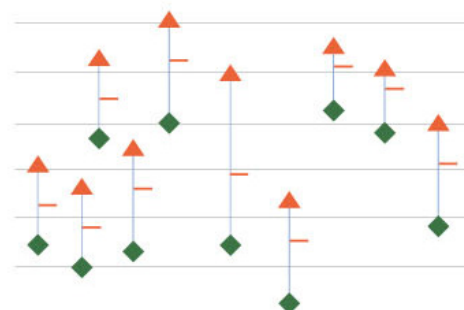


Programme for International Student Assessment



PISA 2006



PISA 2006 in Austria

Implications and Considerations

C. Schreiner & U.
Schwantner

Bundesinstitut

 **bifie**



OECD
PISA

BIFIE — Bundesinstitut für Bildungsforschung, Innovation und Entwicklung des österreichischen Schulwesens

Federal Institute for Educational Research,
Innovation and Development of the Austrian
School System

Head office in Salzburg with research centres in
Salzburg, Graz & Vienna

Directors: **Günter Haider, Josef Lucyshyn**
Head of the Salzburg Research Centre: **Claudia
Schreiner**

BIFIE Austria – Goals

- System-Monitoring
- Evaluation
- Implementation

BIFIE Salzburg – Projects

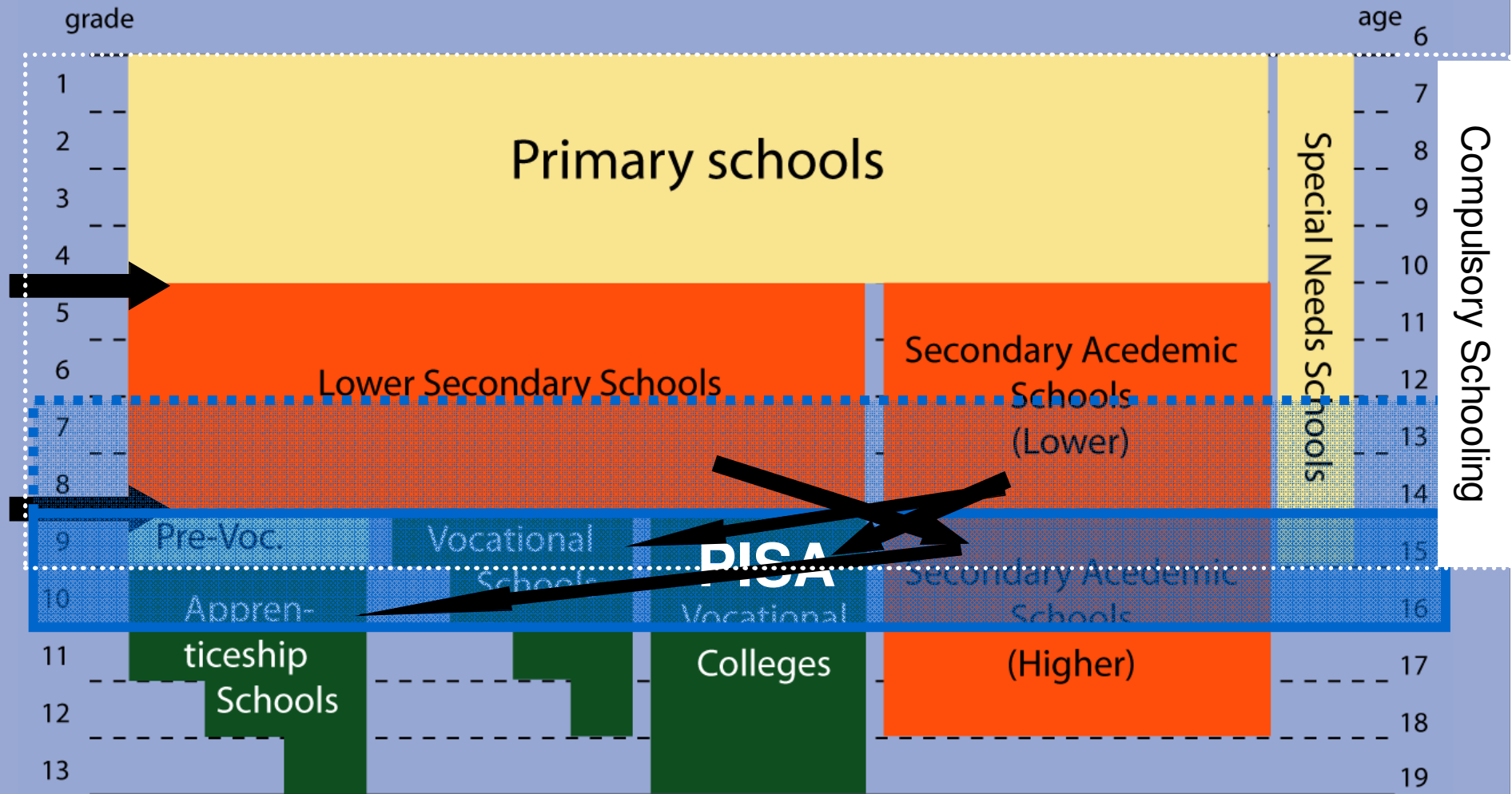
- International Studies (PISA, PIRLS/TIMSS, TALIS)
- Testing National Educational Standards
- Smaller National Projects (i. e. Monitoring the Language Competency of 4–5 year-olds)

PISA 2006 in Austria

PISA 2006 has been implemented

- by the Project Centre for Comparative Educational Research/University of Salzburg (ZVB)
- commissioned by the Federal Ministry of Education
- On April 1st, 2008 the ZVB became part of the Federal Institute BIFIE.
- The BIFIE is responsible for all international educational studies in Austria including PISA.
- The persons are the same.

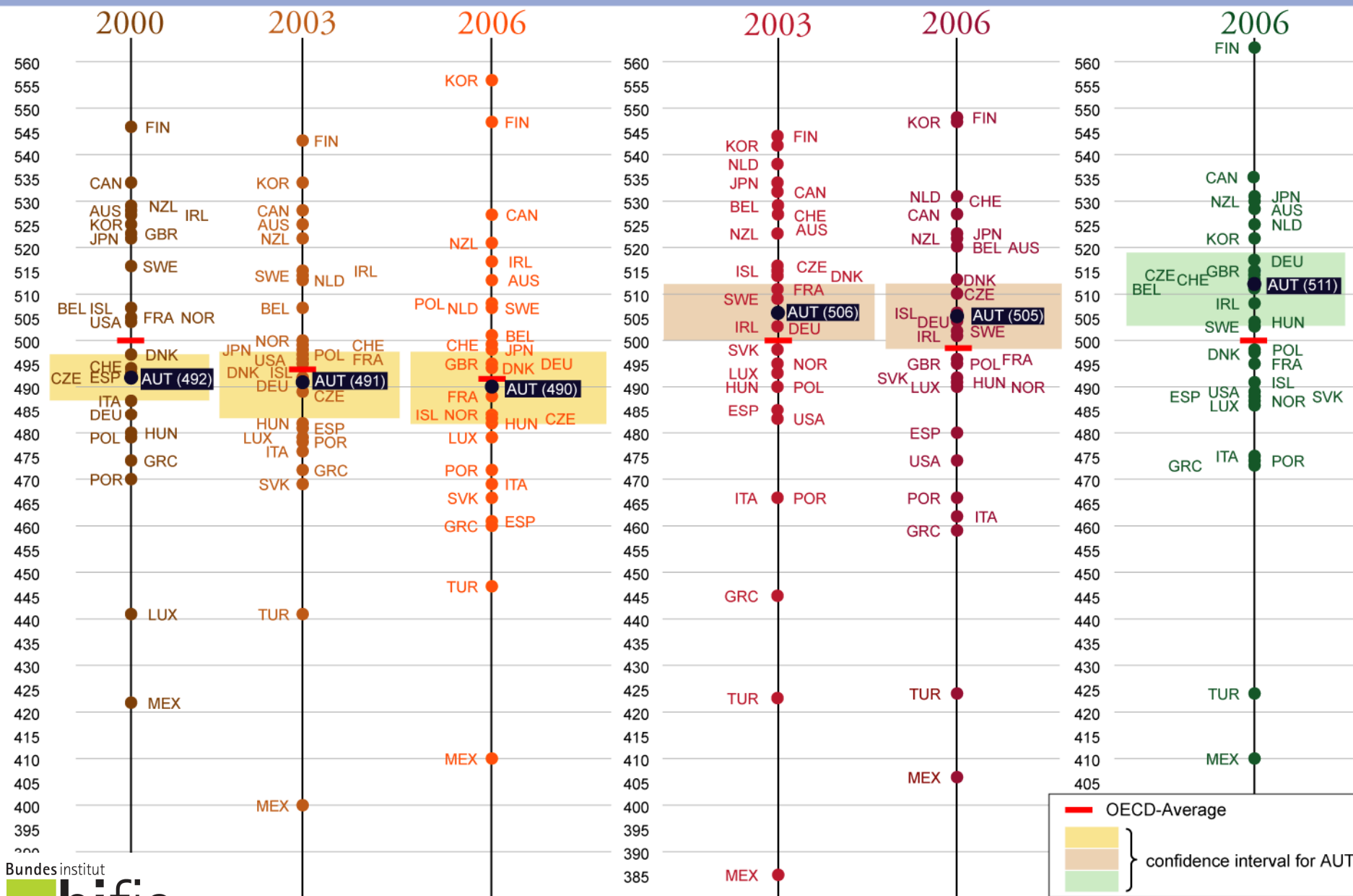
The Austrian School System



READING

MATHEMATICS

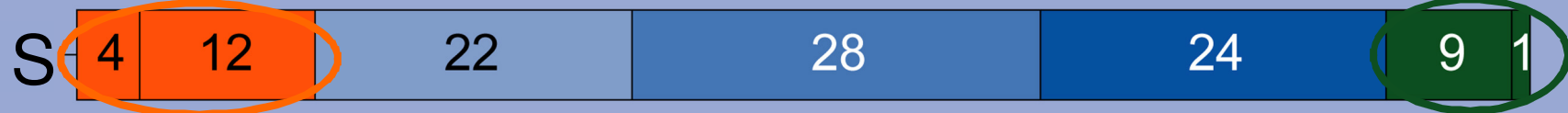
SCIENCE



Top Performers & Students at Risk in Austria

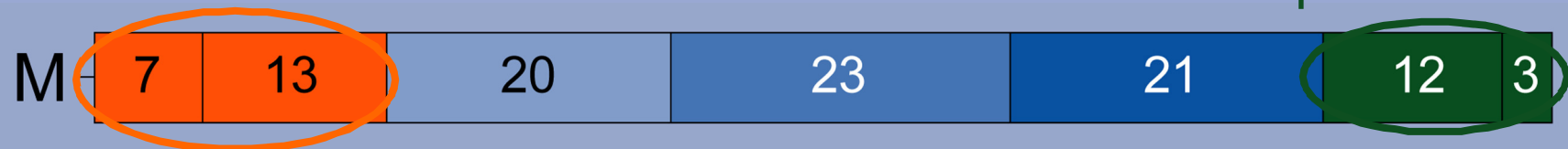
Risk 16%

Top 10%



Risk 20%

Top 15%

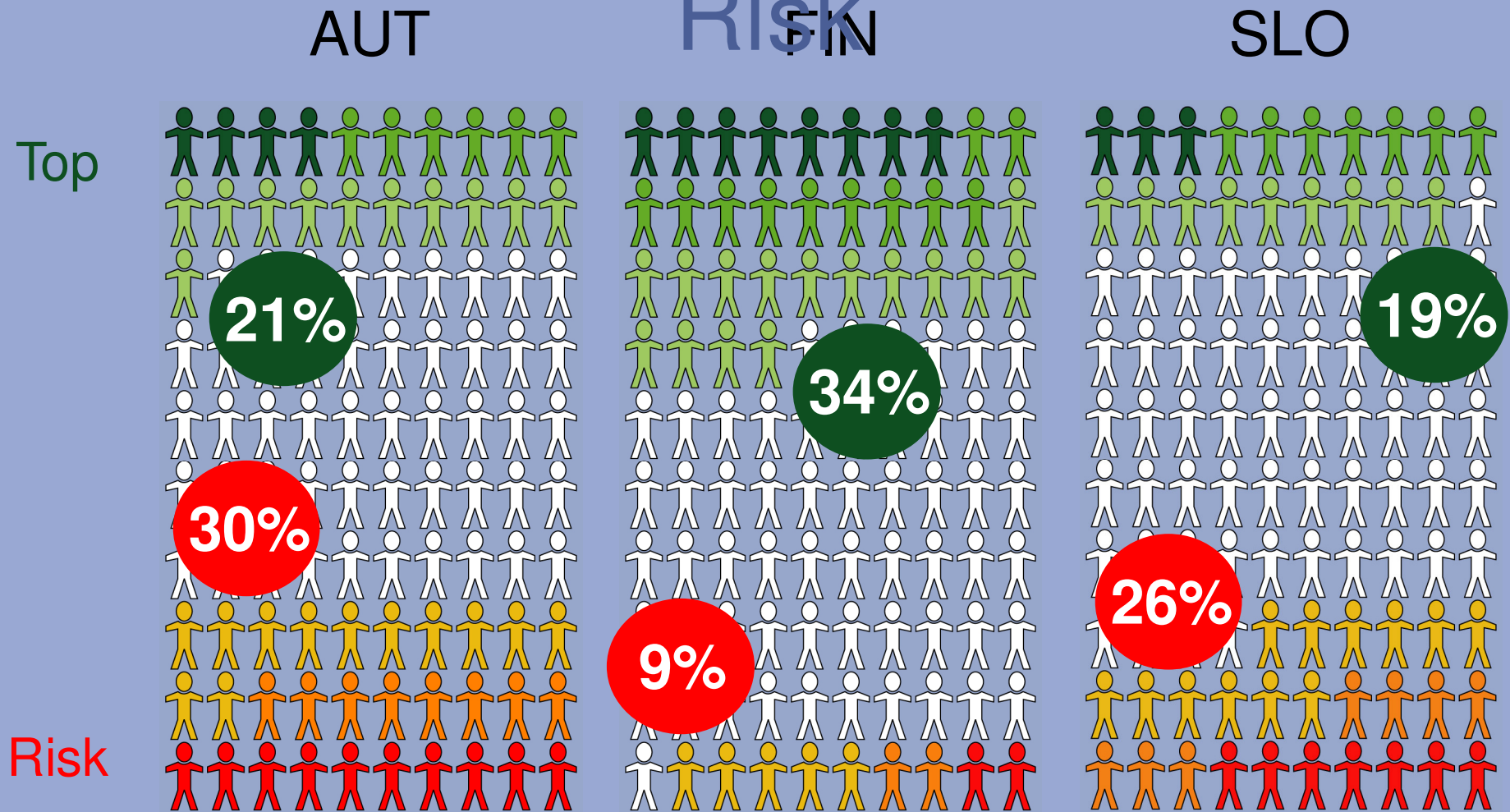


Risk 21.5%

Top 9%



Top-Performers and Students at Risk



Science – Scientific Literacy

Knowledge <u>about</u> Science 40%	Knowledge <u>of</u> Science			
	Physical Systemes	Living Systems	Earth- and Space- Systems	TS

Gender Differences

- Girls tend to perform better in cases where knowledge *about* science is required:

OECD: + 10 score points, AUT: + 7 score points (n.s.)

- Boys tend to perform better in cases where knowledge *of* science is required:



	Austria	OECD
Physical Systems	+45 Points	+26 Points
Earth and Space Systems	+18 Points	+17 Points
Living Systems	+3 Points	+4 Points

Science Attitudes

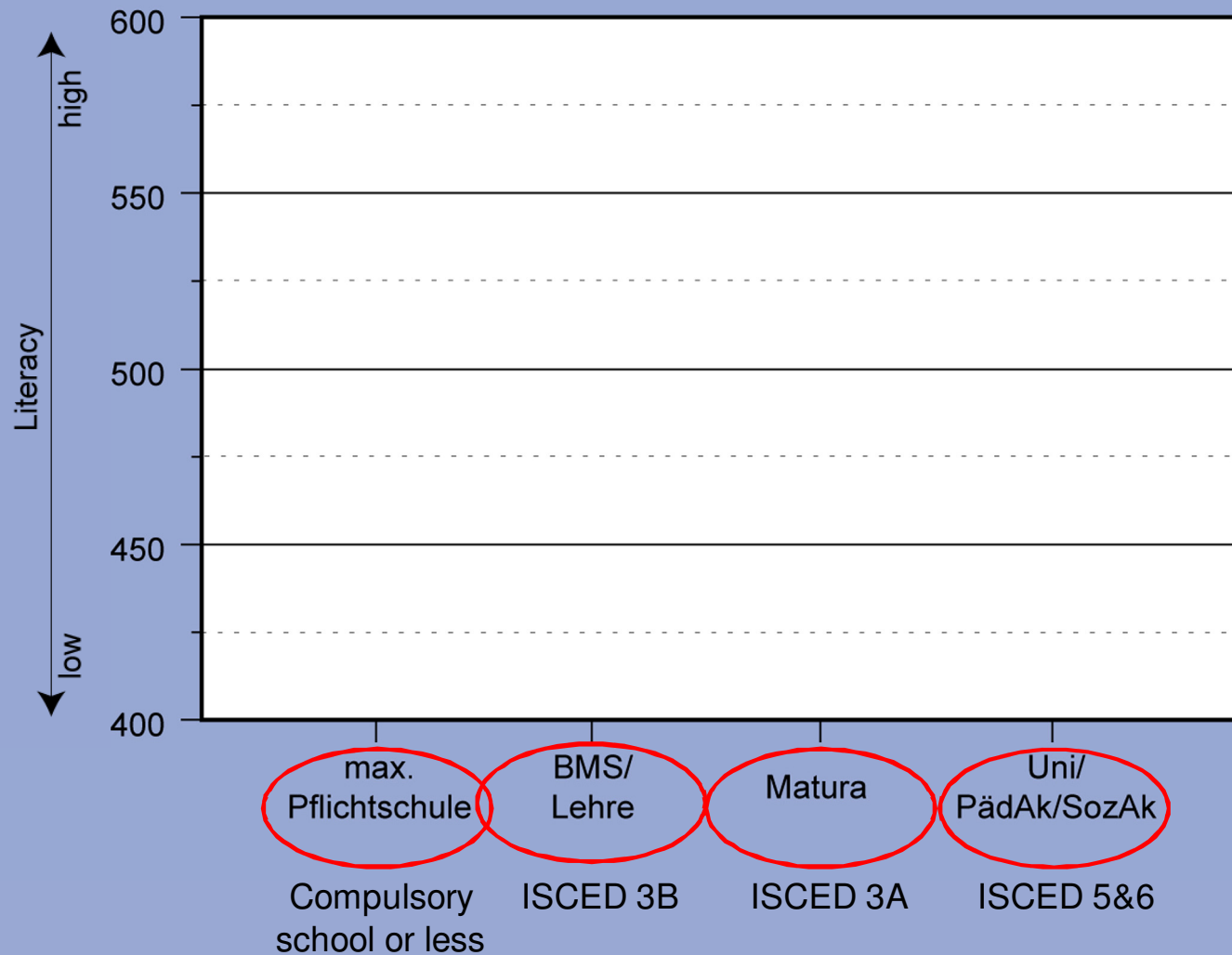
Austria's students show:



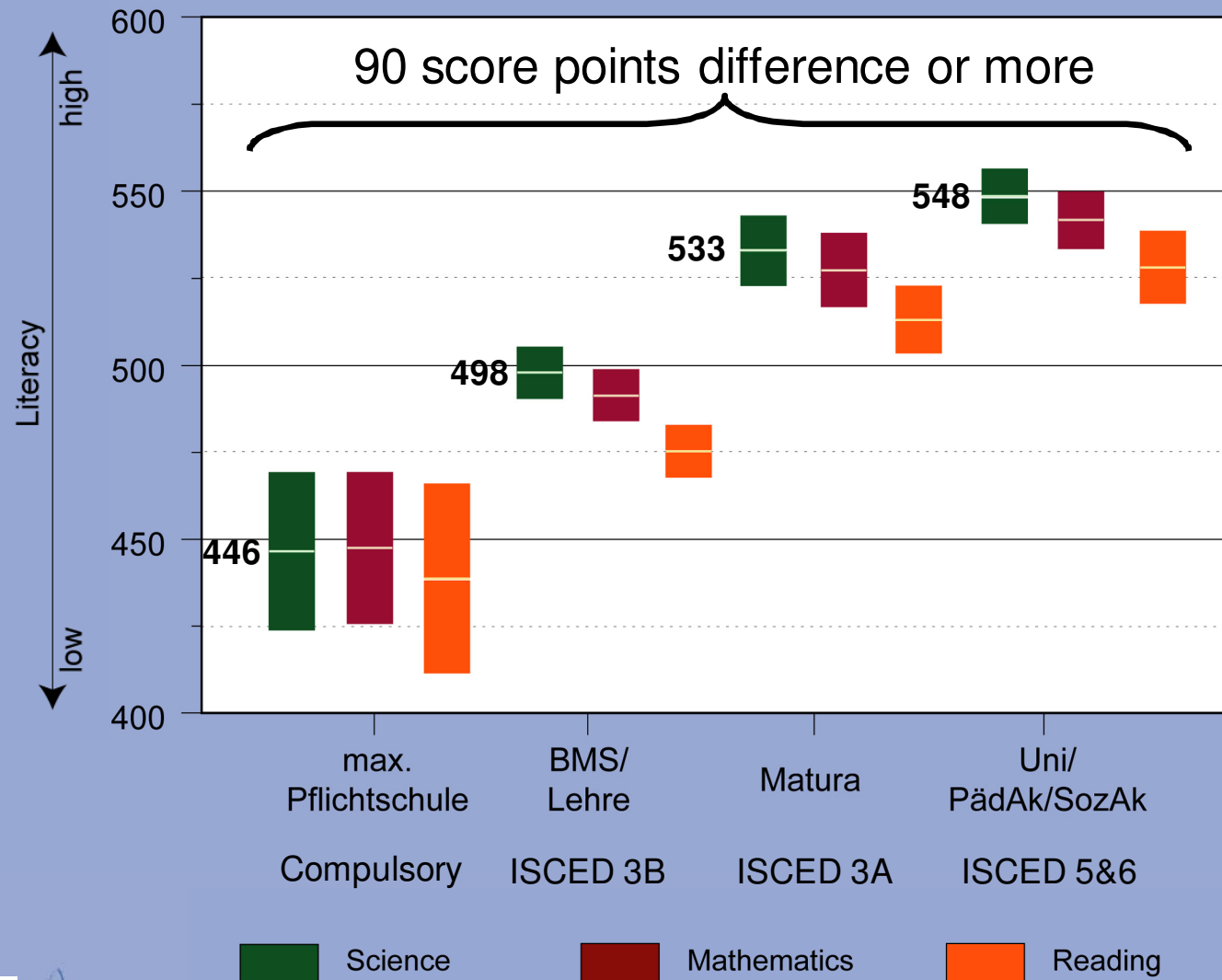
- **Lowest Future Orientated Motivation**
- **Extremely low Instrumental Motivation**
- **Lowest Personal Value in Science**

Girls are even **less motivated** than boys and show **less personal value** of Science.

Parents' Education



Parents' Education



Family Background & Science

Perf.

- The correlation between family background and Scientific Literacy is found **in all countries**.

- But the **strength of this correlation** varies
High degree of compensation:
enormously.
Finland, Italy, Ireland, Denmark and Sweden

Average degree of compensation:

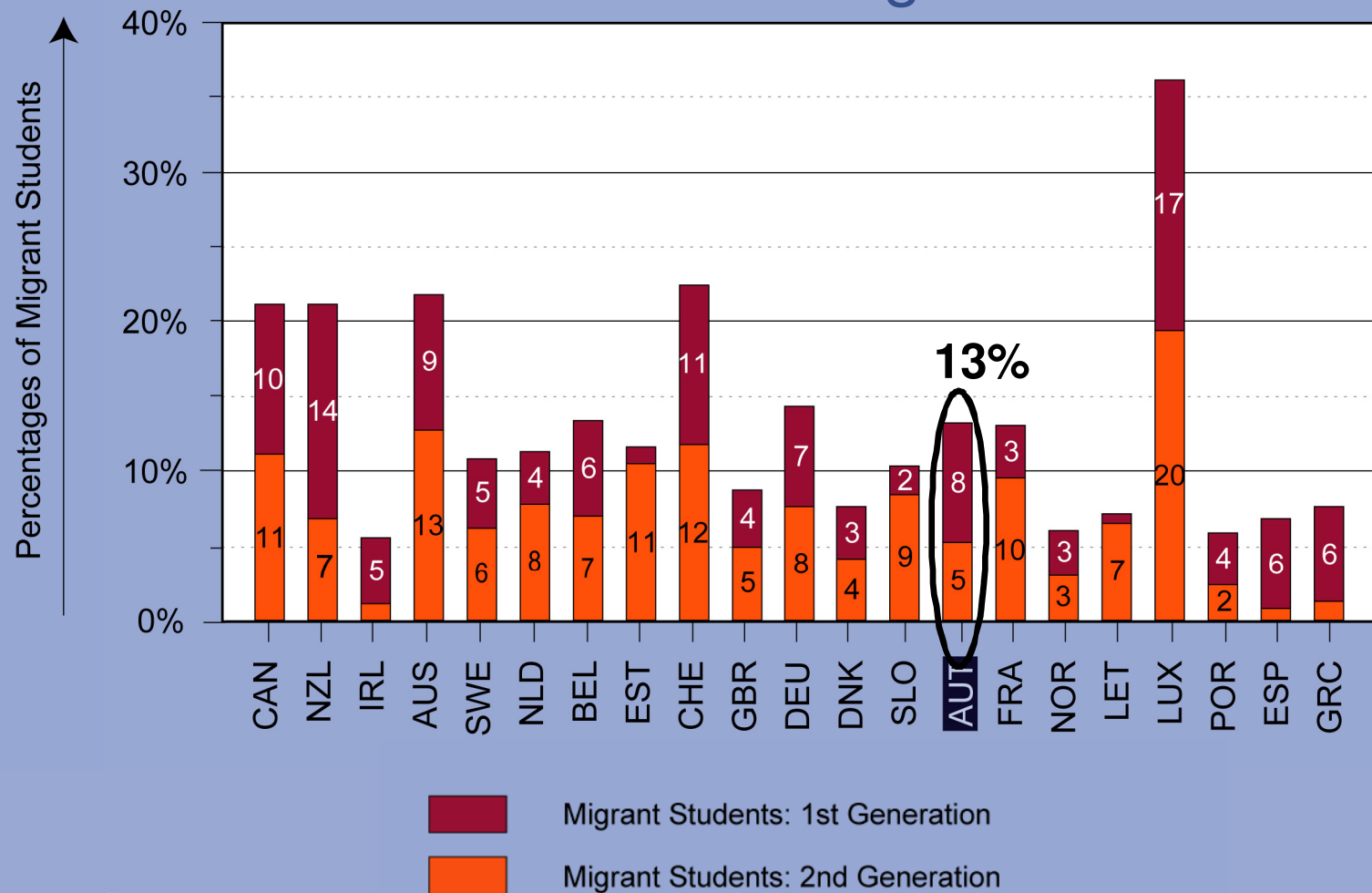
Austria, UK, Switzerland, Hungary and Germany

Low degree of compensation:

Luxembourg, Belgium, Czech Republic, Netherlands und Slovak Republic

Migration Background

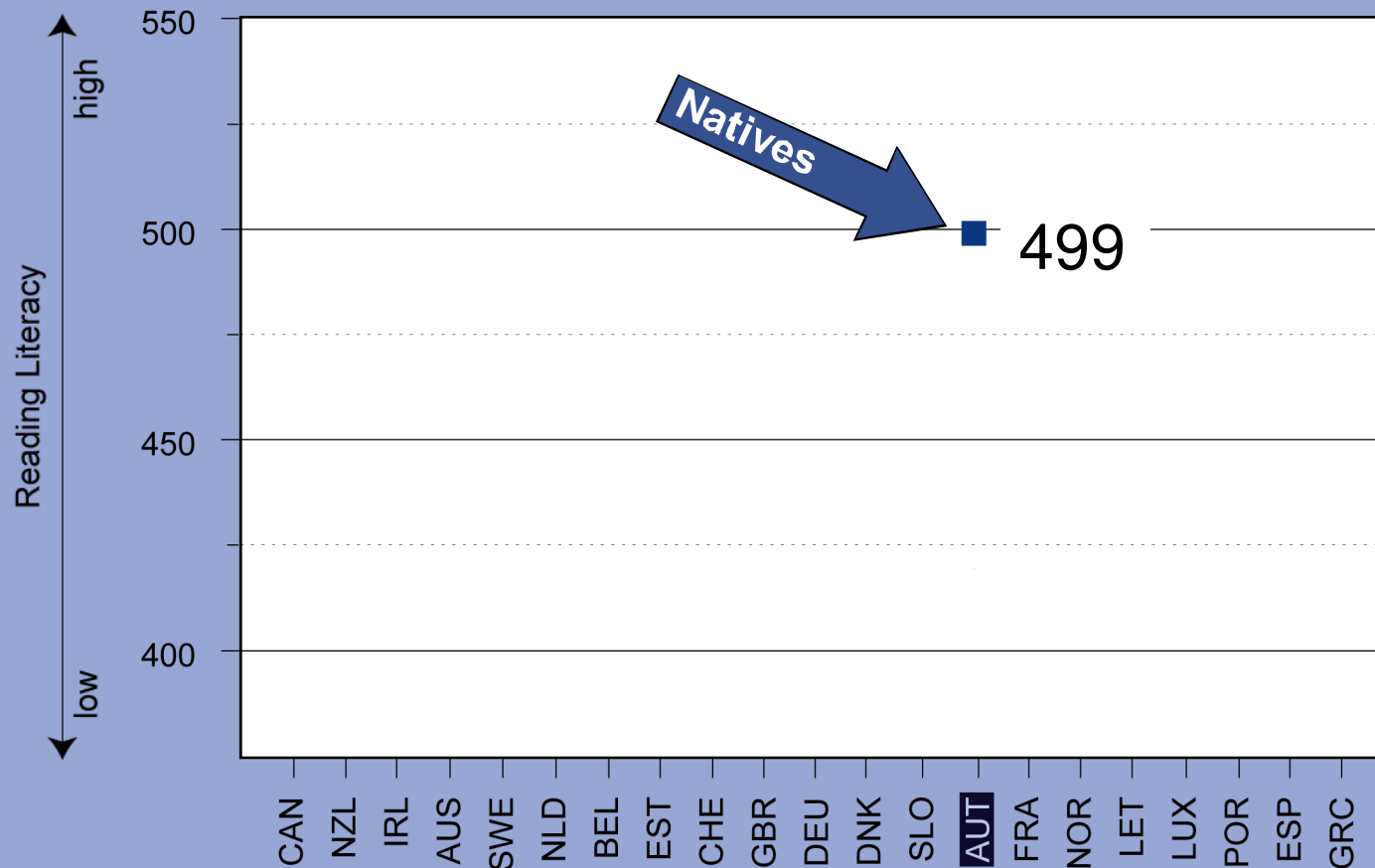
Countries with > 4% Migrant Students



Reading Literacy and

N

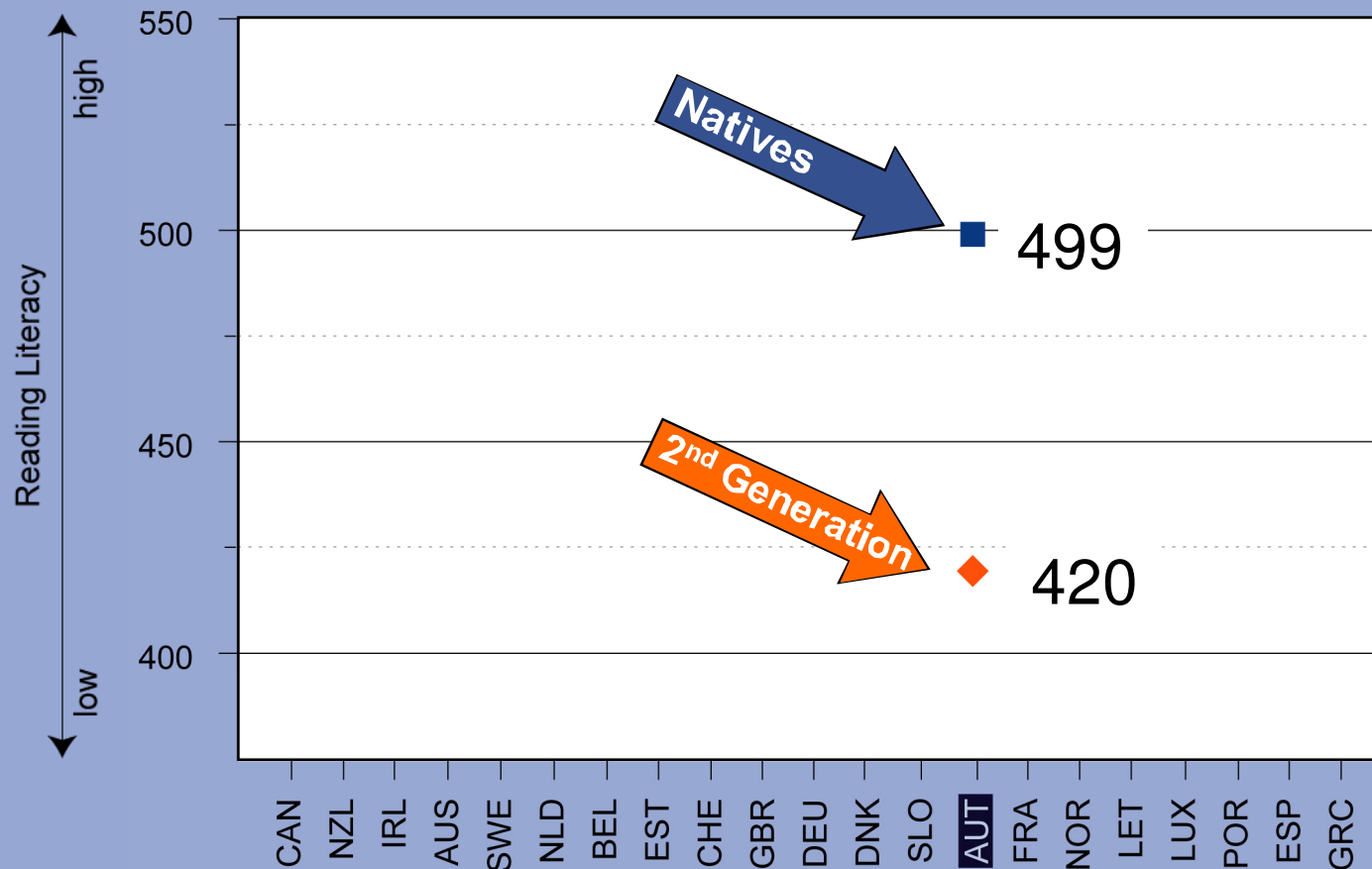
Countries with > 4% Migrant Students



Reading Literacy and

N

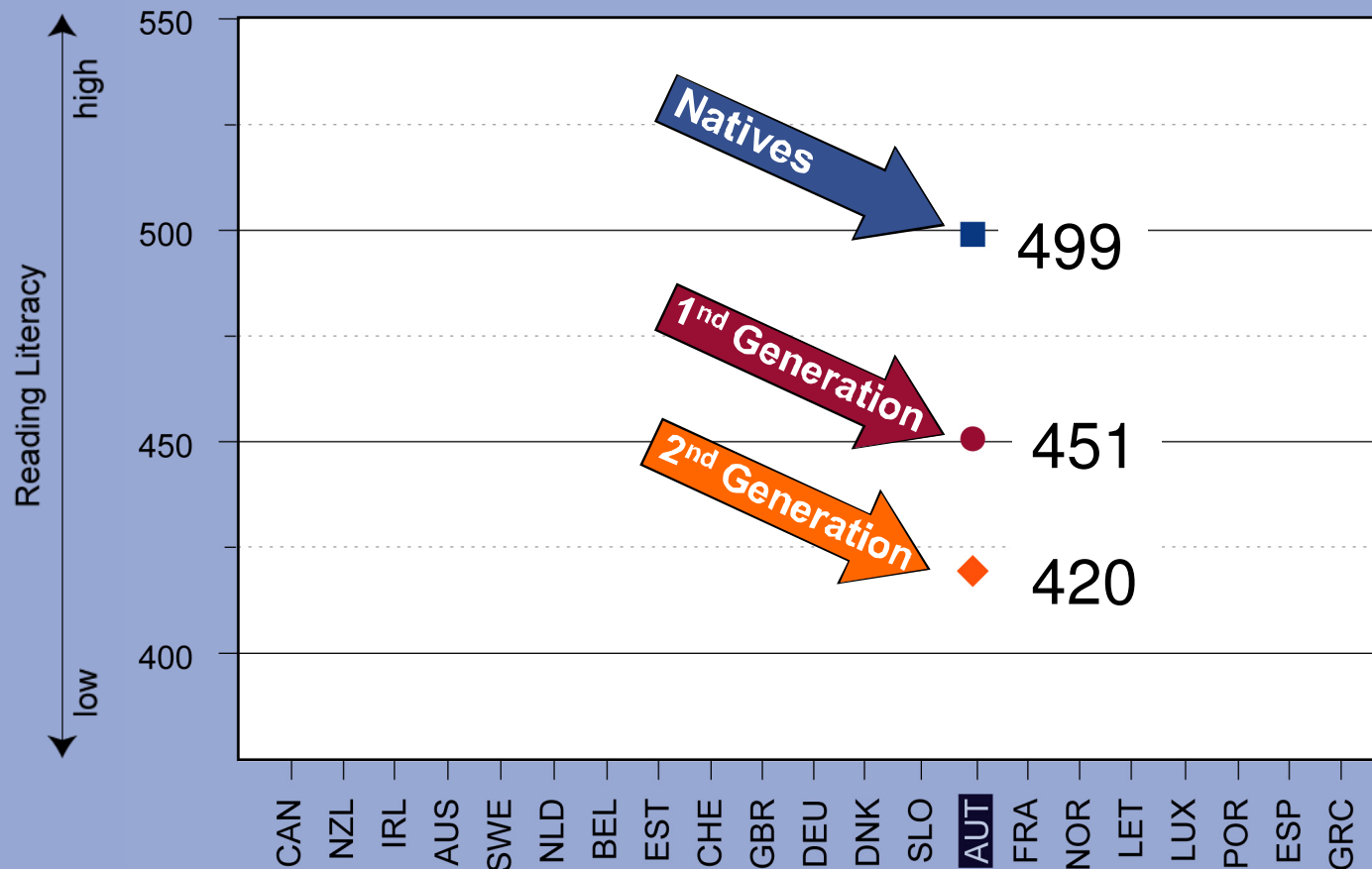
Countries with > 4% Migrant Students



Reading Literacy and

N

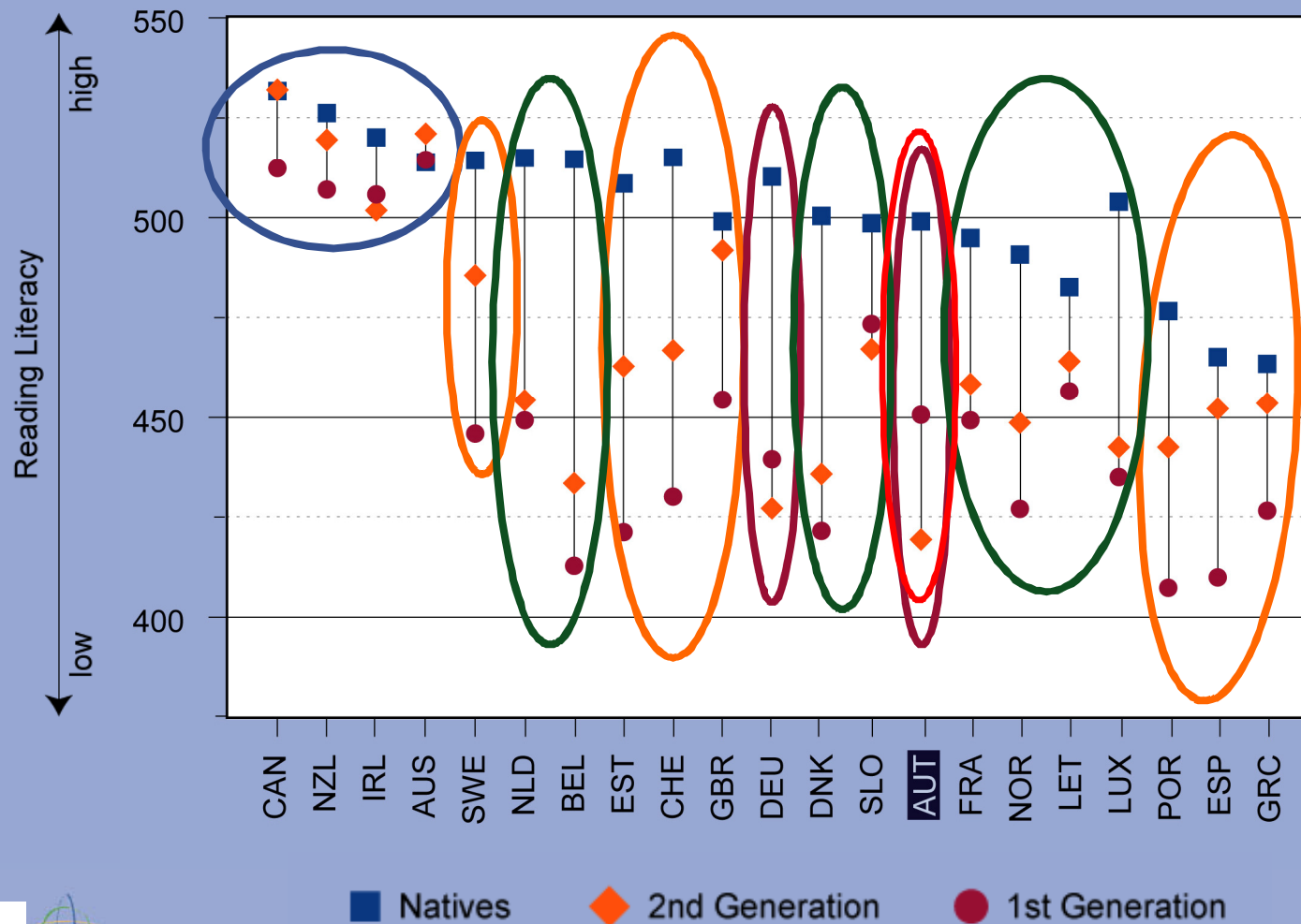
Countries with > 4% Migrant Students



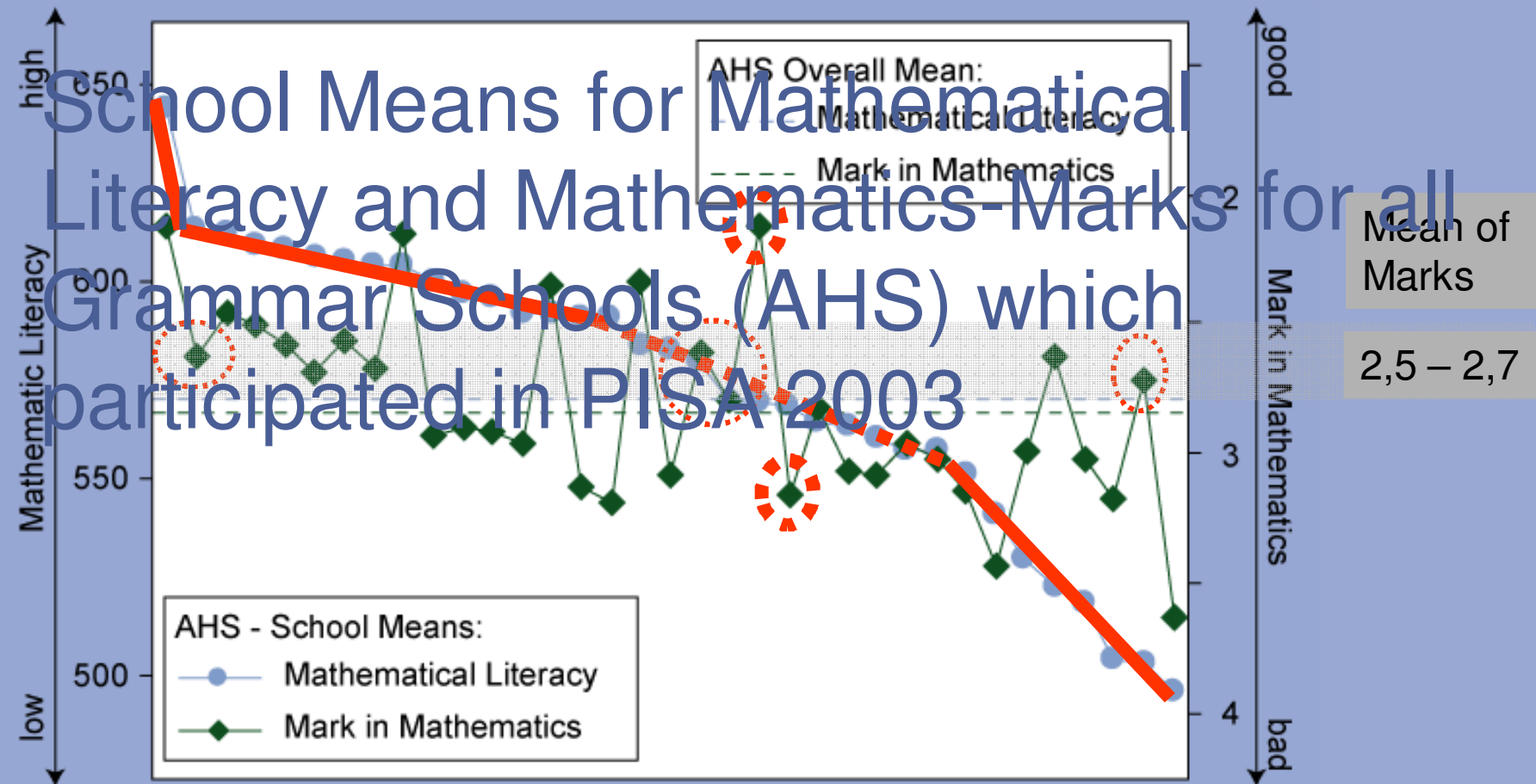
Reading Literacy and

N

Countries with > 4% Migrant Students



Literacy and Marks in Maths



Each Symbol represents the 15-/16-year olds of one school.
 Schools (with at least 10 students in the test with information on the past mark)
 sorted by their means in Mathematical Literacy.

Summary – Conclusions

- High percentages of **students at risk** compared to relatively low percentages of **top performers**
- Extreme **gender differences** in Physical Systems and in regards of attitudes (in favour of boys)
- **Attitudes** towards science: low motivation, low personal value
- Performance and **family background**: high dependence on parents' education
- Performance of **migrant students**: first generation doing better than second generation
- **Lack of fairness** in grading



Bildungsforschung, Innovation & Entwicklung
des österreichischen Schulwesens

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5020 Salzburg

c.schreiner@bifie.at – u.schwantner@bifie.at

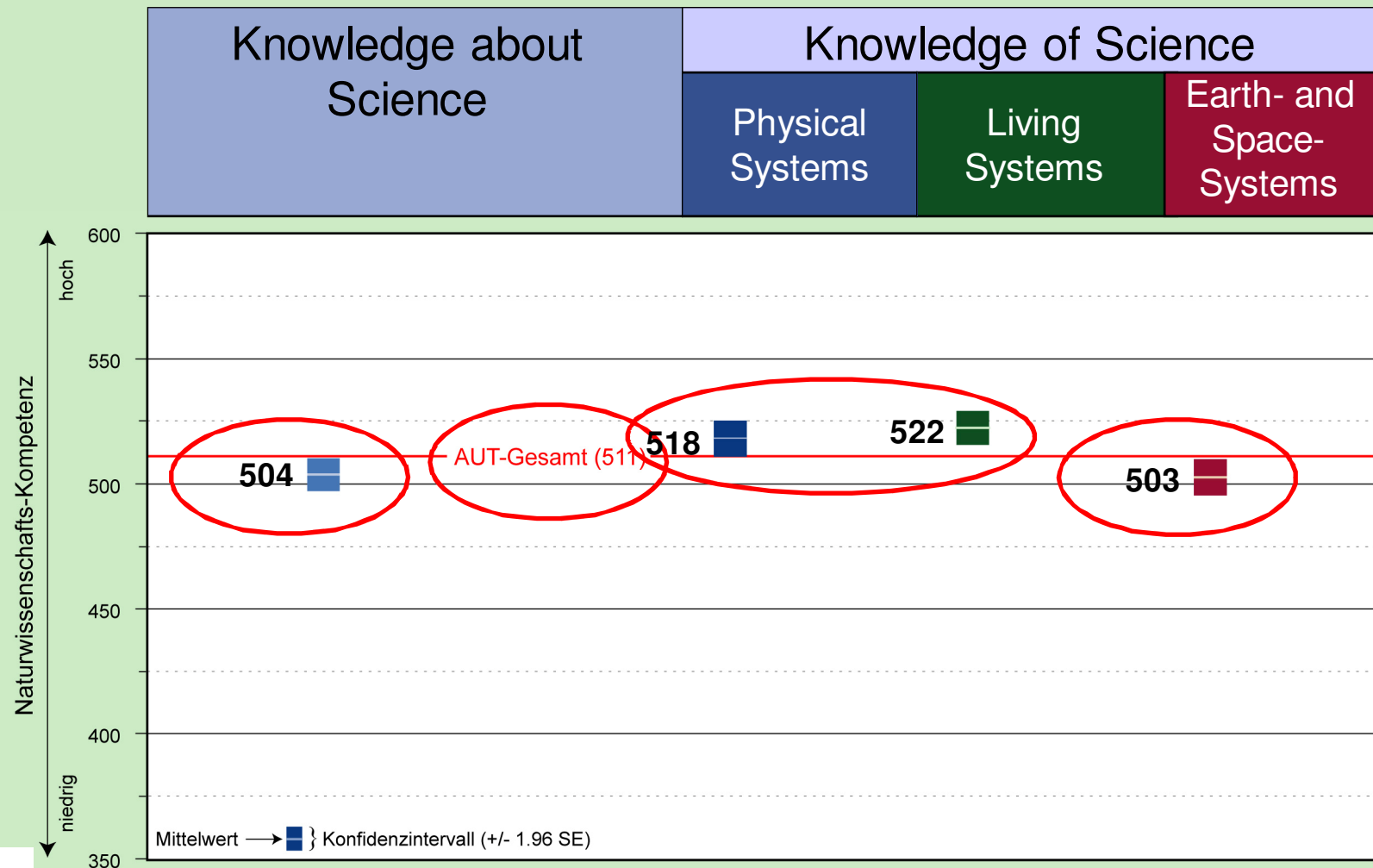
www.pisa-austria.at

How to get in contact with PISA

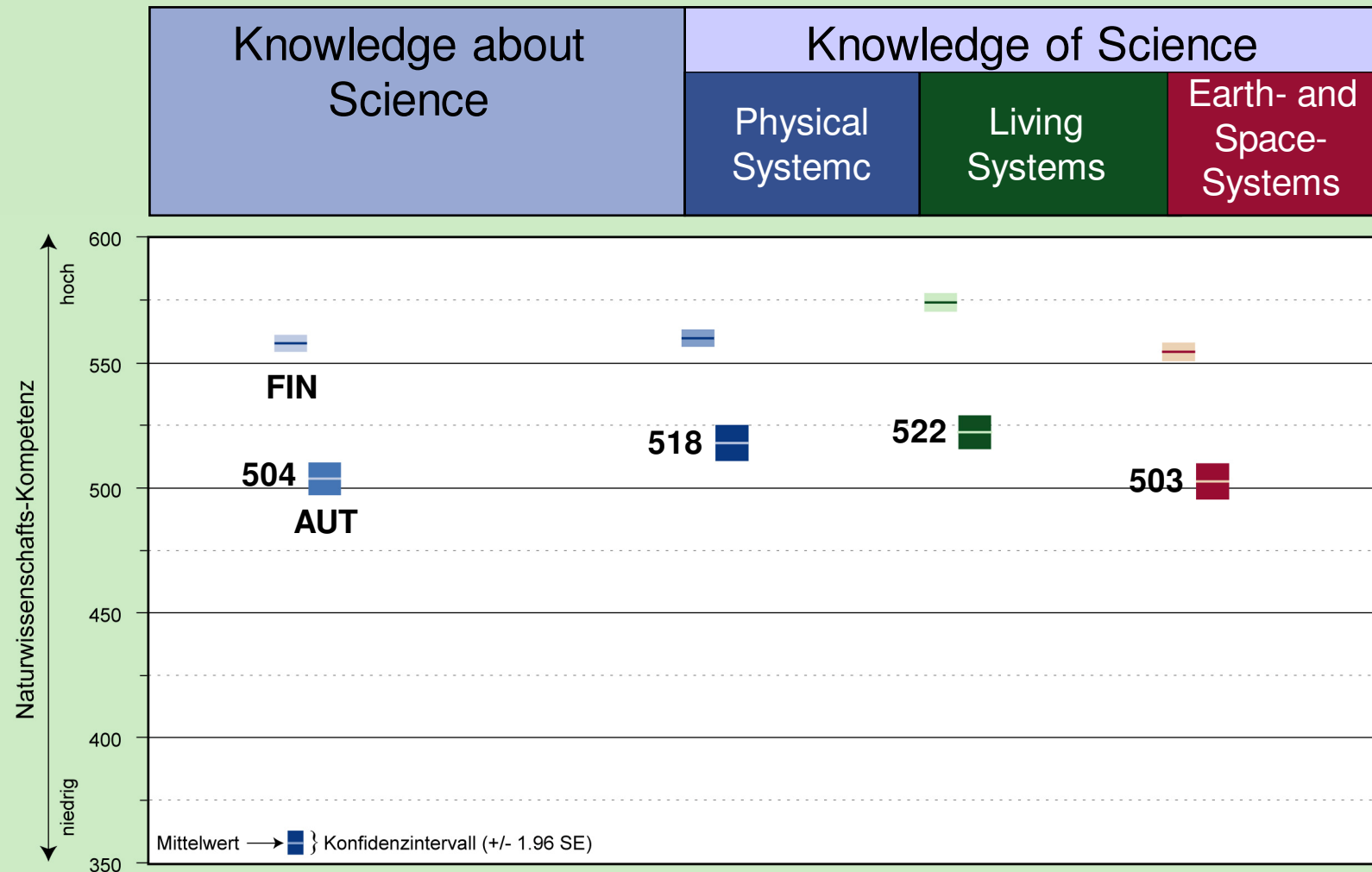
www.pisa-austria.at



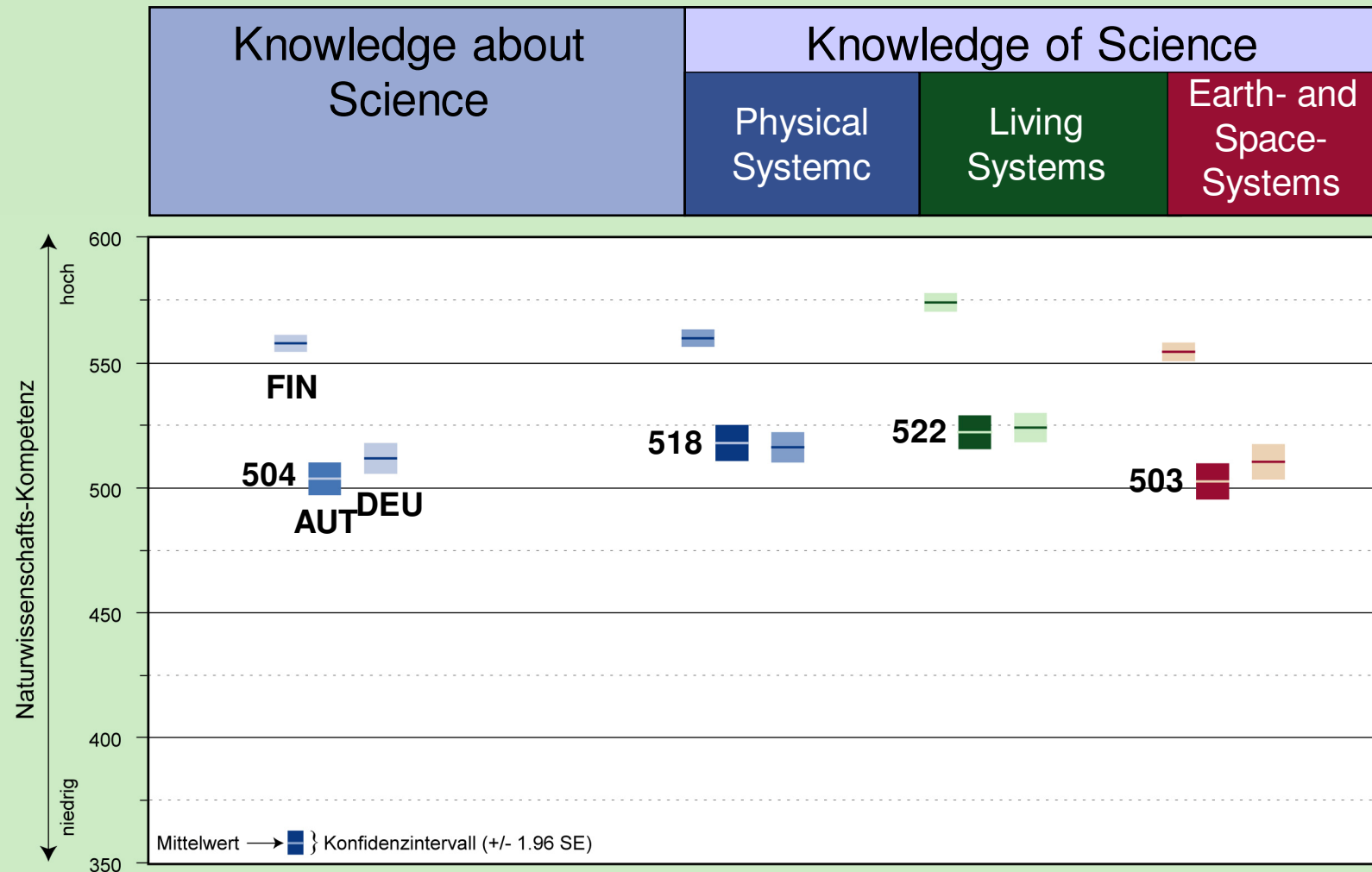
Scientific Literacy: Performance of Austrian Students



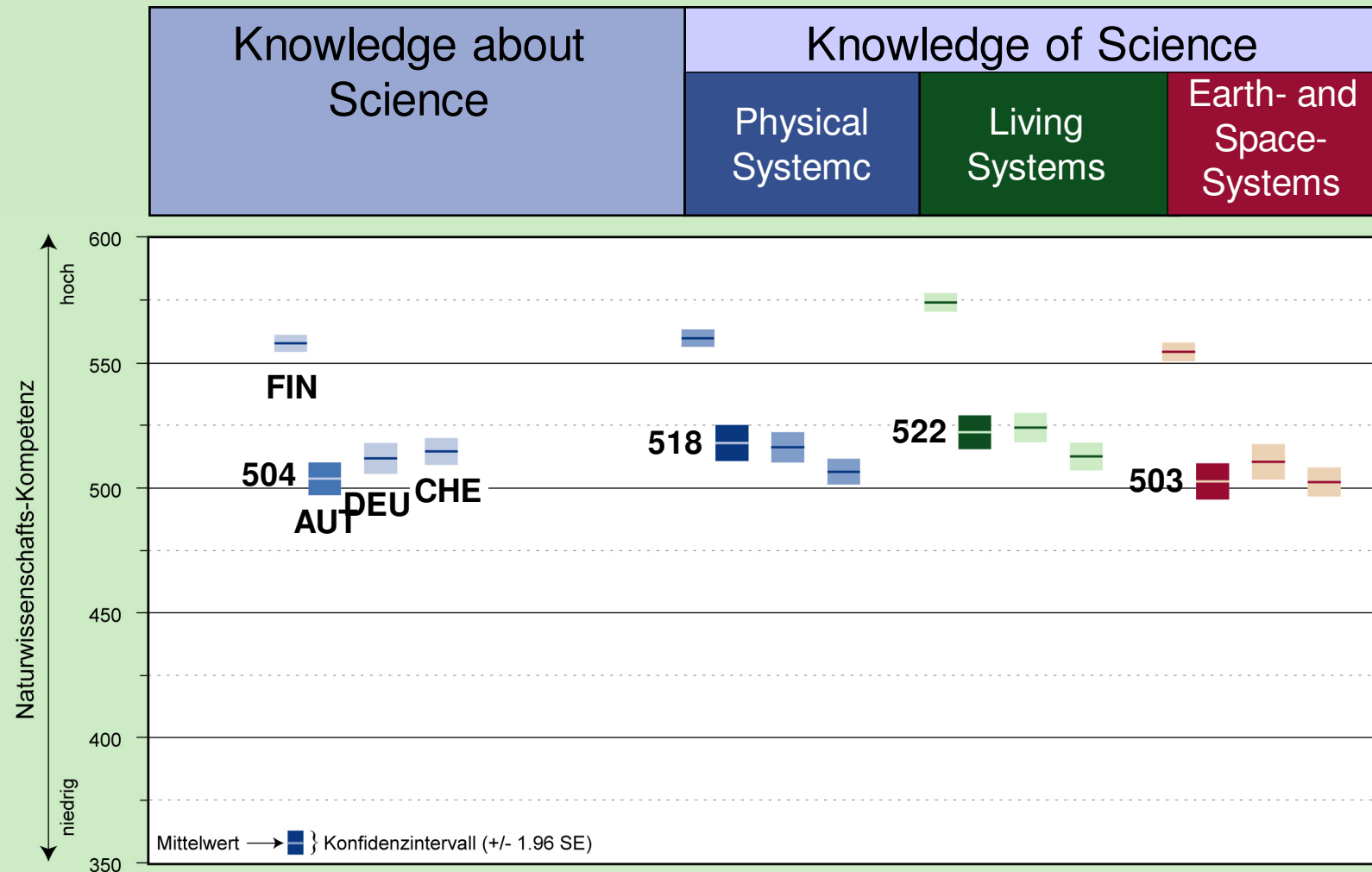
Scientific Literacy



Scientific Literacy



Scientific Literacy

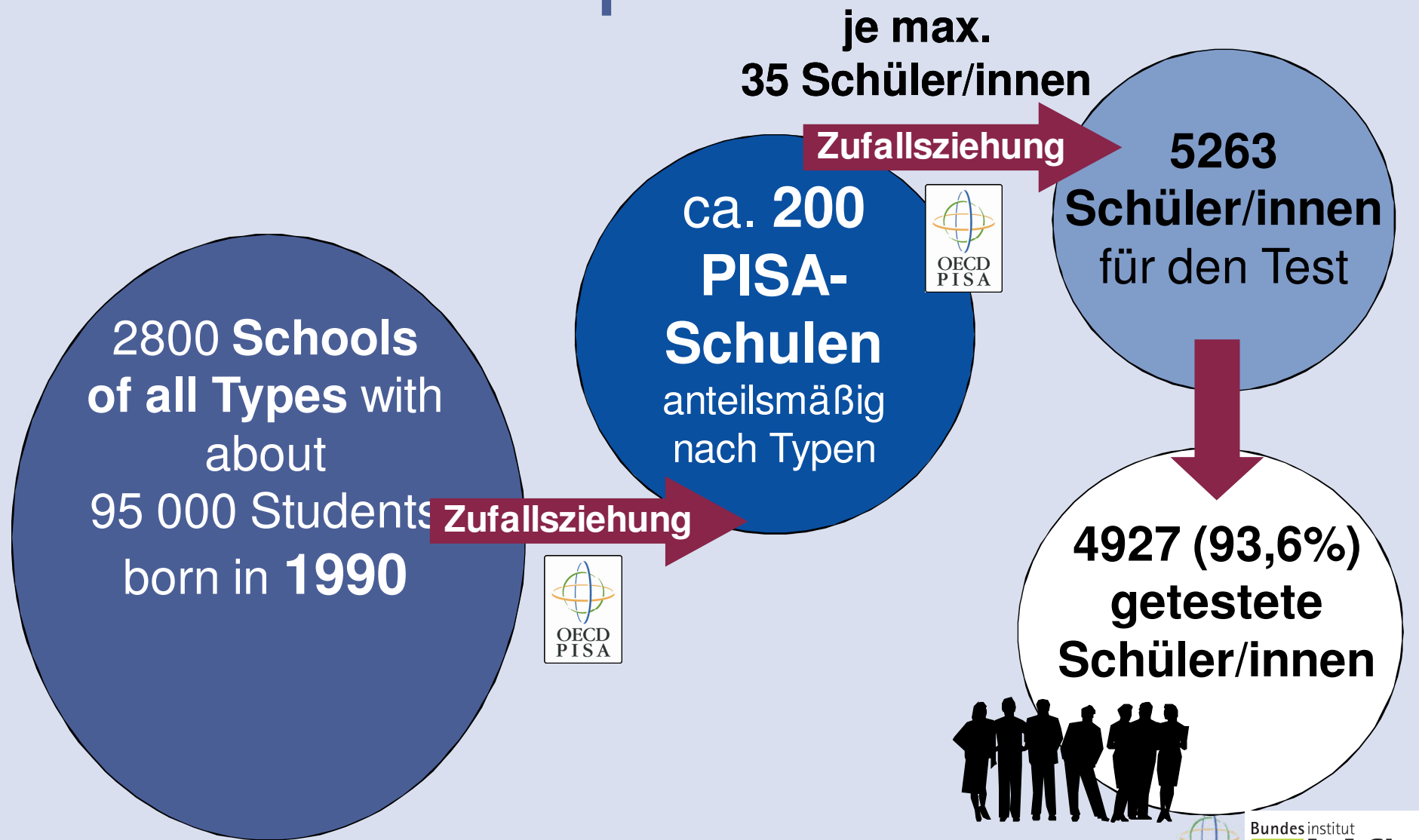


Environmental Attitudes (EA)



- Austrian students show **high Awareness** of Environmental Issues.
- **Boys** in Austria estimate this **even higher** than girls.
- **Girls** in Austria show higher **Perception** of Environmental Issues than boys and show more **Responsibility** for Sustainable Development.

PISA-Sample in Austria



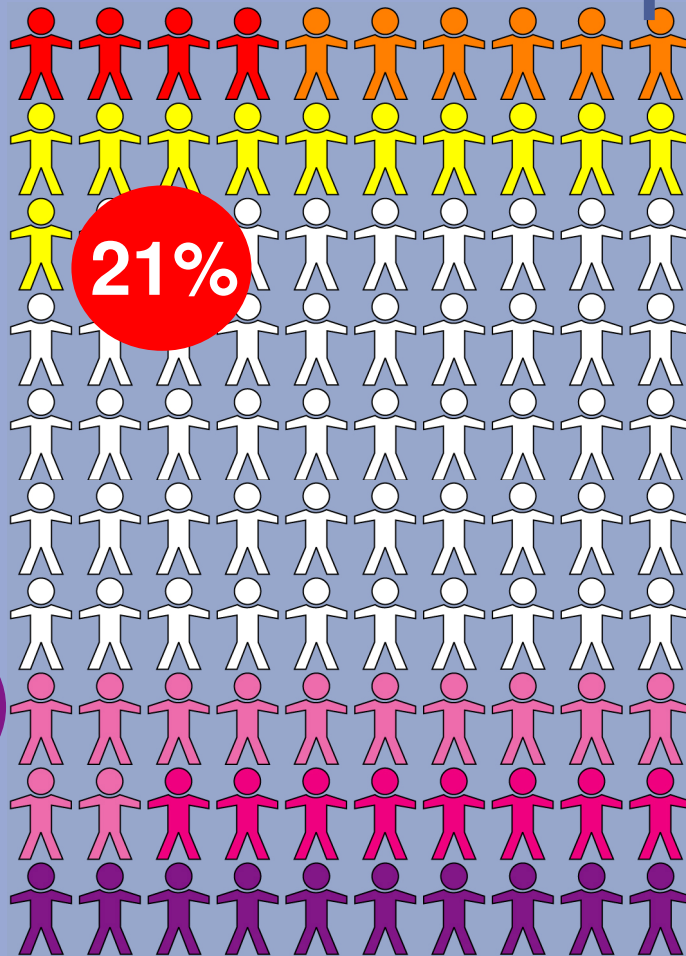
Top-Performers and Students at Risk

AUT

Risk

FIN

Top



Risk

