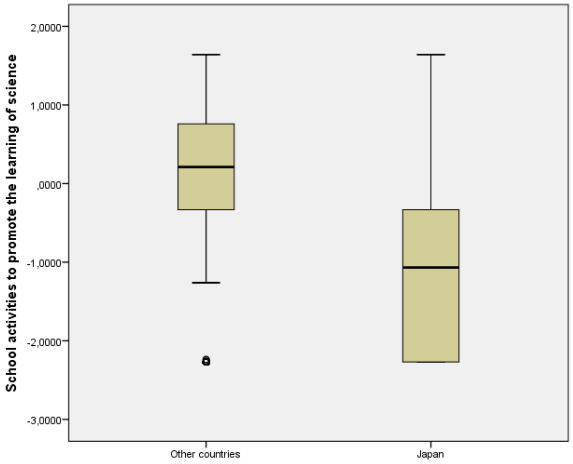
Academic selectivity

others Japan



School activities to promote science learning

others Japan



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Regarding your school, who has a considerable responsibility for the following tasks?

(Please tick as many boxes as appropriate in each row)

	Principal or teachers	*<School governing board>*	*<Regional or local education authority>*	*National education authority*
g) Establishing student disciplinary policies	☐ 1	☐ 1	☐ 1	☐ 1
h) Establishing student assessment policies				
i) Approving students for admission to the school				
j) Choosing which textbooks are used				
k) Determining course content				
l) Deciding which courses are offered	☐ 1	☐ 1	☐ 1	☐ 1

School autonomy regarding curriculum and assessment

How much consideration is given to the following factors when students are admitted to your school?

(Please tick one box in each row)

	Prerequisite	*High priority*	*Considered*	*Not considered*
b) Student's academic record (including placement tests)	☐ 1			

Academic selectivity

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Is your school involved in any of the following activities to promote engagement with science among students in <national modal grade for 15-year-olds>?

(Please tick one box in each row)

	Yes	*No*
a) Science clubs	☐ 1	☐ 2
b) Science fairs	☐ 1	☐ 2
c) Science competitions	☐ 1	☐ 2
d) Extracurricular science projects (including research)	☐ 1	☐ 2
e) Excursions and field trips	☐ 1	☐ 2

School activities to promote science learning

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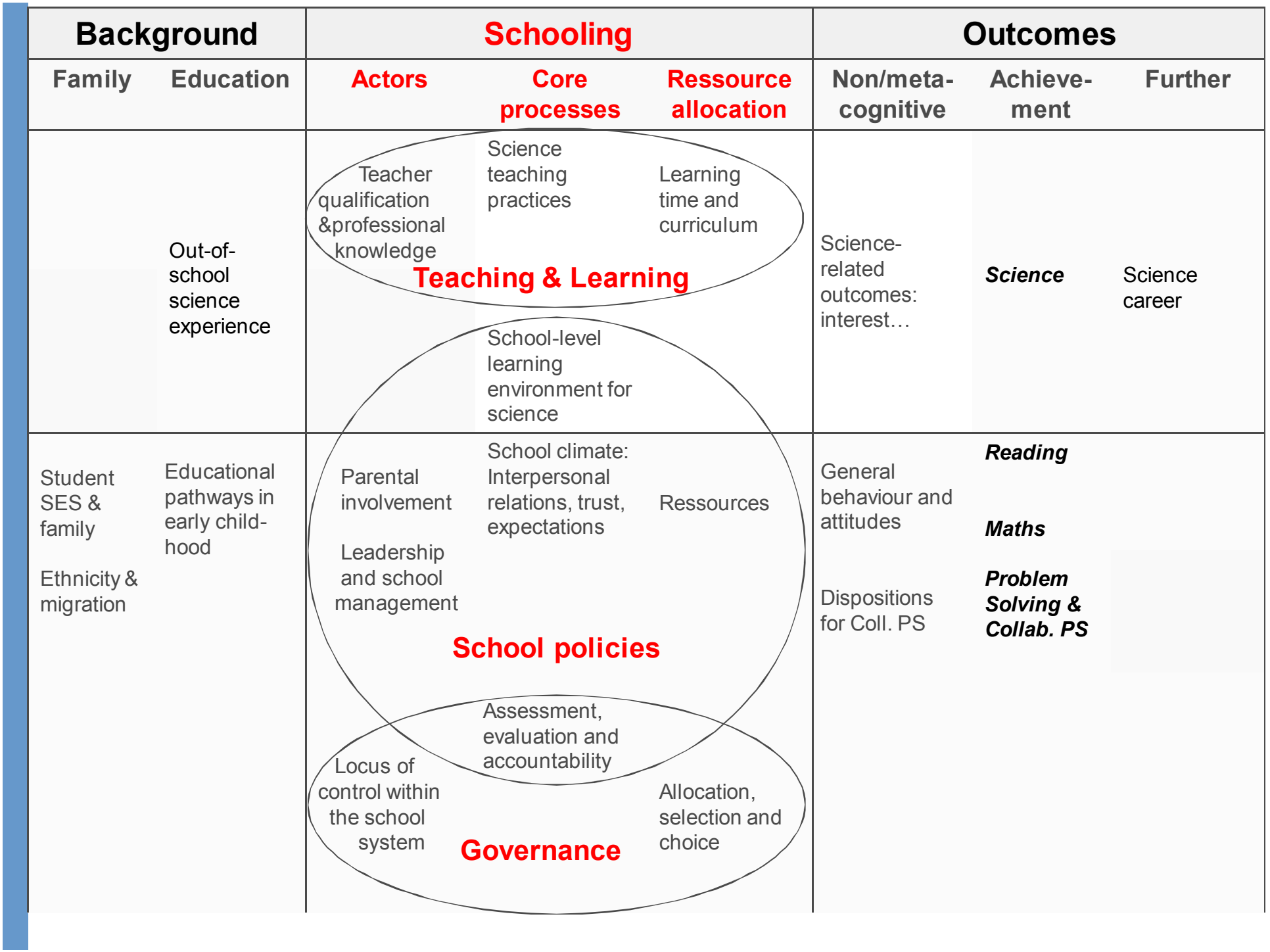
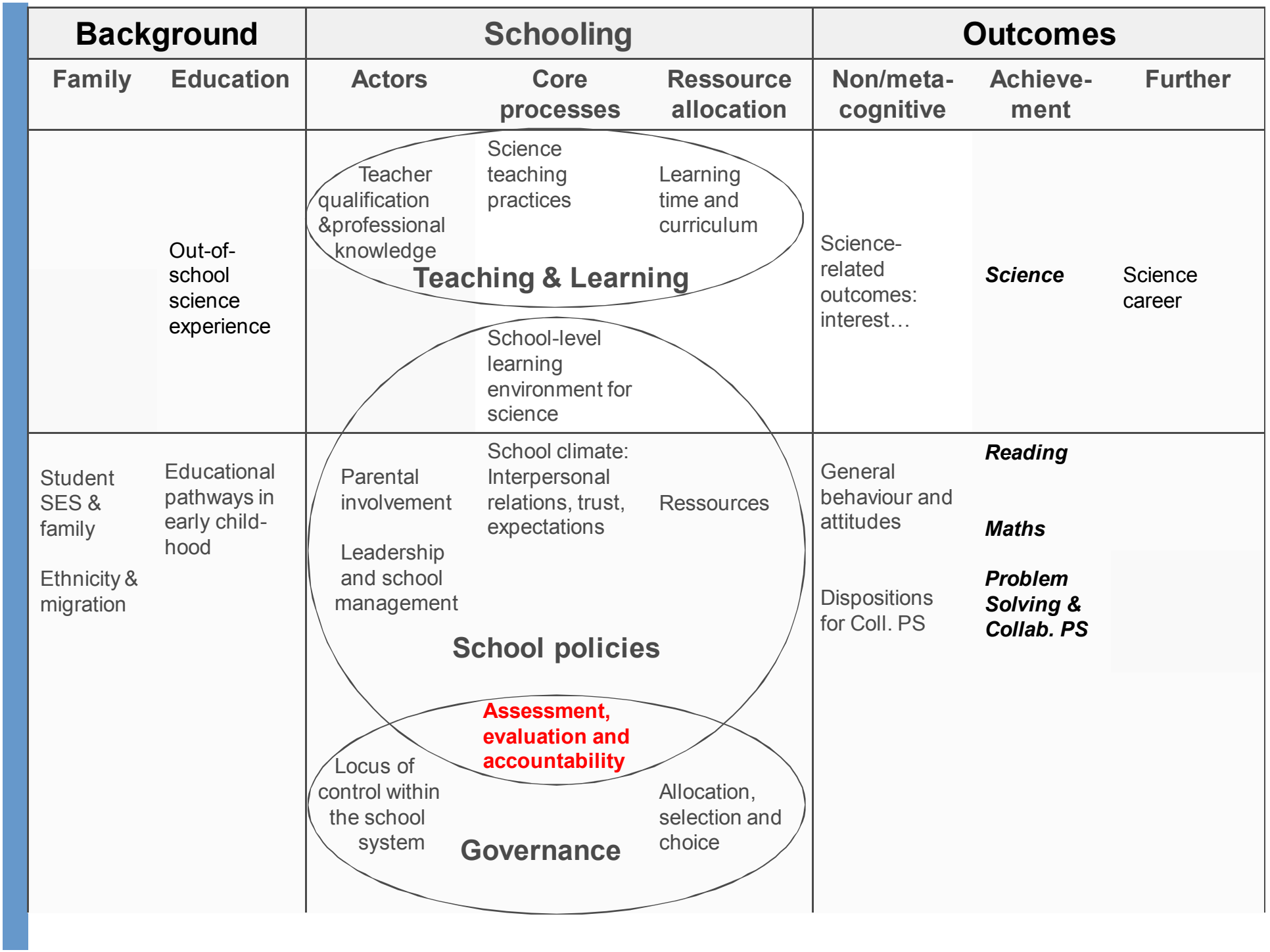
		Outcomes
		Achieve- ment
		Science
		Reading *Maths*

Background			Outcomes
Family	**Education**		**Achieve-ment**
	Out-of-school science experience		***Science***
Student SES & family Ethnicity & migration	Educational pathways in early child-hood		***Reading*** ***Maths***

Background			Outcomes
Family	Education		Achieve-ment
	Out-of-school science experience		***Science***
Student SES & family Ethnicity & migration	Educational pathways in early child-hood		***Reading*** ***Maths*** ***Problem Solving & Collab. PS***

Background			Outcomes		
Family	Education		Non/meta-cognitive	Achieve-ment	Further
	Out-of-school science experience		Science-related outcomes: interest…	***Science***	Science career
Student SES & family Ethnicity & migration	Educational pathways in early child-hood		General behaviour and attitudes Dispositions for Coll. PS	***Reading*** ***Maths*** ***Problem Solving & Collab. PS***	


Background
Schooling
Outcomes
Family
Education
Actors
Core processes
Ressource allocation
Non/meta-cognitive
Achieve-ment
Further
Teacher qualification &professional knowledge
Science teaching practices
Learning time and curriculum
Teaching & Learning
Out-of-school science experience
Science-related outcomes: interest…
Science
Science career
School-level learning environment for science
Student SES & family
Ethnicity & migration
Educational pathways in early child-hood
Parental involvement
Leadership and school management
School climate: Interpersonal relations, trust, expectations
Ressources
School policies
General behaviour and attitudes
Dispositions for Coll. PS
Reading
Maths
Problem Solving & Collab. PS
Assessment, evaluation and accountability
Locus of control within the school system
Allocation, selection and choice
Governance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PISA 2015 – Field Trial: Questions on assessment, evaluation, and accountability

<table>
<tr><th colspan="4">General assessment practice (ScQ)
Purpose of assessment results (ScQ)</th></tr>
<tr><th colspan="3">Evaluation policies (ScQ)</th><td rowspan="2">Classroom assessment
(TQ, StQ)</td></tr>
<tr><td>External evaluation (ScQ)</td><td>Teacher evaluation (ScQ,TQG)</td><td>Internal valuation (ScQ,TQG)</td></tr>
<tr><td></td><td></td><td>Foci</td><td>Grading (TQG)</td></tr>
<tr><td>See „evaluation policies“</td><td>Teacher evaluation methods</td><td>Processes</td><td>Classroom assessment practices (TQG/TALIS)</td></tr>
<tr><td>Use of achievement data for accountability
Use of external evaluation</td><td>Teacher incentives</td><td>Consequences</td><td>Feedback: student perception (StQ).
use by students (StQ)
Adaptation of instruction (StQ, TQS)</td></tr>
</table>

General assessment practices (ScQ)

Q **Generally, in your school, how often are students in <national modal grade for 15-year-olds> assessed using the following methods?**

(Please click only one button in each row.)

		Never	*1-2 times a year*	*3-5 times a year*	*Monthly*	*More than once a month*
a)	Standardised mandatory tests, (mandated e.g. by national, state or district authorities)	☐	☐	☐	☐	☐
b)	Standardised non-mandatory test (e.g. publicly or commercial available standardised test material)	☐	☐	☐	☐	☐
c)	Teacher-developed tests	☐	☐	☐	☐	☐
d)	Teachers' judgmental ratings	☐	☐	☐	☐	☐

Standardized

Teacher-made

Purpose of assessment (ScQ)

Q **In your school, are standardised* and/or teacher-made assessments of students in <national modal grade for 15-year-olds> used for any of the following purposes?**

		Standardised assessment	*Teacher-made assessment*	*Neither of them is used*
a)	To provide individual feedback to students to guide their learning	☐1	☐2	☐3
b)	To inform parents about their child's progress	☐1	☐2	☐3
c)	To make decisions about students' retention or promotion			
d)	To group students for instructional purposes			
e)	To compare the school to <district or national> performance			
f)	To monitor the school's progress from year to year			
g)	To make judgements about teachers' effectiveness	☐1	☐2	☐3
h)	To identify aspects of instruction or the curriculum that could be improved	☐1	☐2	☐3
i)	To adapt teaching to the students' needs	☐1	☐2	☐3
j)	To compare the school with other schools	☐1	☐2	☐3

Formative use of assessment:

„Assessment for learning"

Classroom assessment practices (TQ)

Q **How often do you use the following methods of assessing student learning?**

(Please click only one button in each row.)

		Every Lesson	*Most Lessons*	*Some Lessons*	*Never or almost never*
a)	I develop and administer my own assessment.	☐ 1	☐ 2	☐ 3	☐ 4
b)	I administer a standardised test.	☐ 1	☐ 2	☐ 3	☐ 4
c)	Individual students answer questions in front of the class.	☐ 1			
d)	I provide written feedback on student work in addition to a <mark, i.e. numeric score or letter grade>.	☐ 1	☐ 2	☐ 3	☐ 4
e)	I let students judge their own progress.	☐ 1	☐ 2	☐ 3	☐ 4
f)	When students work on a given task I provide them continuously feedback.	☐ 1	☐ 2	☐ 3	☐ 4

Formative assessment in the classroom

Perceived feedback (StQ)

Q How often do these situations occur in your science lessons?

(Please click only one button in each row.)

		Every lesson	*Most lessons*	*Some lessons*	*Never or almost never*
a)	The teacher tells me how I am performing in science.	☐ 1	☐ 2	☐ 3	☐ 4
b)	The teacher gives me feedback about my strength in science. .	☐ 1	☐ 2	☐ 3	☐ 4
c)	The teacher tells me in which areas I can still improve.	☐ 1	☐ 2	☐ 3	☐ 4
d)	The teacher tells me how I can improve my <level of performance>.	☐ 1	☐		
e)	The teacher advises me on how to reach my individual learning goals.	☐ 1	☐ 2	☐ 3	☐ 4

Process-oriented feedback

Adaptation of instruction (StQ/TQ)

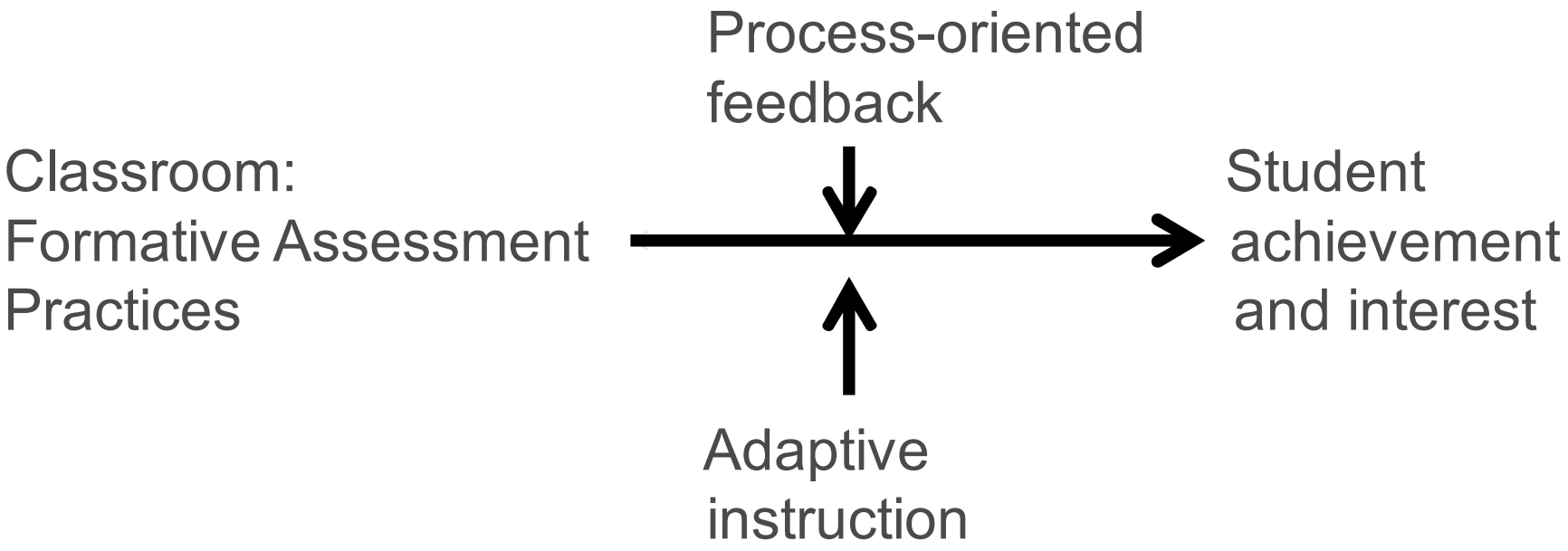
Q105. How often do these situations occur in the lessons of this course?

(Please select one response in each row.)

		Every Lesson	*Most Lessons*	*Some Lessons*	*Never or almost never*
a)	The teacher adapts the lesson to my class's needs and knowledge.	☐ 1	☐ 2	☐ 3	☐ 4
b)	The teacher provides individual help when a student has difficulties understanding a topic or task.	☐ 1			
c)	The teacher changes the structure of the lesson on a topic that most students find difficult to understand.	☐ 1	☐ 2	☐ 3	☐ 4

Adaptive instruction

Explanatory model



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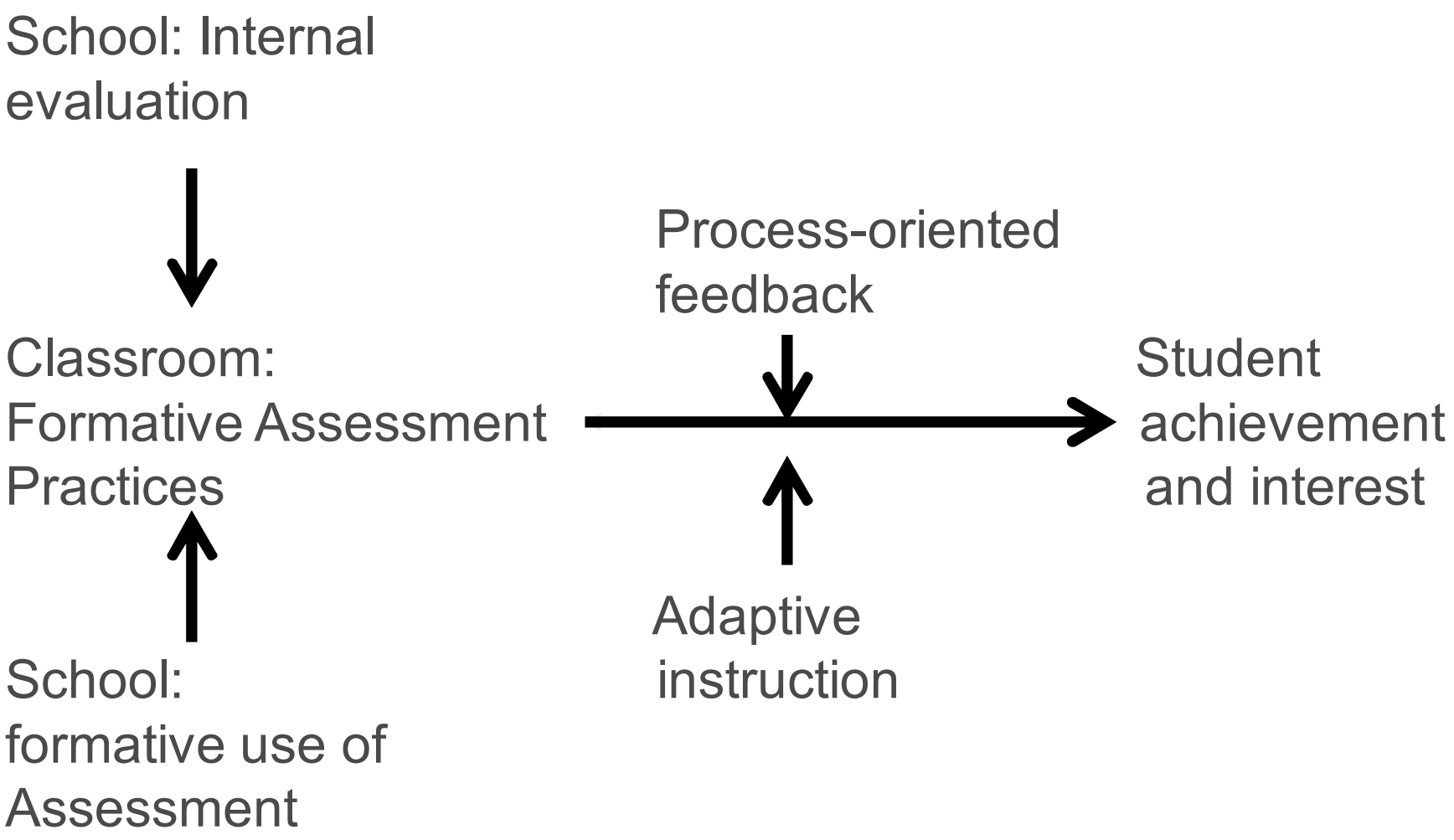

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Explaining outcomes on the school level: PISA 2012 Field trial

Predictor	Predicting school level	
	Achievement R^2=.61	Interest R^2 = .33
OTL: Concept Familiarity	**,496**	**,121**
Concepts: Overclaiming	-,389	,078
OTL: Math Tasks	**,101**	-,025
Applied Reasoning Example	**,080**	-,007
Pure Math Reasoning Example	**-,086**	-,042
Challenge (Complex Problems)	**,109**	**,183**
Structure (Disciplinary climate)	**,124**	,065
Teacher Support	**-,111**	**,307**
Instructional Practices: teacher-directed	-,070	,004
Instructional Practices: student oriented	**-,327**	**,228**
Instructional Practices: formative	**,092**	-,060

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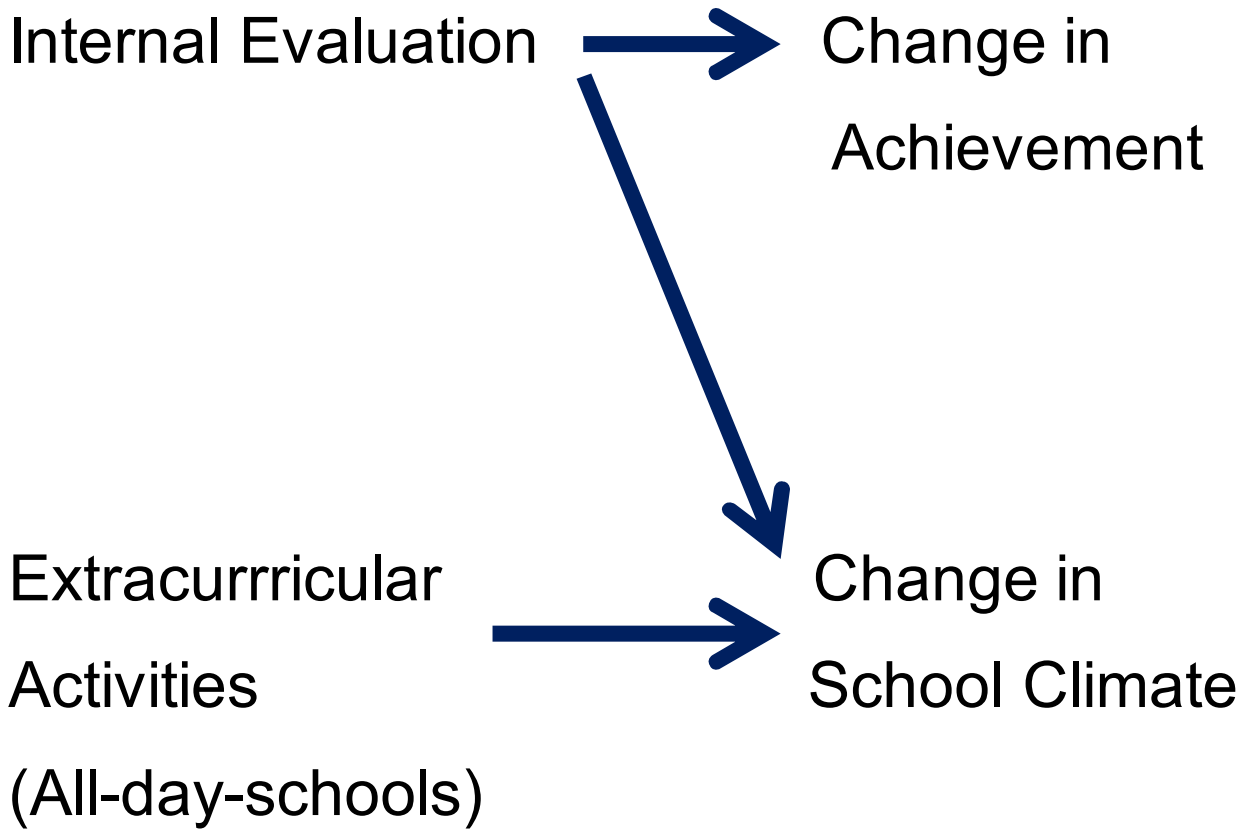
Explaining change at the school level: PISA 2000-2009 Germany - school panel



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-Questionnaires provide important data on the learning context, such as student and school background, and non-cognitive outcomes.
-The new (2012, 2015) PISA design incorporates information on teaching & learning, school policies, and governance.
-Contextual data, based on questionnaires, can help to understand and monitor the (formative) use of assessment in classrooms.
-Longitudinal designs (follow-up, school panel) significantly enhance the explanatory power of LSA studies.

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Thank you for your attention!

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