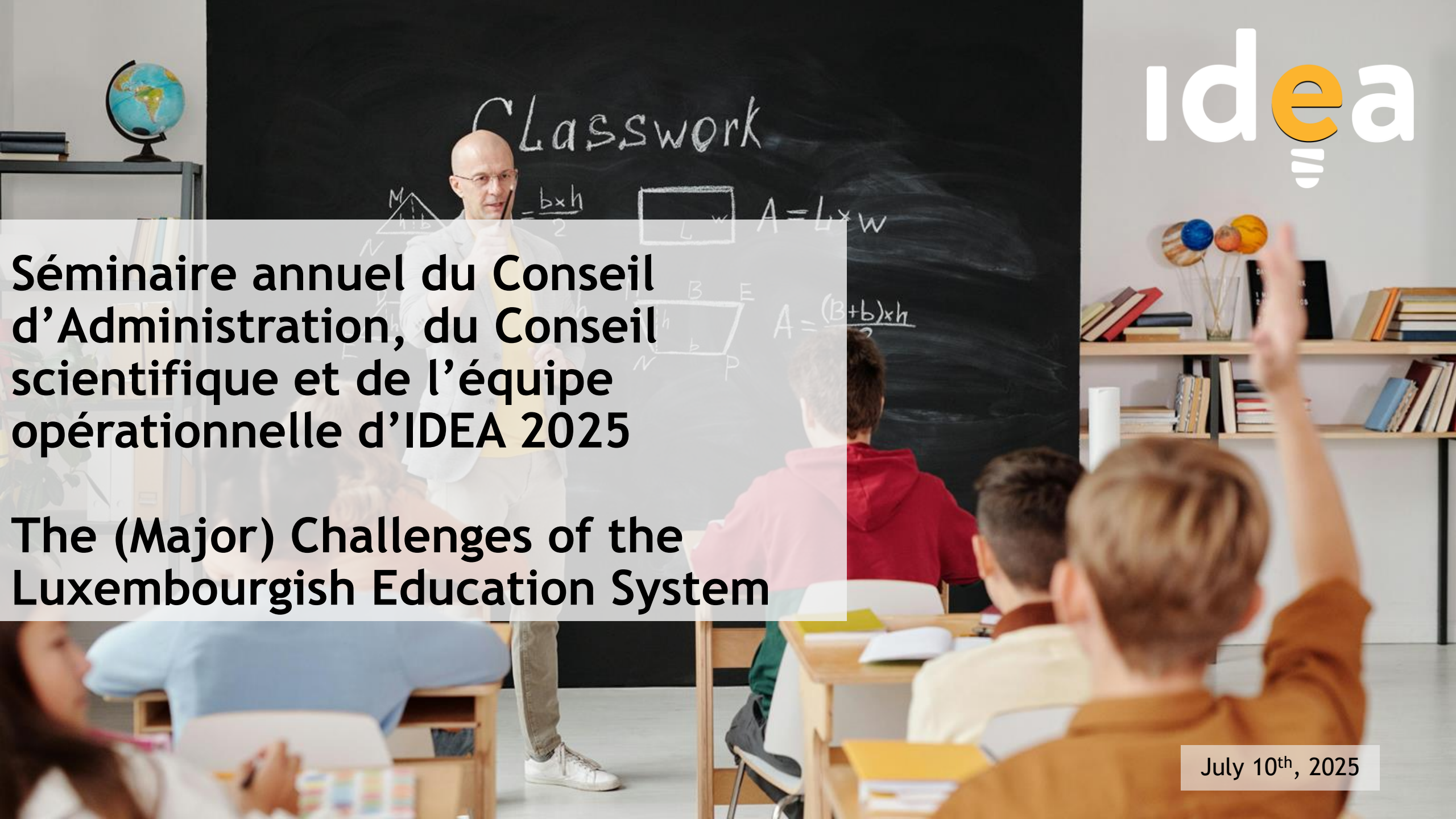


Séminaire annuel du Conseil d'Administration, du Conseil scientifique et de l'équipe opérationnelle d'IDEA 2025

The (Major) Challenges of the Luxembourgish Education System

July 10th, 2025

Back to school
WELCOME

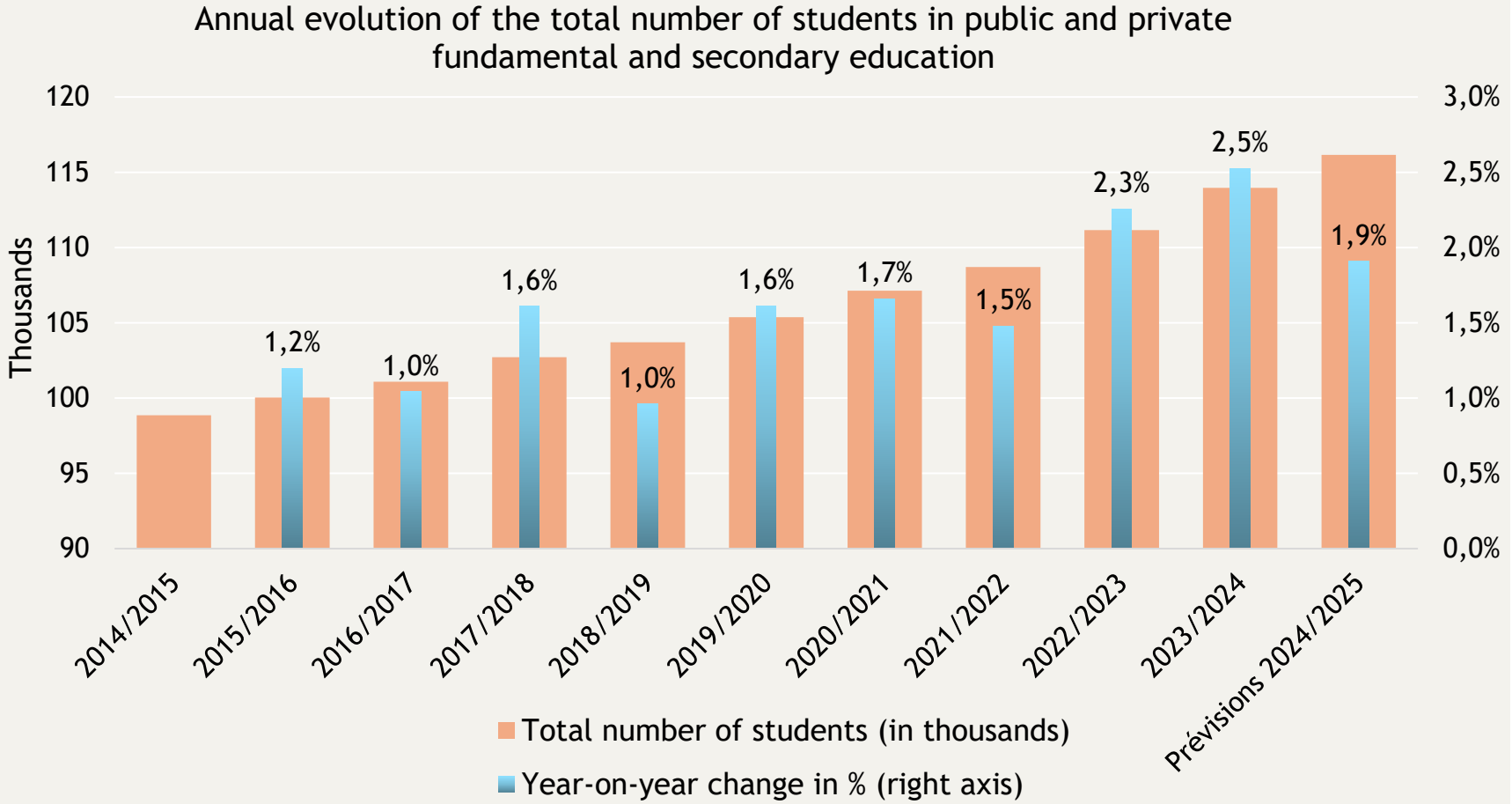
Some facts and figures

Ioana Pop, IDEA

1. There is a very strong growth in the number of students in the school system

+17,5% in student numbers enrolled in fundamental and secondary education over 10 years.

→ given Luxembourg's population growth, there is probably no other school system in Europe facing such an increase.



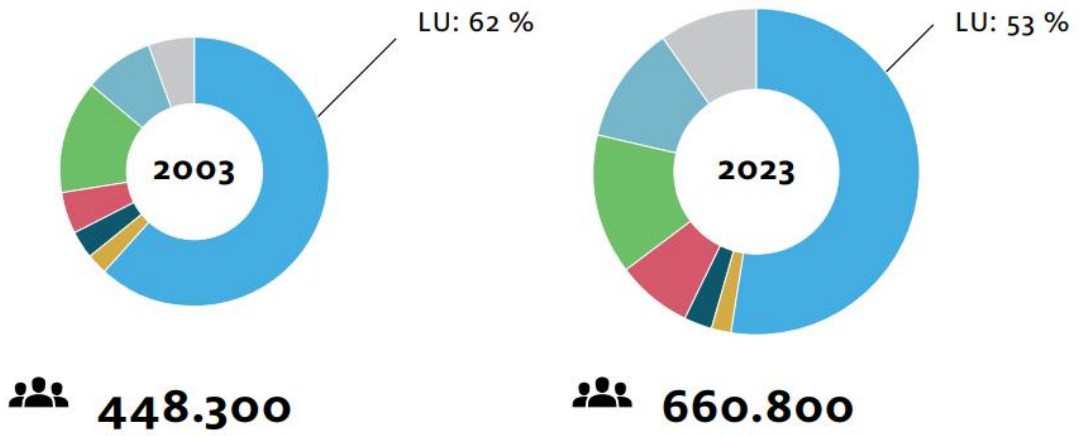
Source : *Chiffres de la rentrée*, MENJE

2. There is a strong growth in the diversity of nationalities

- The *Nationaler Bildungsbericht 2024* highlights in Factsheet no. 1 that Luxembourg's total population grew by 47% over the 20-year period from 2003 to 2023. However, the proportion of Luxembourgish nationals within this population declined, while the share of non-Luxembourgish residents increased, particularly among French citizens, other EU nationals (including the UK), and people of other nationalities (excluding Portuguese, Germans, and Belgians) → **this is also something quite unique in international comparison.**

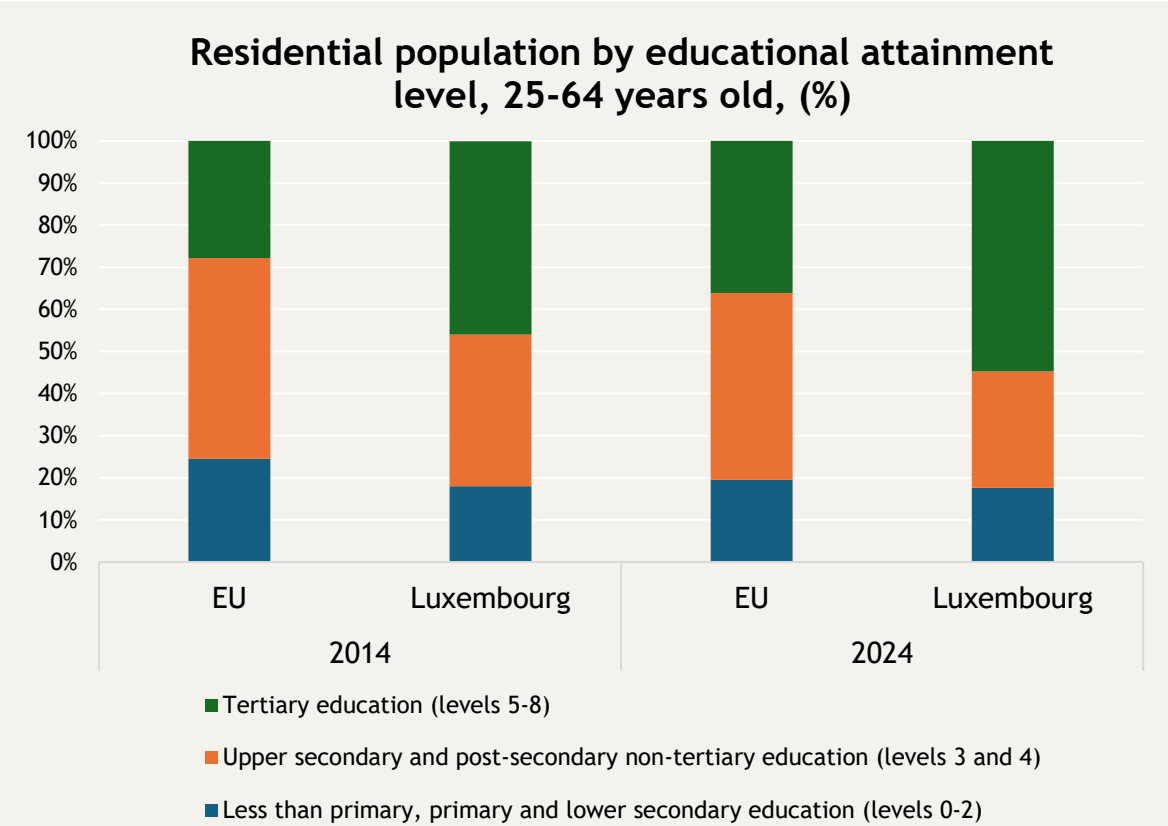
Tab. 1 : **Répartition de la population du Luxembourg par nationalité**

Nationalité	2003	2023
Luxembourg	277.600	347.402
Allemagne	10.200	12.678
Belgique	15.900	19.205
France	21.550	49.104
Portugal	61.440	92.101
Autre nationalité U.-E. (y compris R. U.)	36.980	76.589
Autre	24.630	63.730
Population totale	**448.300**	**660.800**



3. Luxembourg's population has the highest level of education among EU countries, and this is also increasing very rapidly over the years and even surpassing the EU average growth.

→ this is closely linked with the fact that the national labor market has been very dynamic over the last decades. It is also characterized by economic specializations that require high education levels (finance sector, international headquarters, international institutions , ICT, etc.).



Source : Eurostat.

4. There is a significant decline in the number of students enrolled in initial vocational training programmes.

- between the 2016/2017 and 2022/2023 school years, the number of students enrolled in initial vocational training decreased by 3,4% (-1.453 students), falling from 7.422 to 5.969 students – with the largest decline among students enrolled in technician diplomas (-3,5%).

5. PISA results – *"the elephant in the room"*

- students' performances remain a concern, with PISA results in 2018 showing scores below the EU average in all domains and high shares of students not meeting basic proficiency levels.
- Luxembourg did not take part in the 2022 PISA survey, but it will participate in 2025.

  → One of the questions that must be explored in this seminar is "how can we measure performance of the system and how can we compare them with other countries?"

Some reforms to be mentioned

The 2009 reform

- created the *école fondamentale*, merging preschool and primary education into a single, four-cycle structure. In vocational education, it implemented a competence-based, modular training system aligned with labour market needs.

2016 : a shaping year for the education system :

Compulsory schooling from age 16 to 18

- extend compulsory schooling from age 16 to 18. Starting in 2026, young people must stay in school longer, though the 16–17-year-olds (enrolled in a vocational training) can get exemptions to work. The reform aims to reduce dropout and youth unemployment.

The expansion of the Alpha project

- starting in 2026, the Alpha project—literacy teaching in French—will be expanded to all primary schools. A phase-in will start with one age group in 2026–2027 and then extend to others. Since 2022, pilots have run in four schools —Differdange, Dudelange, Schifflange, and Larochette. From 2026, families can choose literacy in German or French.

Todays’s schedule

	Moments	Speakers
8 :30-9 :00	Welcome breakfast	
9 :00-9 :20	Welcome and introduction	Ioana Pop, IDEA
9 :20-9 :40	Changes in school demographics in primary and secondary education: a challenge for the school system	Dr. Susanne Backes (LUCET)
9 :40-10 :00	Education for all? The Luxembourgish education system and its pitfalls	Dr. Thomas Lenz (LUCET)
10 :00-10 :20	The Luxembourg School Monitoring Programme: Insights and Future Directions	Dr. Sonja Ugen & Dr. Joanne Colling (LUCET)
10 :20-10 :40	From Classrooms to Careers: Educating for a Stronger Economy and Society	Dr. Aigul Alieva (LISER)
10 :40-11 :00	Does Luxembourg have a high-performing education system, and how would we know?	Mr. Edmund Misson (OECD)
11 :00-12 :00	Discussions	
12 :00	Lunch	

University of Luxembourg

Multilingual. Personalised. Connected.

Changes in School Demographics in Luxembourgish Primary and Secondary Education: A Challenge for the School System

Dr. Susanne Backes (Luxembourg Centre for Educational Testing, LUCET)

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Introduction to the Luxembourgish education system

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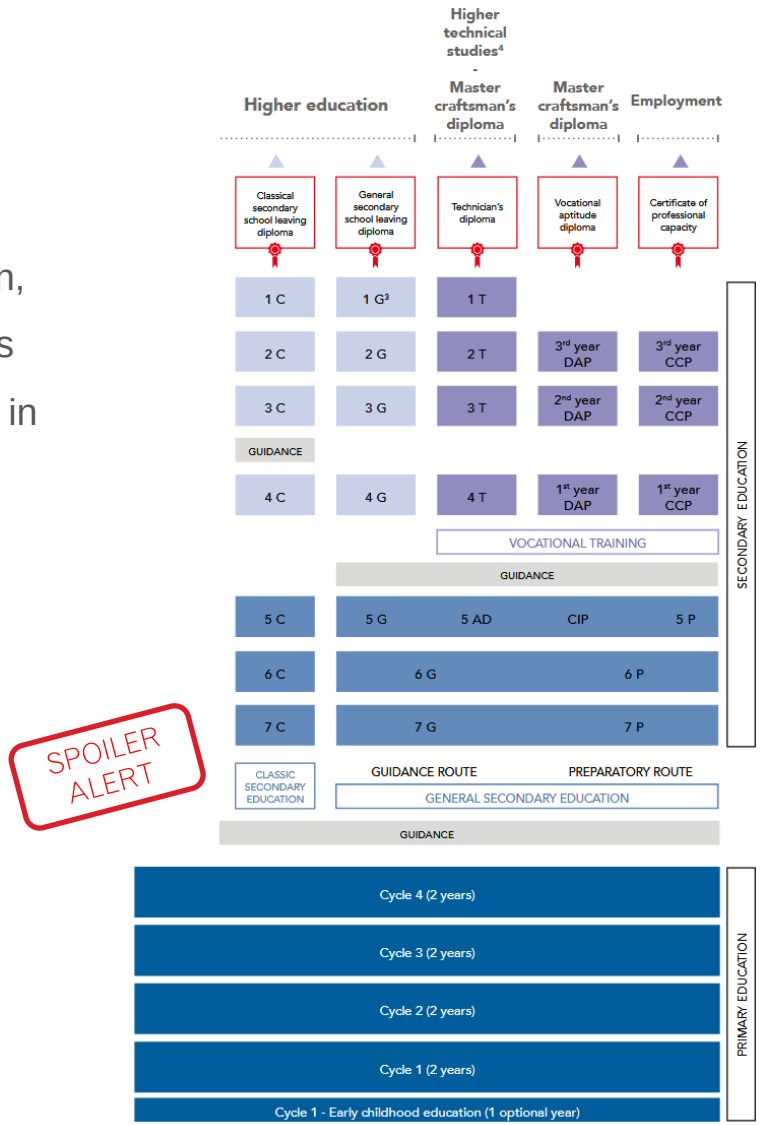
Key characteristics of the traditional (standard) education system of Luxembourg

- Includes primary and secondary education
- Demonstrates high stratification after primary education, with tracks leading to distinct school-leaving certificates
- Provides high-specificity vocational training embedded in secondary education
- Incorporates institutionalised orientation phases
- Integrates trilingual language regime

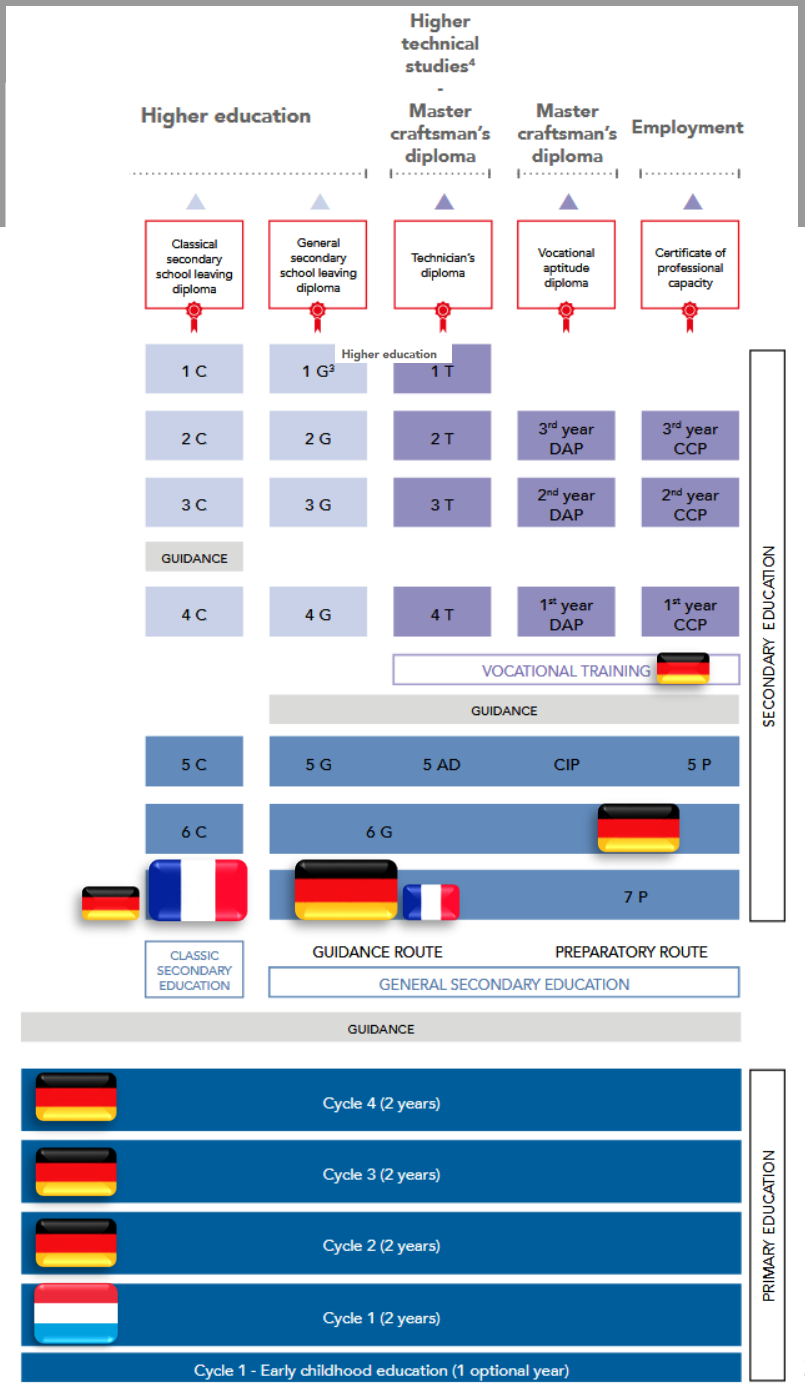
→ Remains prone to educational inequalities



SPOILER ALERT

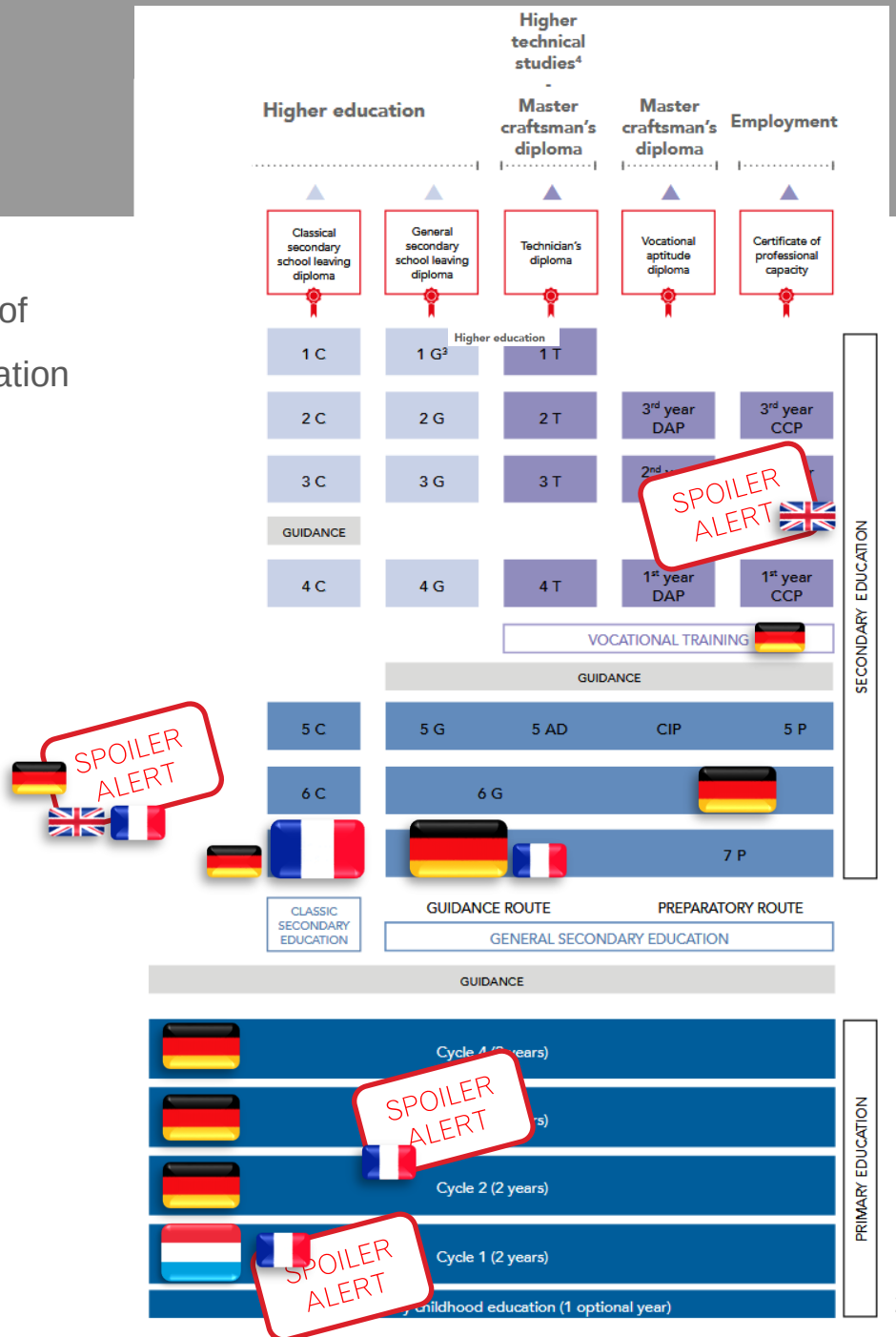
Introduction to the Luxembourgish education system

A closer look at language regime and languages of instruction in the traditional Luxembourgish education system



Introduction to the Luxembourgish education system

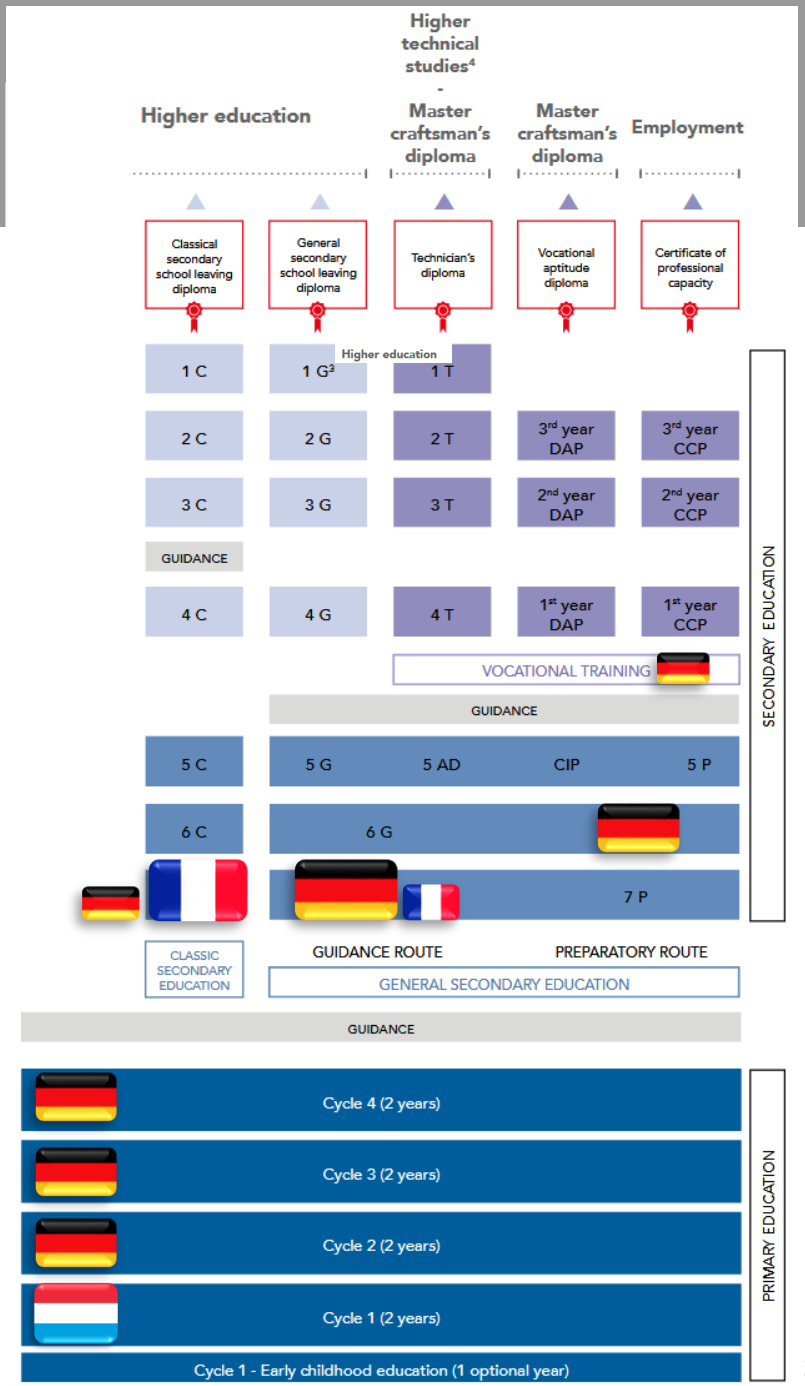
A closer look at language regime and languages of instruction in the traditional Luxembourgish education system



Introduction to the Luxembourgish education system

A closer look at language regime and languages of instruction in the traditional Luxembourgish education system

Language demands – with Luxembourgish, German, French, along with foreign language (mostly English) – are challenging.



Population

Luxembourg is characterized by a *super-diverse population* with inhabitants belonging to various socio-economic, cultural and linguistic backgrounds (Eurydice, 2022)

Distribution of Luxembourg's population in terms of nationality (Statec, 2024)

Nationalité	2003	2023
Luxembourg	277.600	347.402
Allemagne	10.200	12.678
Belgique	15.900	19.205
France	21.550	49.104
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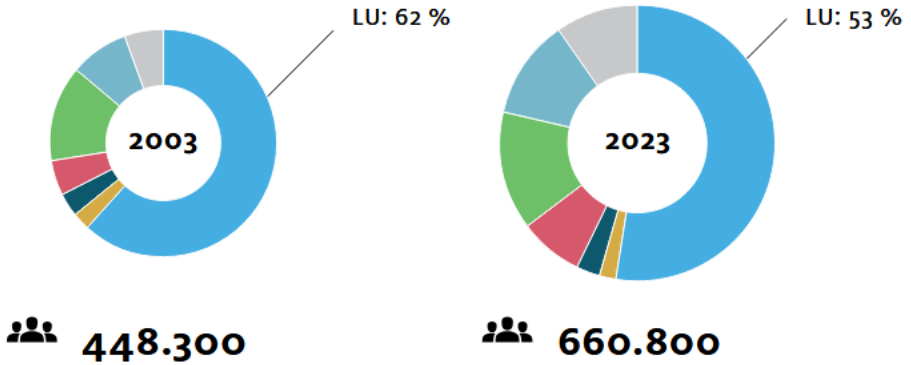


In the 2021 census, **around half of the respondents** stated Luxembourgish as their first language. Notably, **61.5%** generally used more than one language in a private and professional context and Luxembourgish is also spoken as a second language.

Student population – Changes over time

Student population by first language spoken at home (Backes & Lenz, 2024, 2021)

In public primary schools (all programs)

- During the 2022/23 school year, only **31.9%** of all the pupils in the enseignement fondamental spoke Luxembourgish as their first language. This proportion was **37.8%** during 2014/15 (45.8% during 2009/10).

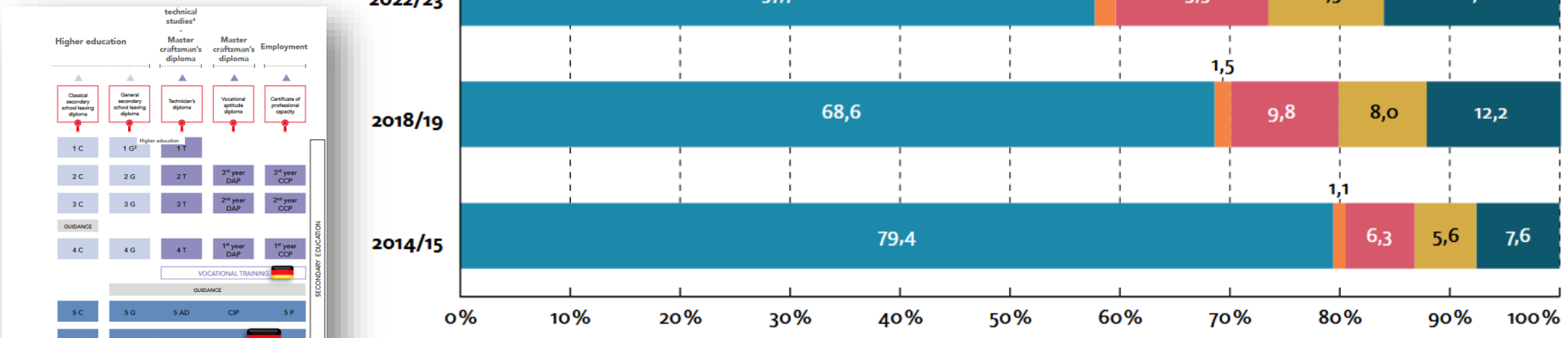
In public secondary schools (all programs)

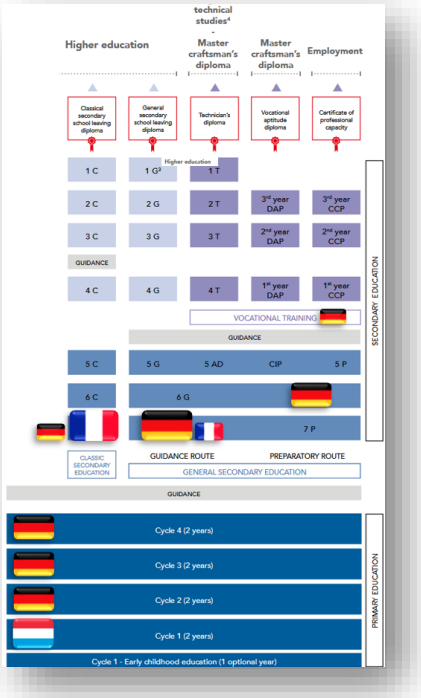
- During the 2022/23 school year, **36.7%** of all the pupils in the enseignement secondaire spoke Luxembourgish as their first language. This proportion was **50.4%** during 2014/15 (58.5% during 2009/10).

Note: The first language is not always the only language of a student, nor is it the most important, but only the one entered first by the responsible. Thus, it can be understood as a proxy.

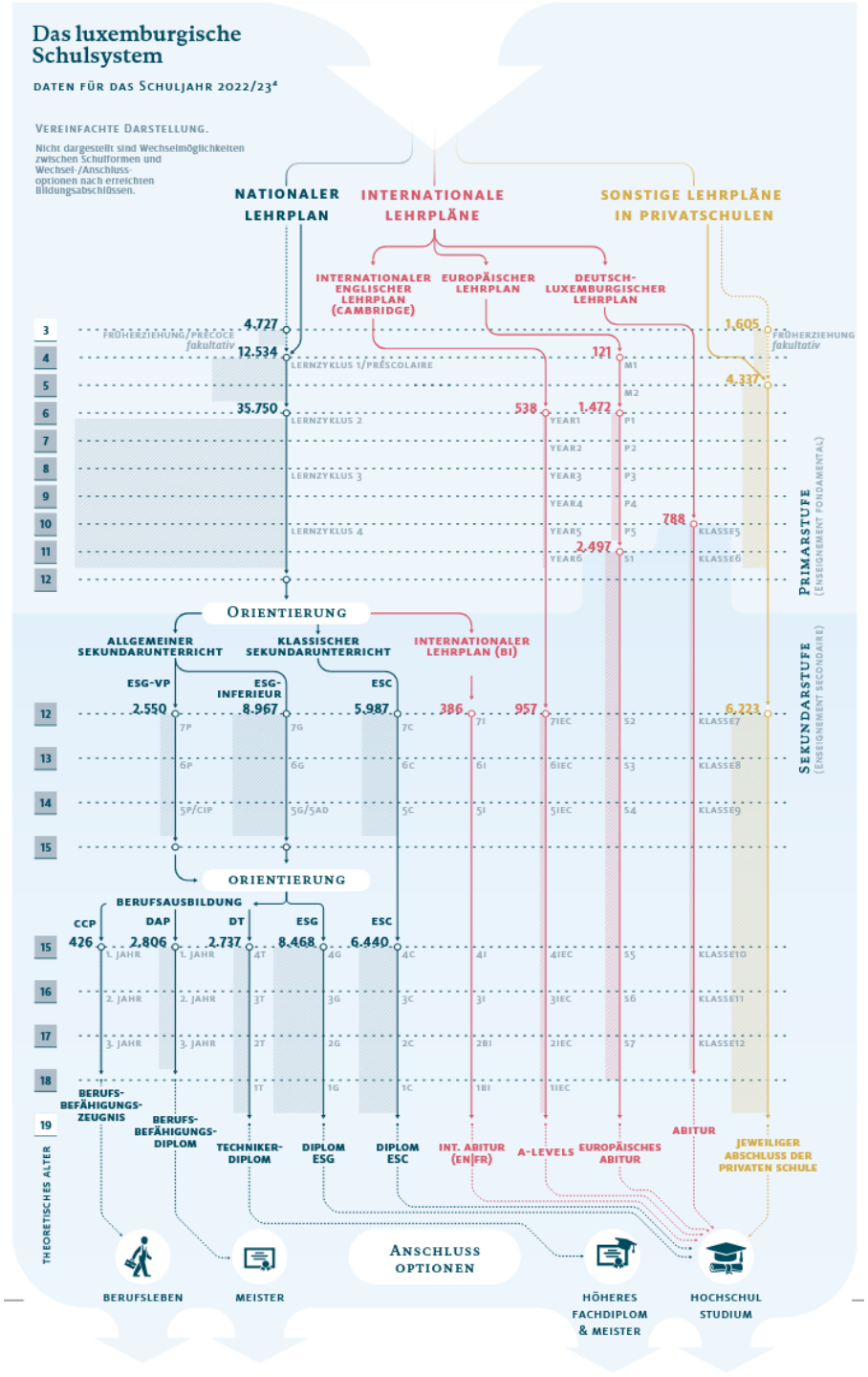
Student population – Changes over time

First language of secondary school pupils with Luxembourgish nationality (%) (Backes & Lenz, 2024)





The Luxembourgish school system – all offers



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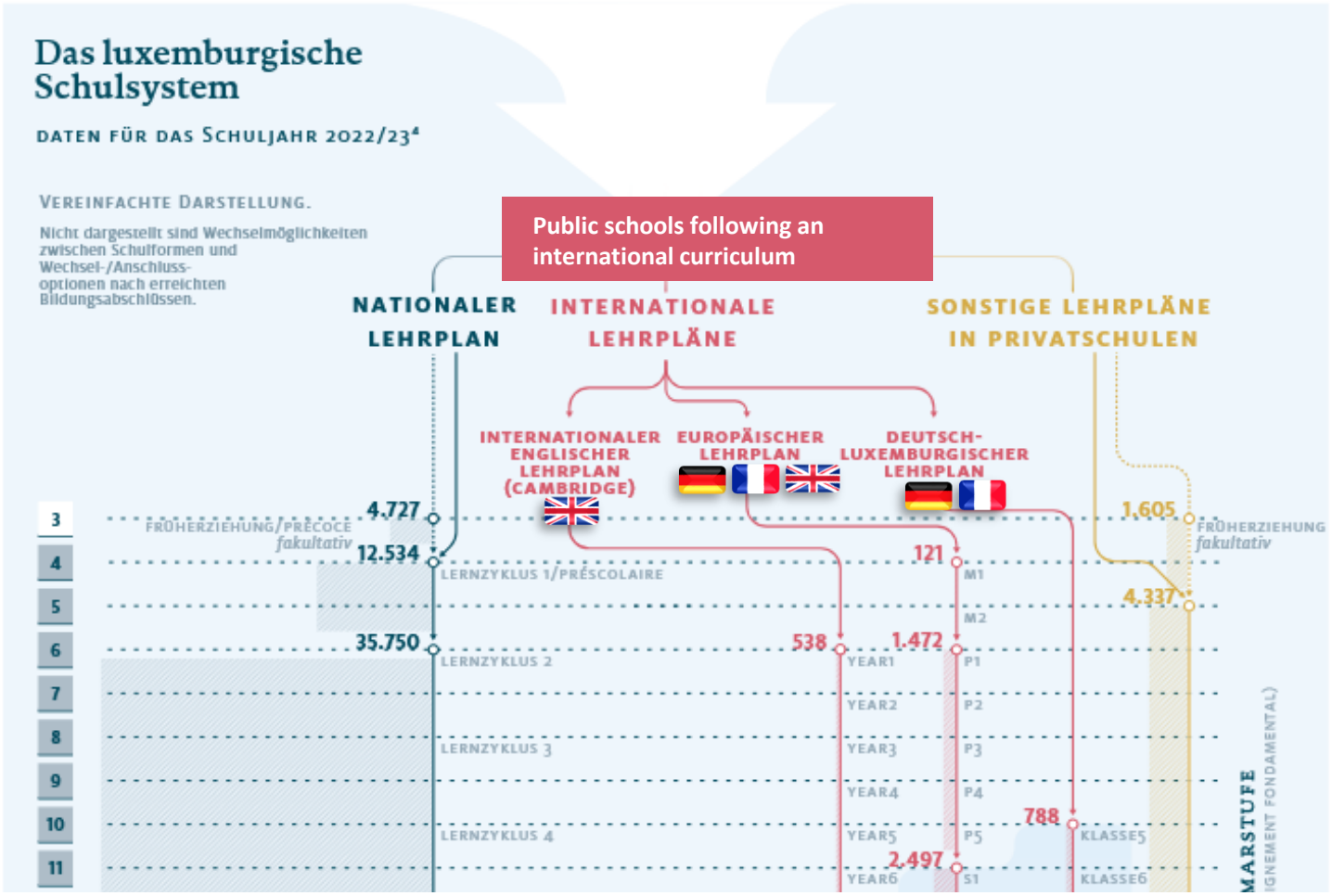
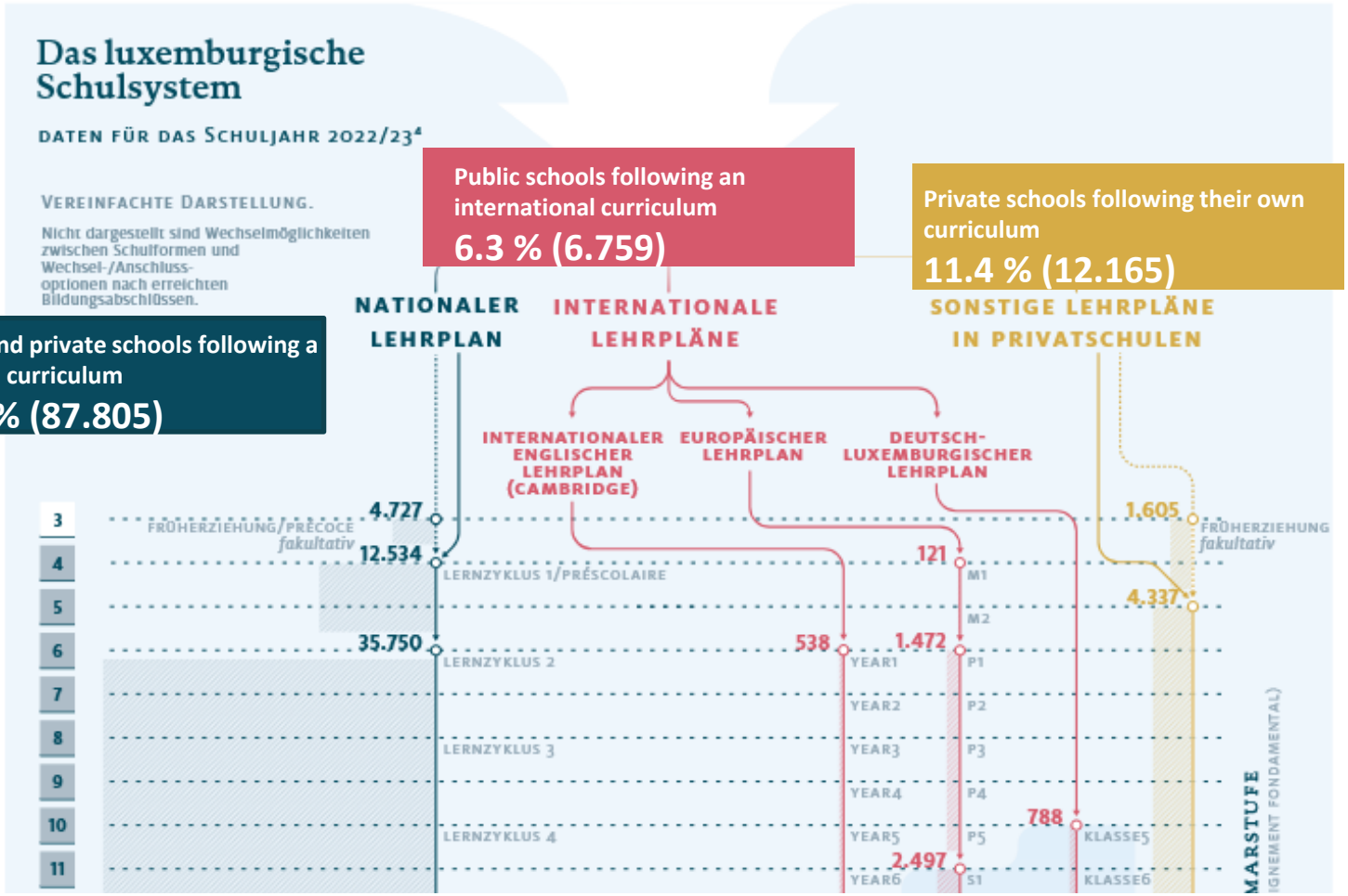
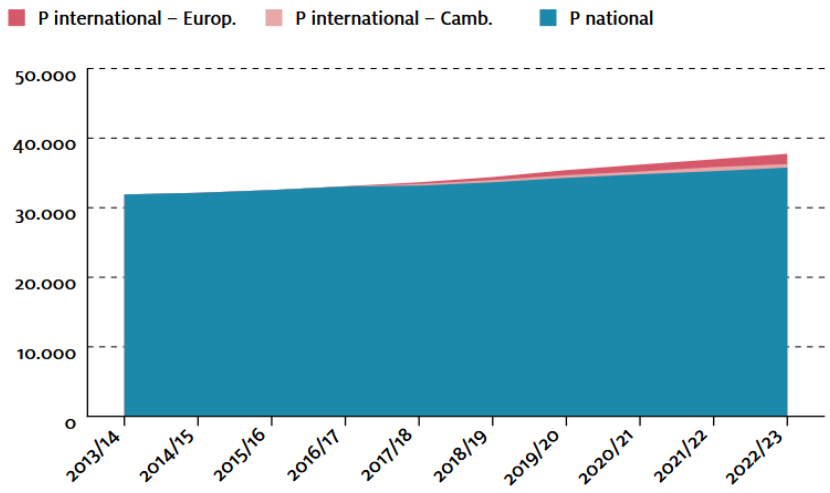


The Luxembourgish school system – all offers

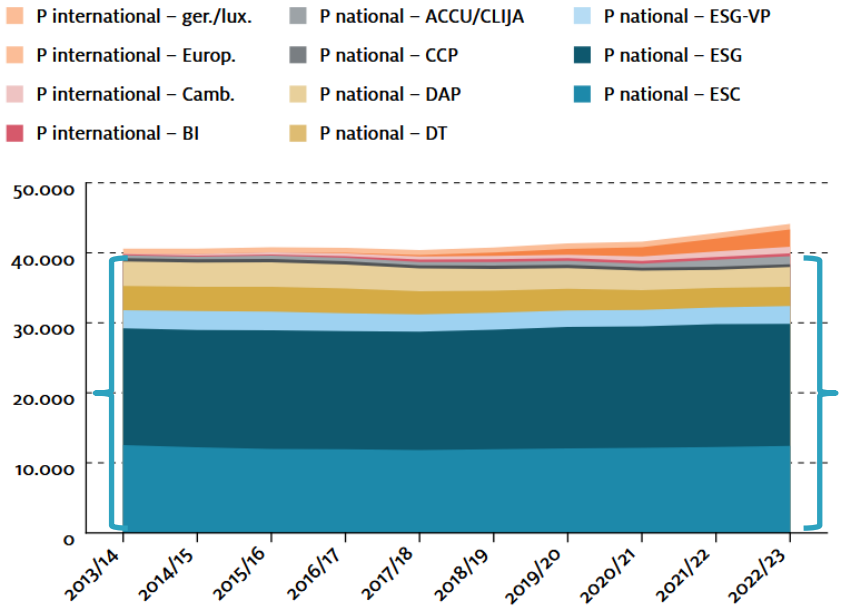


Development of distinct programs

Changes in numbers of students in terms of programs (Backes & Lenz, 2024)



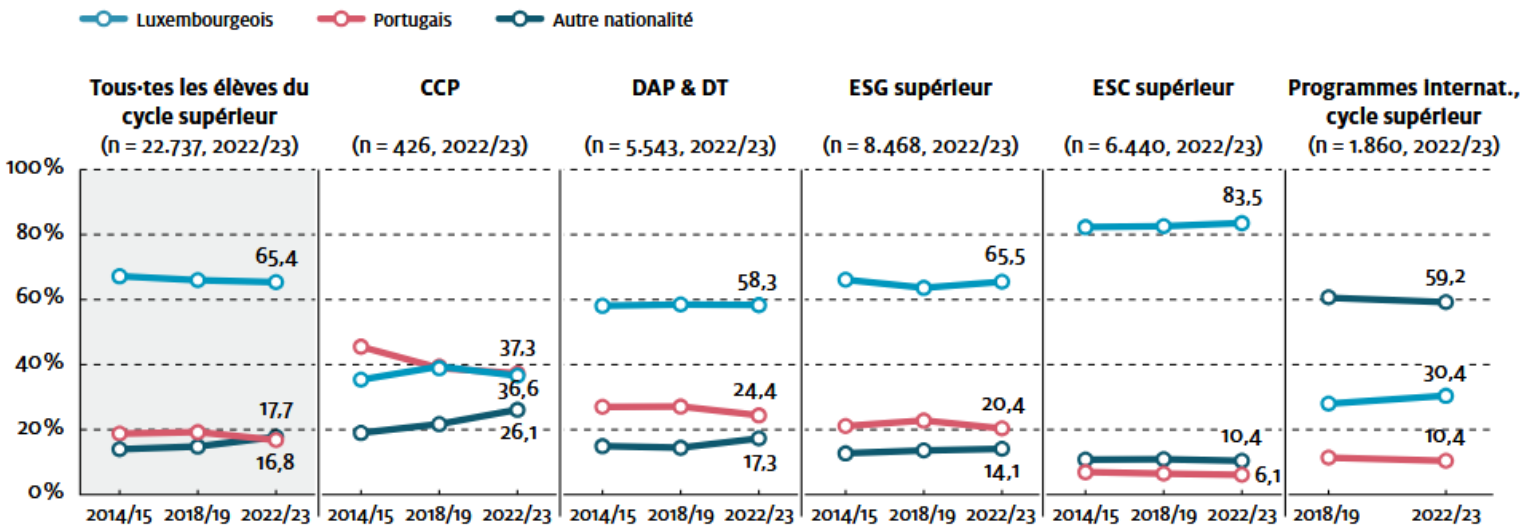
Primary education



Secondary education

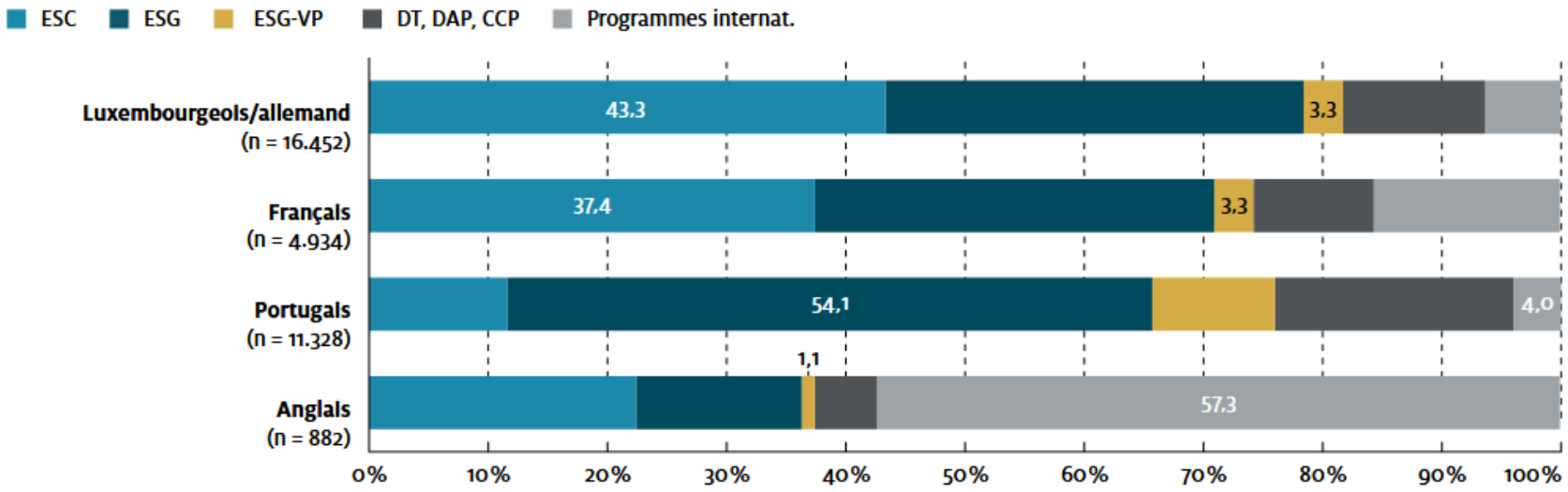
Placement of distinct student groups within the education system – Focus on secondary education

Changes in student groups' placement in terms of program and nationality (Backes & Lenz, 2024)



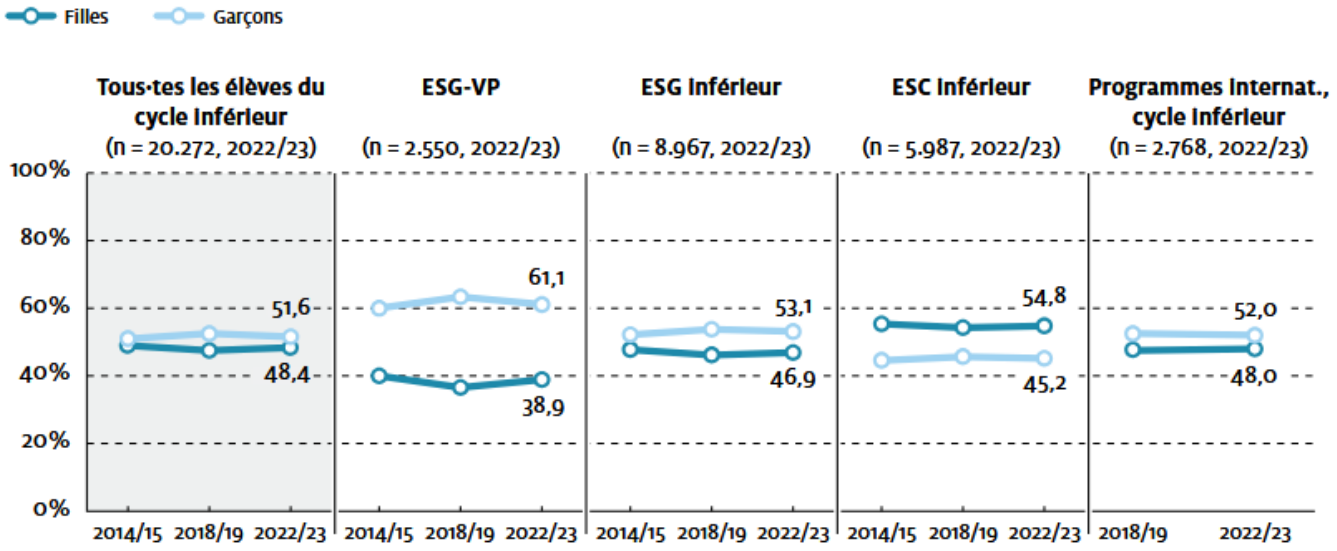
Placement of distinct student groups within the education system – Focus on secondary education

Percentages of students who attended various school types per language group in 2022/23 (%) (Backes & Lenz, 2024)



Placement of distinct student groups within the education system – Focus on secondary education

Changes in student groups' placements in terms of program and gender (Backes & Lenz, 2024)



Educational inequalities

Definition

Inequalities are systematic variations in educational outcomes (e.g. track placement) along different axes (social origin, gender or migration)

Outcomes/Dimensions of educational inequalities

- Track placement, competencies, school marks, grade repetition, drop out, etc

Axes of educational inequalities

- Linguistic background, nationality, socio-economic background (SES), gender etc. (along with intersectionalities)

Educational inequalities often occur in stratified, choice-driven educational systems (Van de Werfhorst & Mijs, 2010; Pfeffer 2008) in which factors such as knowledge of the system and social and economic capital are potentially more influential than in other systems.

For example, we observe strong disparities in track placement, competencies, school marks etc. in Luxembourg to the disadvantage of low SES students.

Interim conclusion:

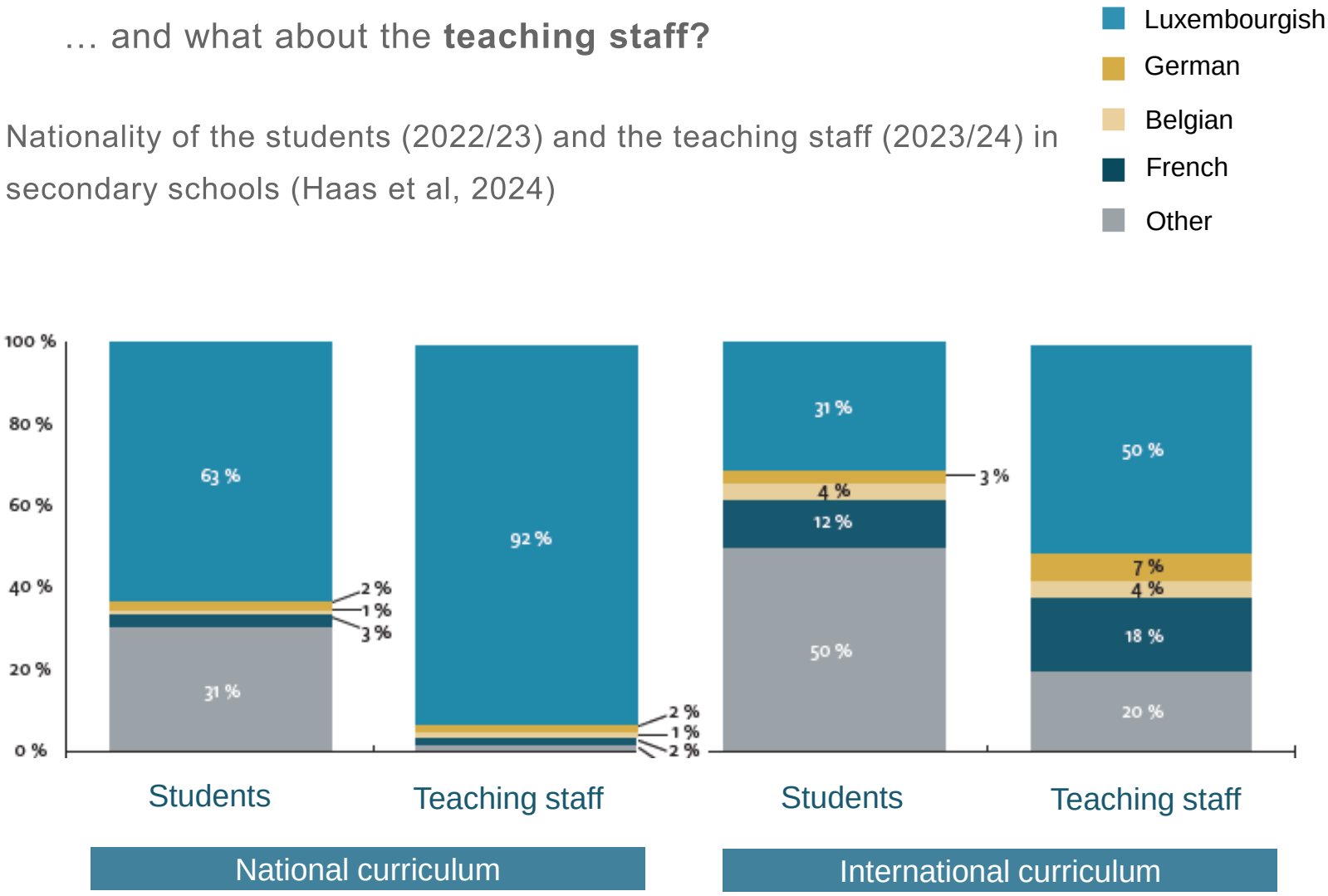
- Super-diverse student population
- Highly demanding trilingual regime
- Choice-driven system
- Educational inequalities

→ challenge for an educational system that aims to provide equal opportunities to all its students

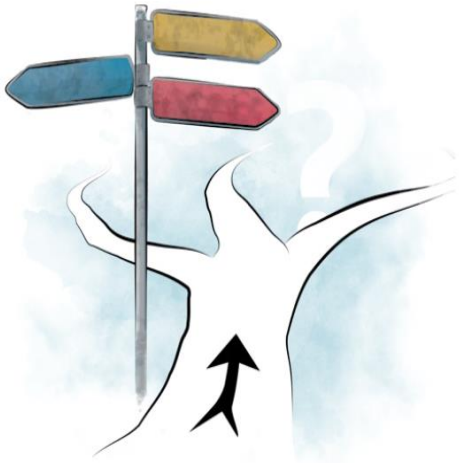
Excursus

… and what about the **teaching staff?**

Nationality of the students (2022/23) and the teaching staff (2023/24) in secondary schools (Haas et al, 2024)

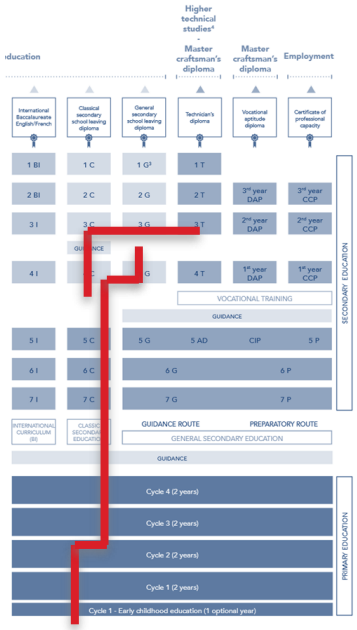


Change of perspective – A challenge for the students (1/4)

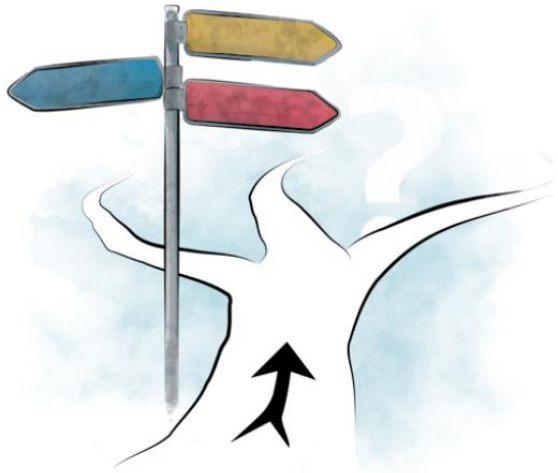


Educational trajectories from selected student perspectives: “And then the next decision came again” (IBIO; Backes, 2015)

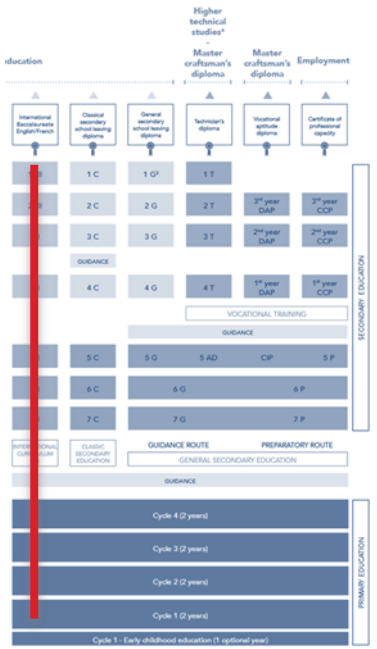
‘The more choice I had, the less I could decide. [...] And sometimes I wished that they [my parents] would show me a way. [...] They didn't want to interfere, because it was supposed to be my decision. And then I can't blame anyone. It was always my fault because I made the wrong decision. But you never know what it was all good for’. (Student with strongly interwoven pathways)



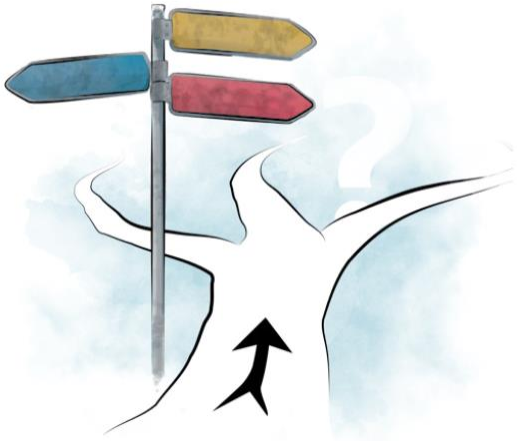
Change of perspective – A challenge for the students (2/4)



‘You're still so young and you already have to get your life on track somehow’.



Change of perspective – A challenge for the students (3/4)



‘I made a big effort to move [upwards] from the preparatory track to the regular system [into the adapt class]. There are many more future opportunities to get further education. […] I learned a lot and was very motivated. The teachers knew that I was motivated to transition upwards and supported me … I thought it was better I’m learning now instead of working somewhere on the construction site as my father does.’

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Change of perspective – A challenge for the students (4/4)

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Educational trajectories and language regime

- On language of literacy acquisition

  '[Learning in another than your home language] makes it harder to read, harder to learn and harder to understand. And then, in the test, you think 'Okay, I've understood the question, I know the answer, but I can't express myself the way I want to'.'

- On educational decision-making (passage primary-secondary)

  'A chain is only as strong as the weakest element and the problem in my case was French. And French is very important in Luxembourg'.

- On late track changes within secondary schooling

  'When entering the ESC [the academic track] I had problems, because at the RT [former track] we had all subjects in German and then at ESC suddenly in French, so biochemistry and physics were suddenly in French'.

Summary

Conclusion

- Super-diverse student population
- Highly demanding trilingual regime
- Highly stratified system
- Educational inequalities

All such characteristics make it challenging for an educational system that aims to provide equal opportunities to all its students and for students (and parents) who search for the right track or school offer

- Current educational reforms regarding language flexibility seem to recognize the mismatch.
- Further research is needed to
  - evaluate the outcomes and monitor whether targeted student groups benefit from specific programs
  - study intended and unintended consequences of structural adjustments and
  - analyse structural relationships through statistical analyses (numbers) along with students' perspectives through qualitative approaches (voices)

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Thank you for your attention!

susanne.backes@uni.lu
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Dr. Thomas Lenz

Education for all?

The Luxembourgish education system and its pitfalls.

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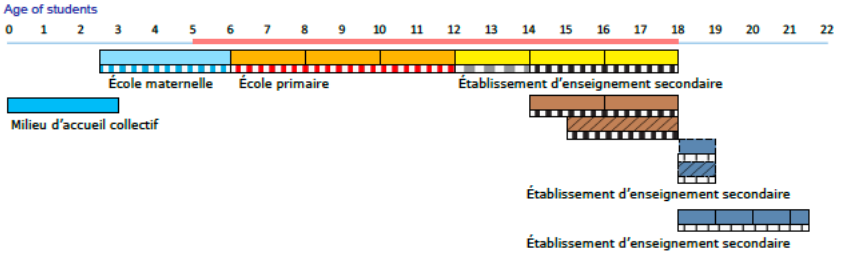
Tracking and differentiation in different countries

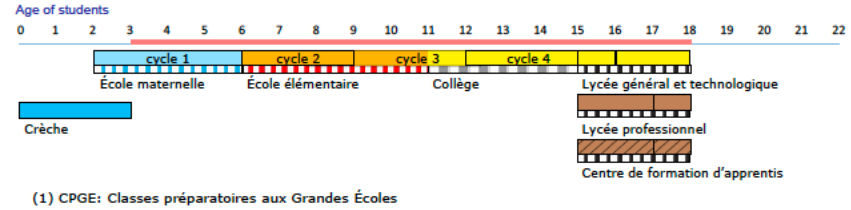
Early tracking, a lot of differentiation

Late tracking, little differentiation

Belgium – French Community

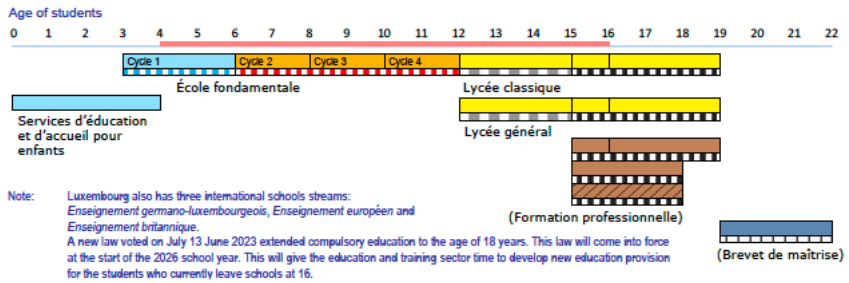


France



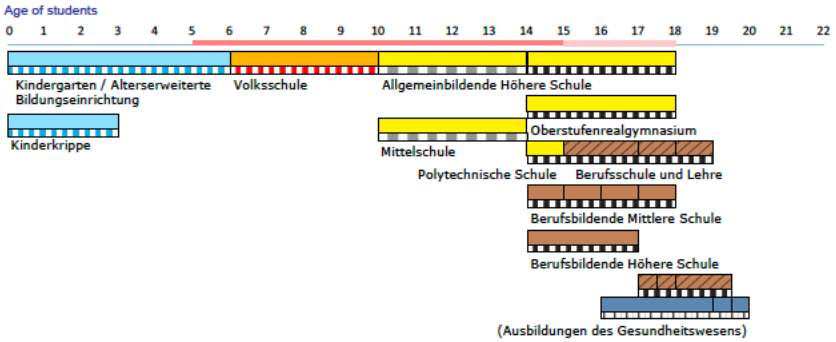
(1) CPGE: Classes préparatoires aux Grandes Écoles

Luxembourg

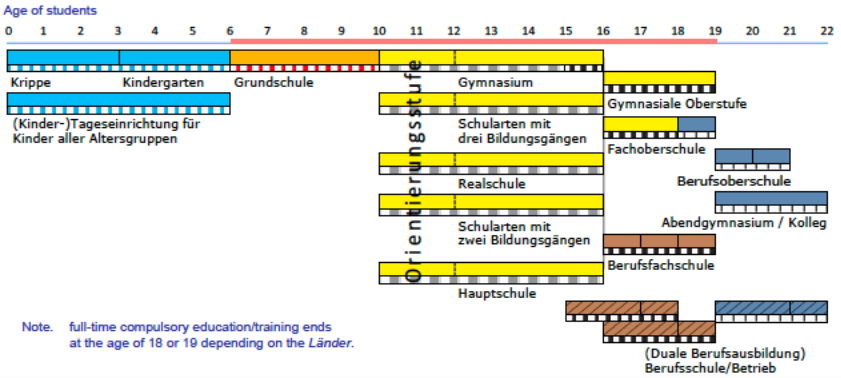


Note: Luxembourg also has three international schools streams: *Enseignement germano-luxembourgeois*, *Enseignement européen* and *Enseignement britannique*.
A new law voted on July 13 June 2023 extended compulsory education to the age of 18 years. This law will come into force at the start of the 2026 school year. This will give the education and training sector time to develop new education provision for the students who currently leave schools at 16.

Austria



Germany



Note. full-time compulsory education/training ends at the age of 18 or 19 depending on the *Länder*.

Tracking and Mobility in Luxembourg

Tracking: Students are tracked at around **age 12** after completing the *cycle 4* of primary education.

Criteria for Tracking:

- Academic performance (especially in **German, French, and Mathematics**).
- Teacher assessments and parental consultation.
- Heavy emphasis on **language proficiency** due to trilingual curriculum.

Educational Mobility

Low Upward Mobility: Once students are placed in a lower track, it is **very difficult to switch upward (language)**.

Rigid Transitions: Movement between pathways (e.g. vocational to general or general to classical) is rare (language).

High Inequality: According to **EpStan, OECD and PISA** data, Luxembourg has **one of the widest achievement gaps** between:

Native vs. migrant students

High vs. low socio-economic status (SES) students

Language Barriers:

Children from **non-German- or non-French-speaking homes** struggle early.

Language of instruction changes multiple times which disproportionately affects **immigrant** and **working-class** students.

Support Measures:

Programs like **REVIS** and **language support classes** exist but are **not sufficient** to bridge gaps.

Early disadvantage tends to **accumulate**, especially among students with fewer family resources.

Social inequality and education

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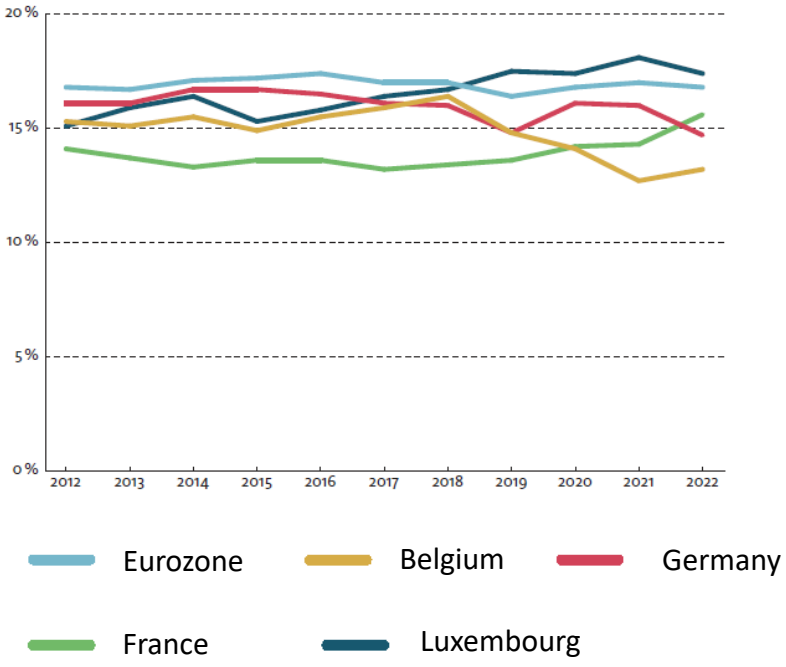
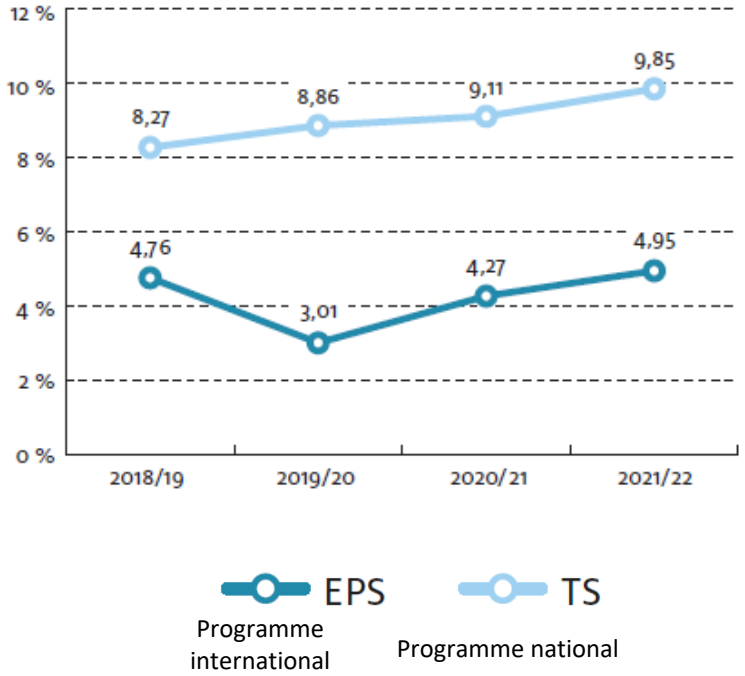
Poverty risk in Europe over time



STATEC 2024

Percentage of primary school students whose family receives REVIS benefits (LUX)



Sattler et al. 2024

Example: Mathematical skills and Socio-Economic Status (SES) from Cycle 2.1 to 3.1 to 4.1

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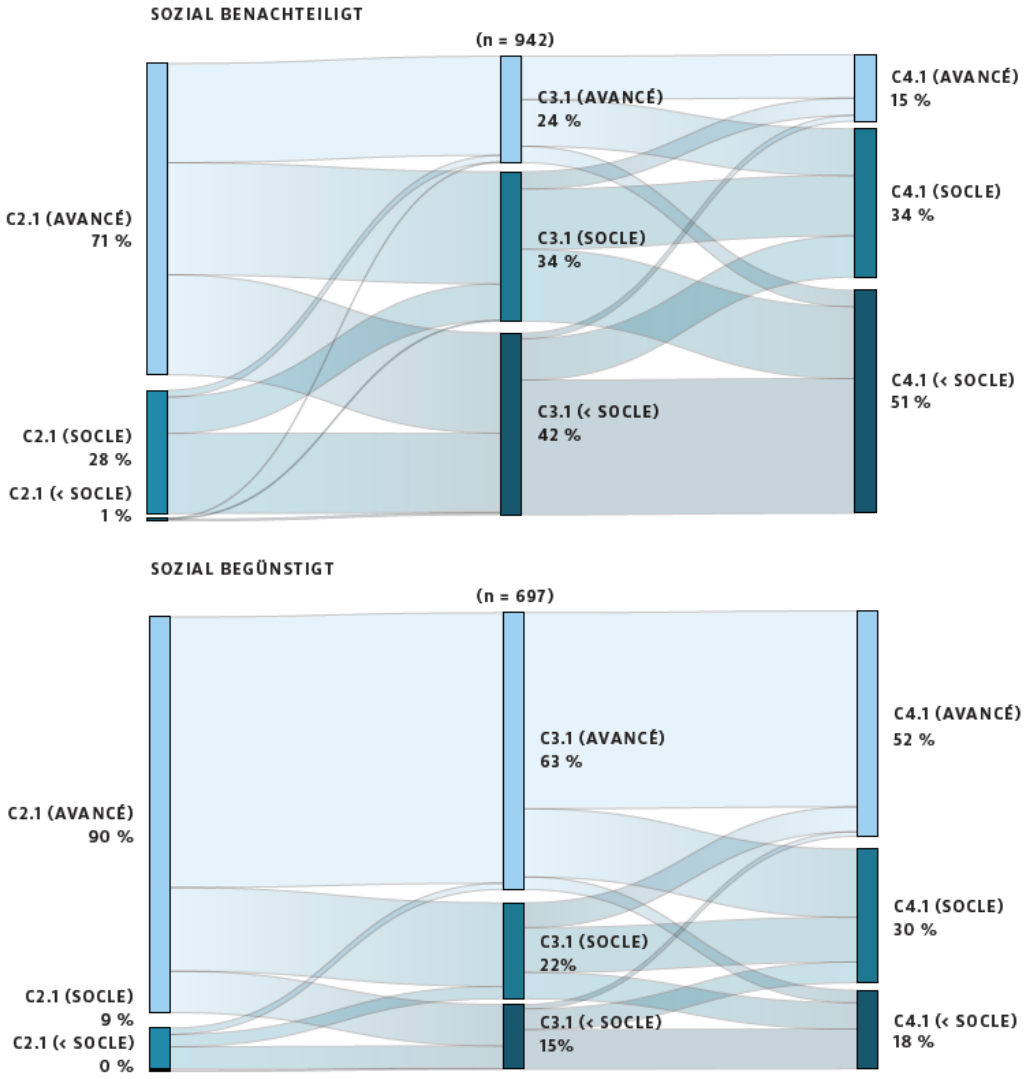
Primary education

1 – 3 – 5



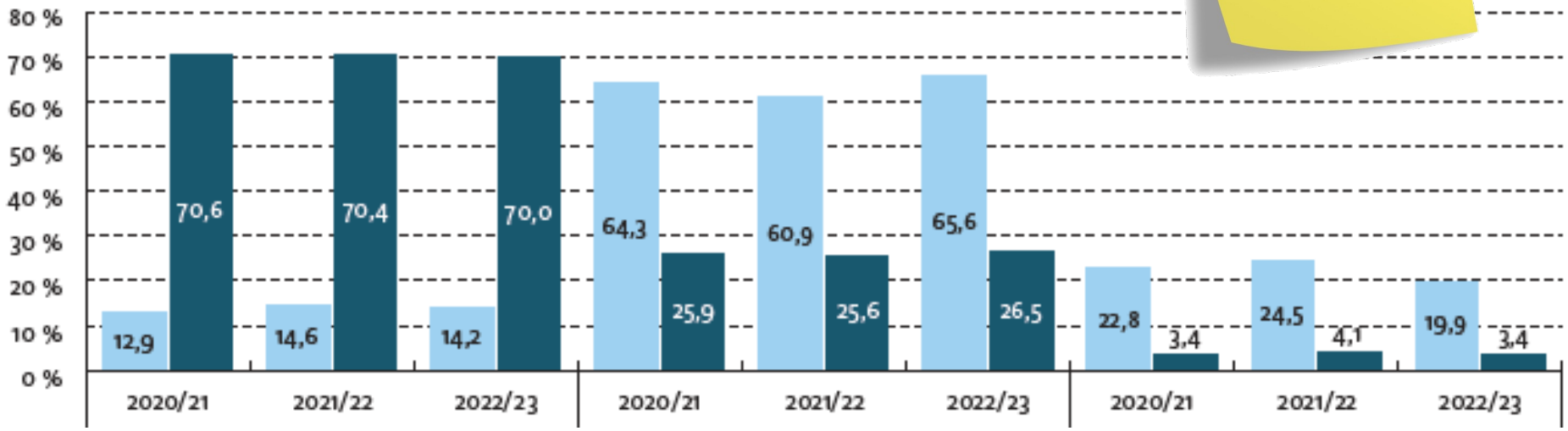
socioeconomically disadvantaged

socioeconomically advantaged

Ottenbacher et al. 2024

Example: Transitions and Socio-Economic Status (SES)

Transition from primary to secondary school

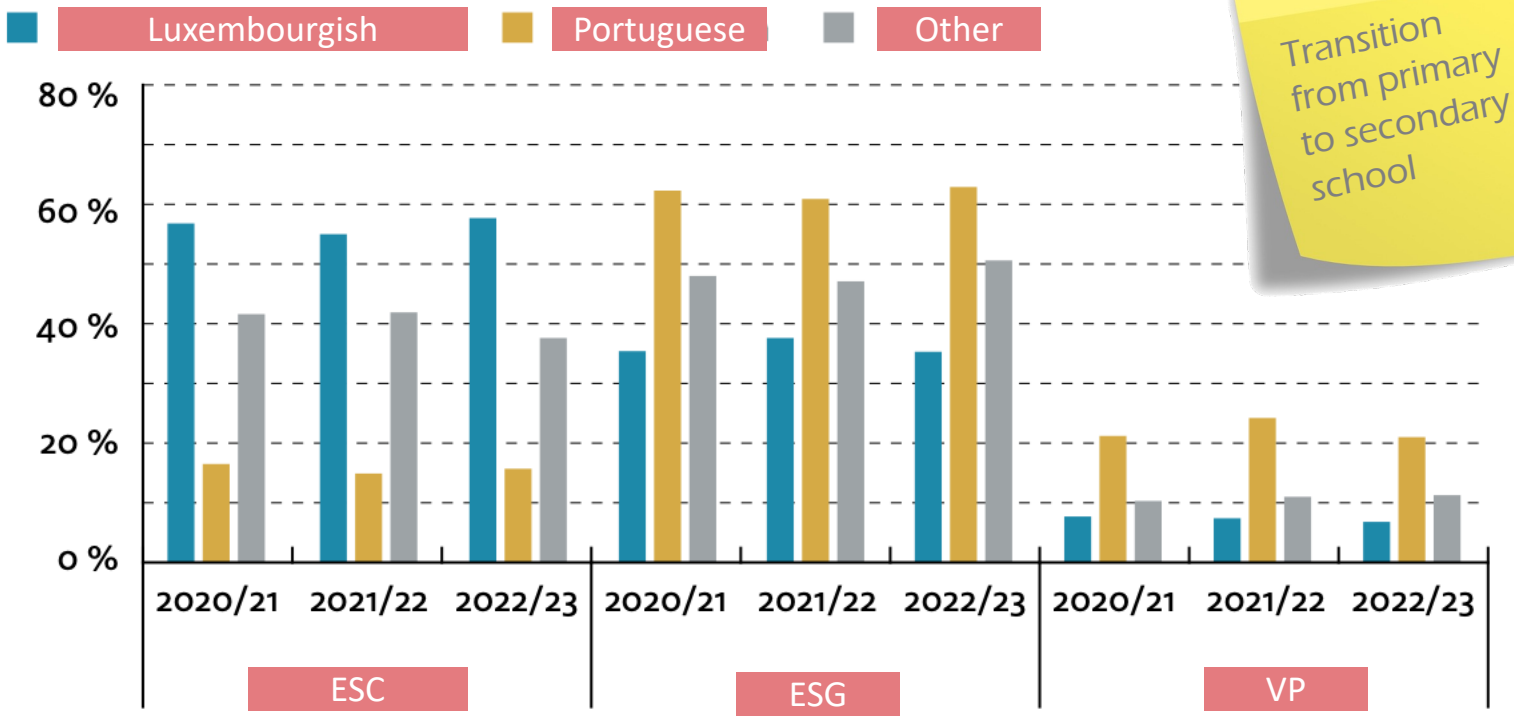


ESC ESG VP

low SES high SES

Backes/ Hadjar2024

Example: Transitions and Language spoken at home



Transition from primary to secondary school

Example: Orientation toward the ESC by municipalities (2017 to 2023)

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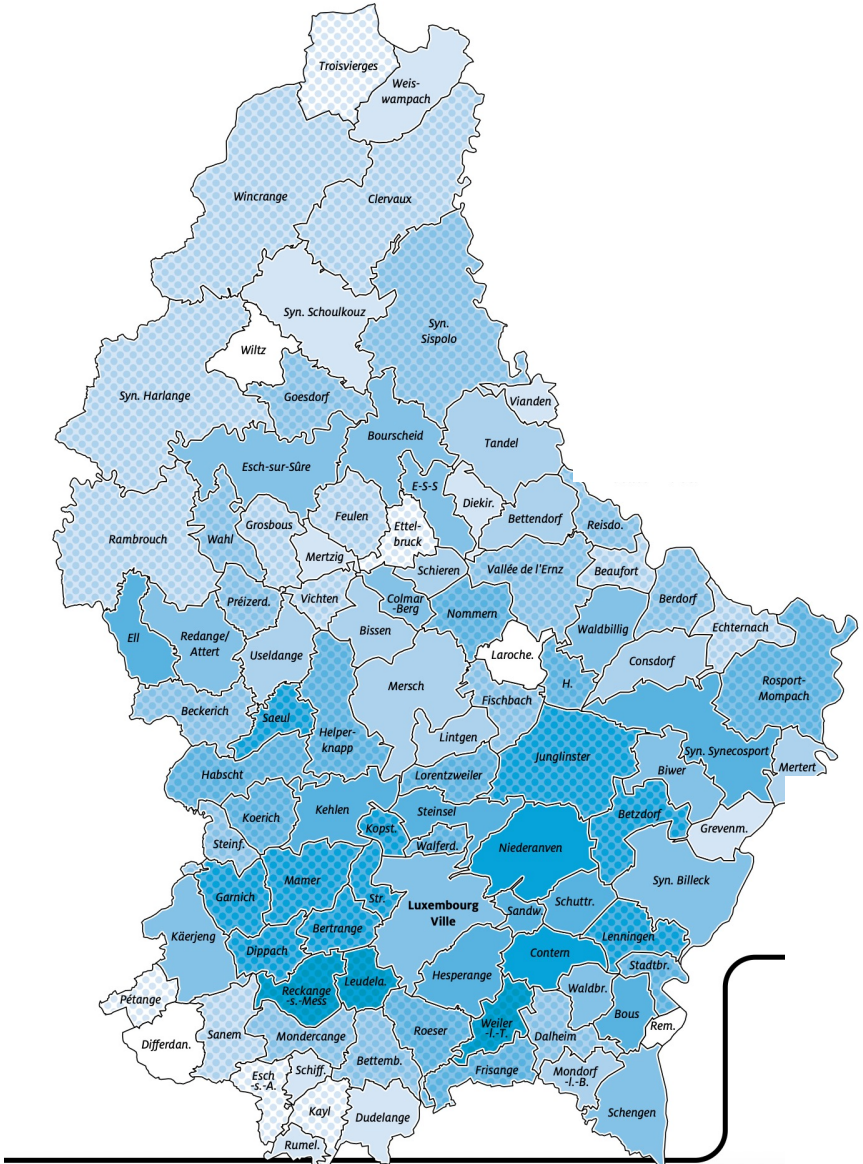


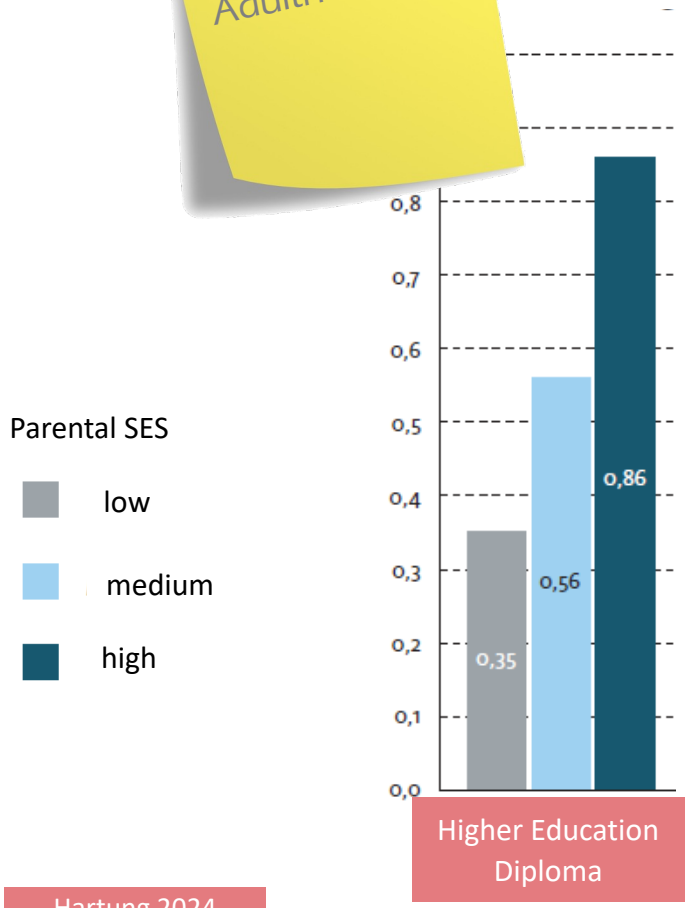
Geographical distribution and inequality

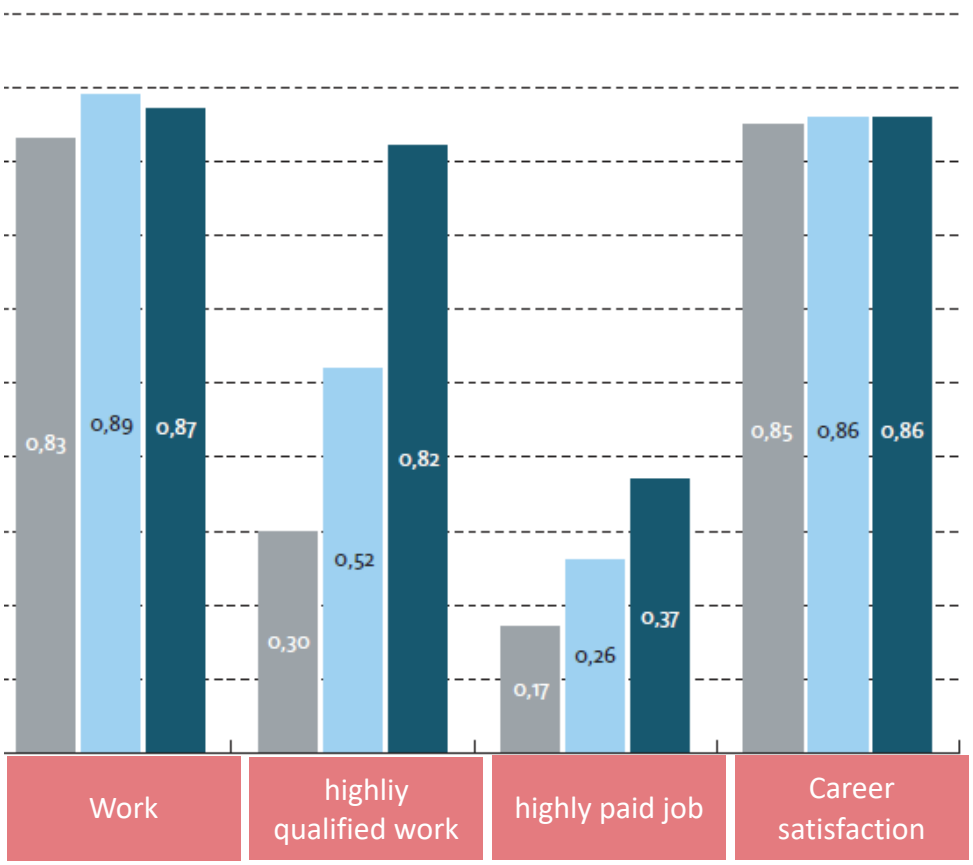
≤ 20 (4)	≤ 50 (12)
≤ 25 (5)	≤ 55 (11)
≤ 30 (9)	≤ 60 (8)
≤ 35 (10)	≤ 65 (10)
≤ 40 (10)	≤ 70 (2)
≤ 45 (13)	≤ 75 (3)

Lenz/ Backes 2024

Example: Relationship between career and parental SES

Adulthood





Relationship between migration background and academic performance

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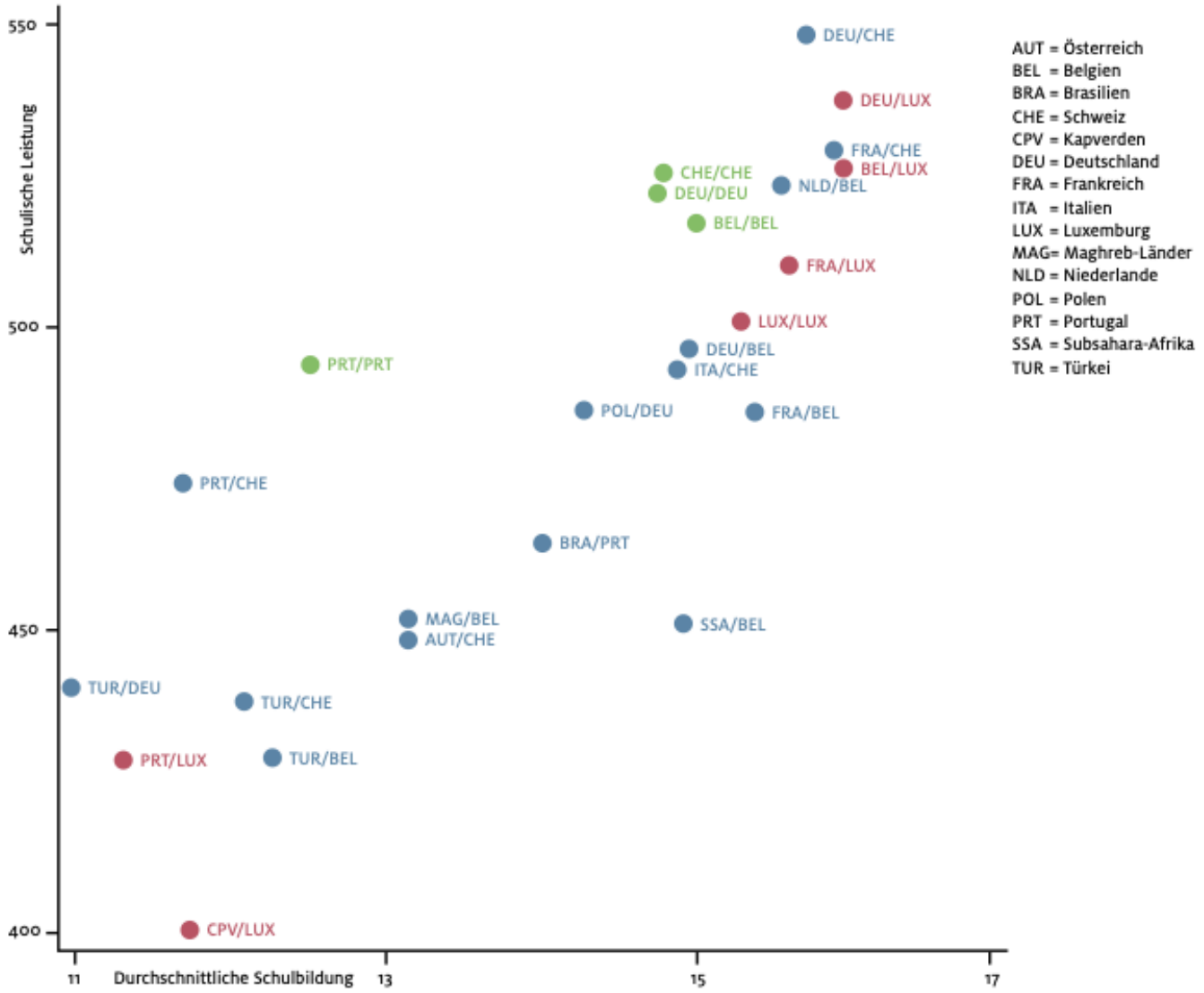
International Comparison



Chauvel et al. 2024

10.07.
2025

The (Major) Challenges of the Luxembourgish Education System

Fondation IDEA – Internal seminar

The Luxembourg School Monitoring Programme: Insights and Future Directions

Dr. Sonja Ugen

Dr. Joanne Colling

www.epstan.lu

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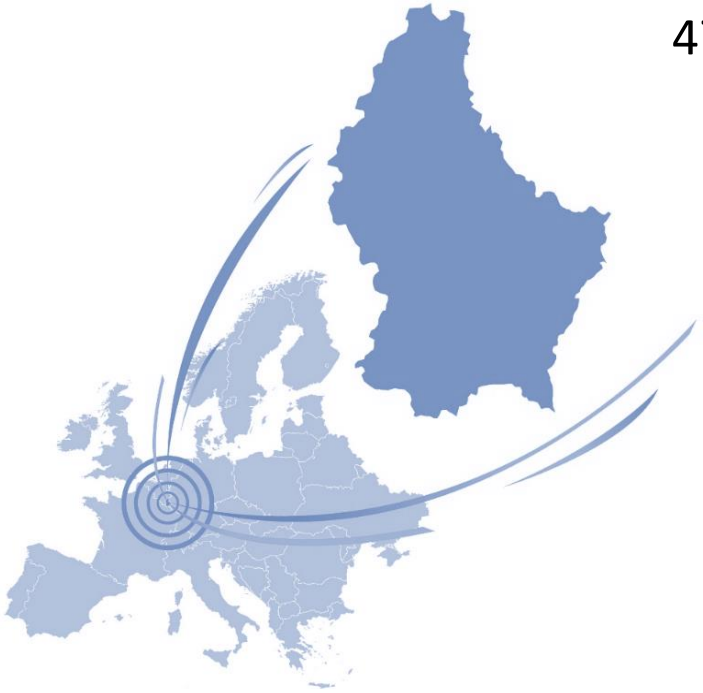
LUCET | LUXEMBOURG CENTRE FOR EDUCATIONAL TESTING

LUXEMBOURG IS A HIGHLY DIVERSE AND MULTILINGUAL COUNTRY

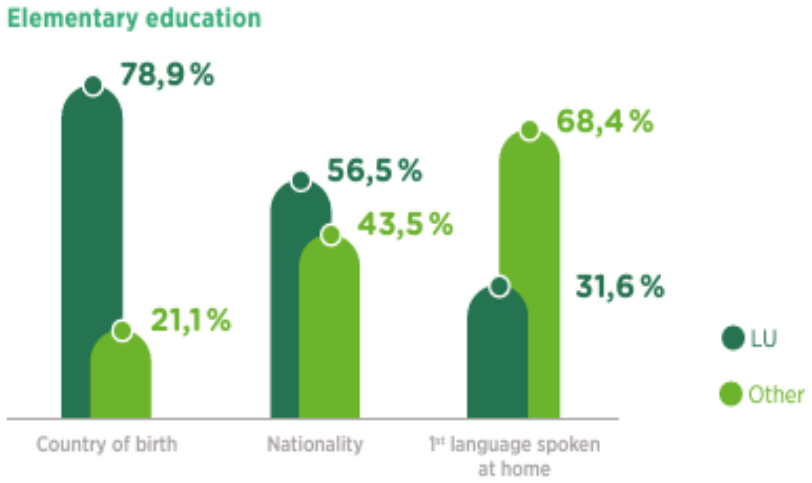
Officially trilingual

High language expectations in the education system



672.050 inhabitants (STATEC, 2024)

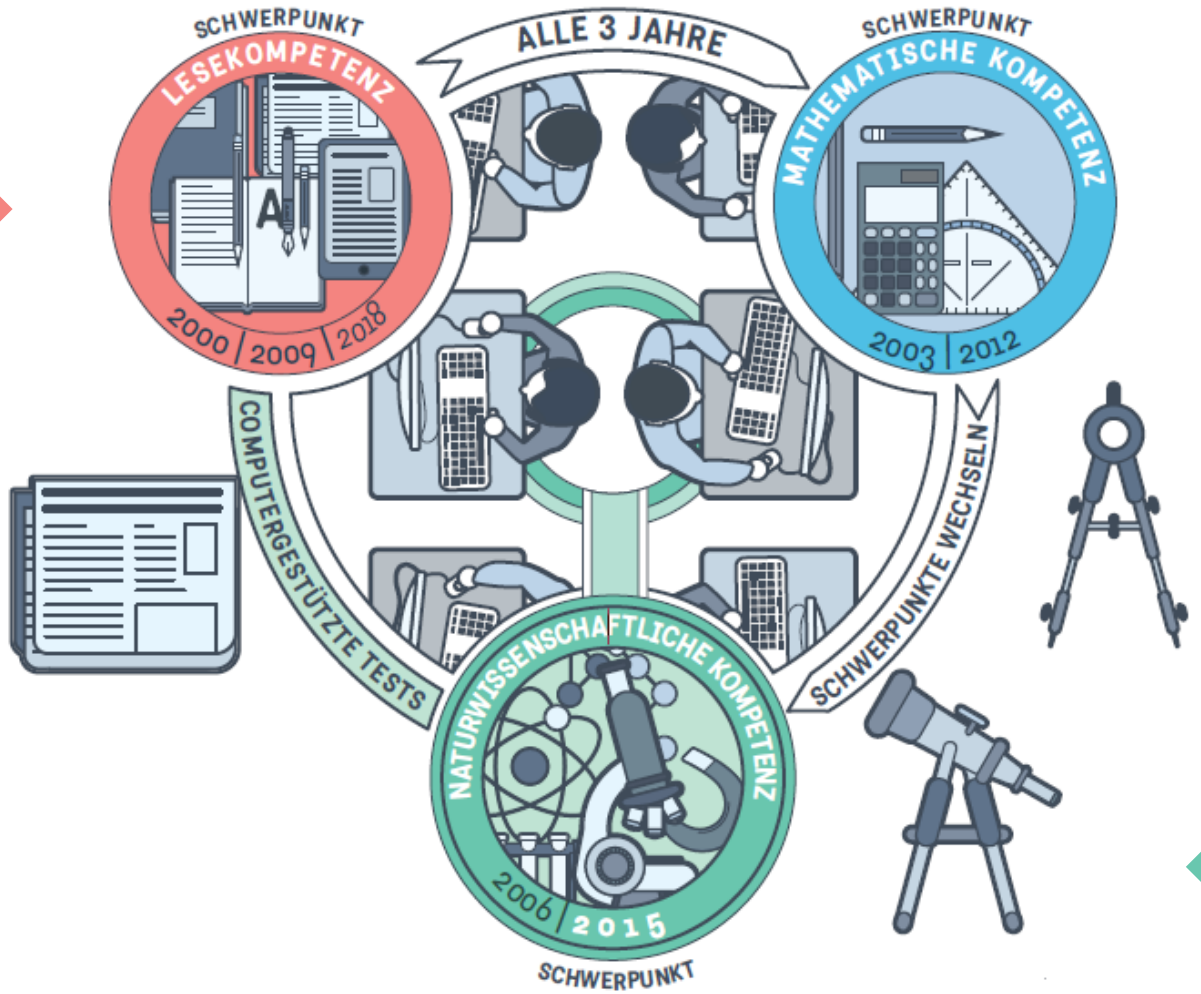
47.3% non-Luxembourgish residents



(SCRIPT, 2024)

AN OVERVIEW ON LUXEMBOURG'S MOST RECENT PISA RESULTS (2018)

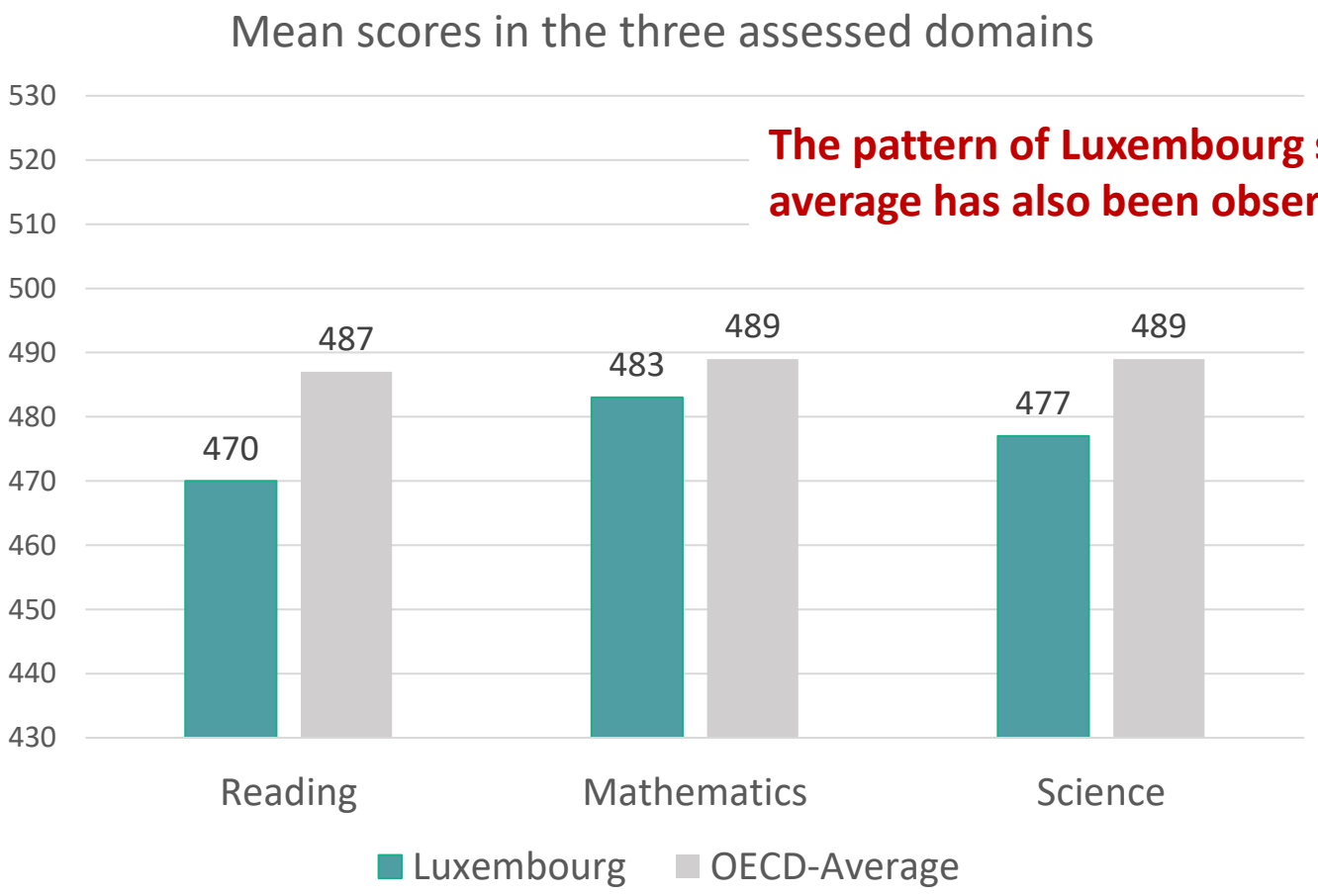
Focus domain assessed with a higher amount of items



Side domains assessed with a smaller amount of items

Figure adapted from Boehm et al. (2016; p. 5)

AN OVERVIEW ON LUXEMBOURG'S MOST RECENT PISA RESULTS (2018)



The pattern of Luxembourg scoring below the OECD-average has also been observed in previous iterations

Figure adapted from Boehm et al. (2020; p. 14)

AN OVERVIEW ON LUXEMBOURG'S MOST RECENT PISA RESULTS (2018)

Performance differences between academically advantaged and disadvantaged student groups in Luxembourg

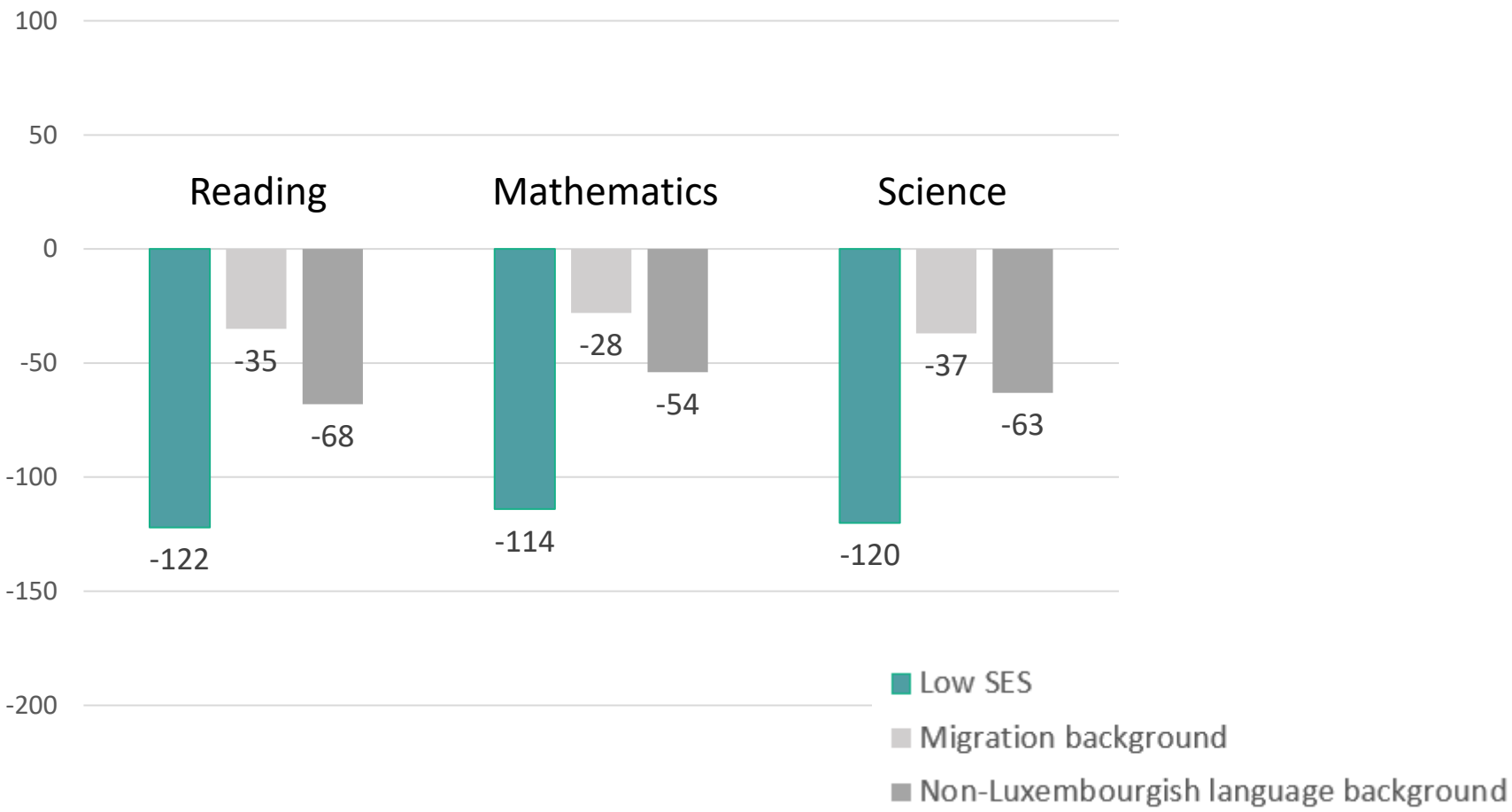
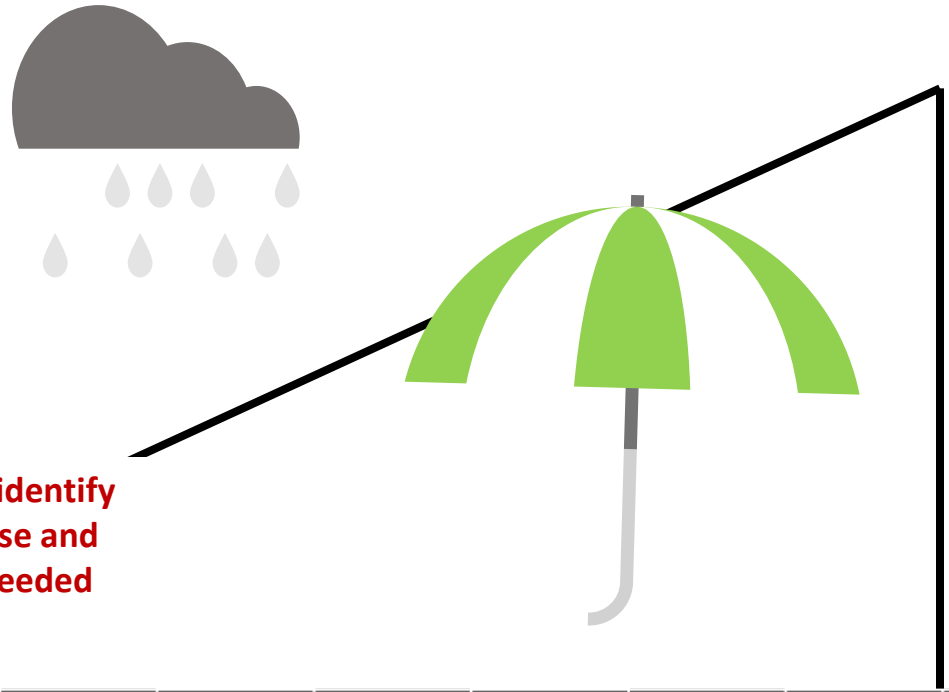


Figure adapted from Boehm et al. (2020; p. 43; 49; 57)

CREATION OF A NATIONAL SCHOOL MONITORING PROGRAMME



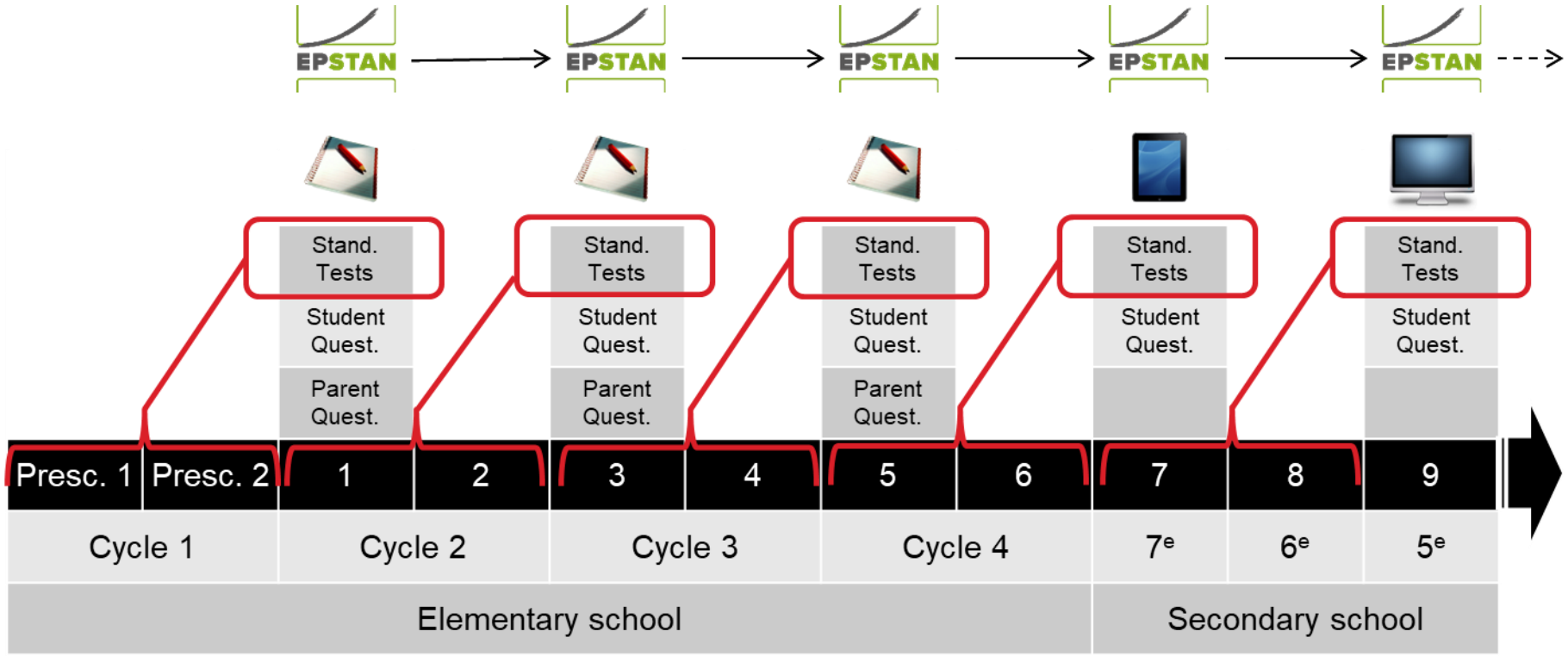
The PISA do not allow to identify where in inequalities arise and what adjustments are needed

PISA

7e	6e	5e	4e	3e
%	%	%	%	%
0,3	10,0	48,3	40,3	1,1

Presc. 1	Presc. 2	1	2	3	4	5	6	7	8	9
Cycle 1		Cycle 2		Cycle 3		Cycle 4		7e	6e	5e
Elementary school								Secondary school		

ASSESSMENT TIME POINTS OF THE ÉPREUVES STANDARDISÉES (ÉpStan)

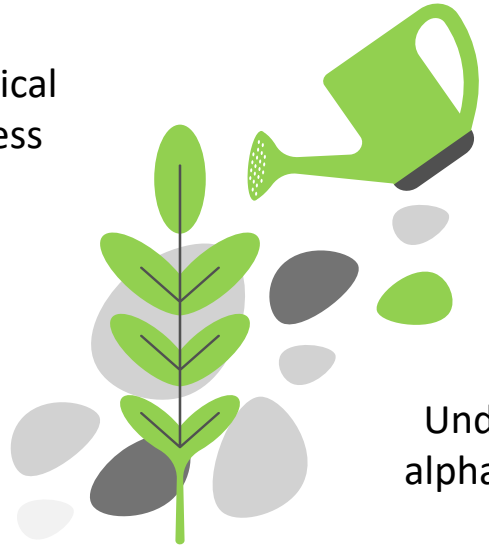


At the beginning of each new learning cycle, the **ÉpStan allow to monitor** whether the students have achieved the **competence levels of the previous learning cycle** as defined in the national education standards.

STANDARDIZED ACHIEVEMENT TESTS IN EDUCATIONAL KEY DOMAINS

Early literacy skills (G1)

Phonological awareness



Understanding the alphabetical principle

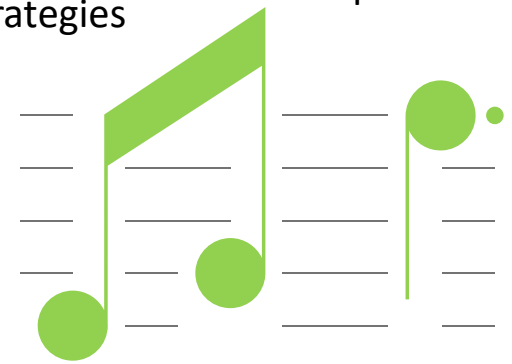
Visual discrimination

Assessed via an audio stream

Listening comprehension (G1 and G3)

Construing information and activating listening strategies

Identifying and applying information presented in an audio text



Different topics
(e.g., animals, family)

Different text forms
(e.g., dialogues, radio broadcasts)

Assessed via an audio stream

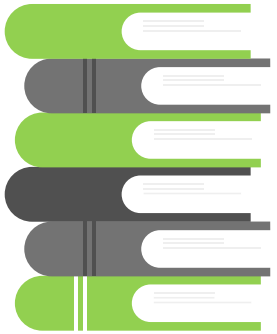
G1 G1 & G3

STANDARDIZED ACHIEVEMENT TESTS IN EDUCATIONAL KEY DOMAINS

Reading comprehension (G3 to G9)

Identifying and applying information presented in a text

Different topics
(e.g., hobbies, friendship)



Continuous and discontinuous text forms (e.g., stories, recipes)

Construing information and activating reading strategies

Interpreting texts and drawing conclusions by activating previous knowledge

G3 – G9

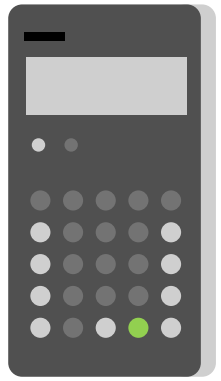
G5 – G9

Mathematics (G1 to G9)

Numbers and operations

Sizes and measures

Dependence and variation



Space and shapes

Data

Contextualized and decontextualized
(e.g., problem solving, basic skills)

G1 – G5

G7 – G9

STUDENT (G1 TO G9) AND PARENT QUESTIONNAIRES (G1 TO G3)

Student questionnaire to collect information on:

- Student background characteristics (e.g., gender, language background)
- Educational trajectories
- Motivation (e.g., domain-general and domain-specific)
- Learning environments (e.g., class climate, teacher-student relationship)

Image generated with the assistance of ChatGPT (OpenAI) and DALL·E.

Parent questionnaire to collect information on:

- Family background (e.g., socio-economic status, language contact)
- Educational trajectories and early childcare attendance
- Parental support in learning
- Questionnaire available in four languages (e.g., German, French, Portuguese and English)

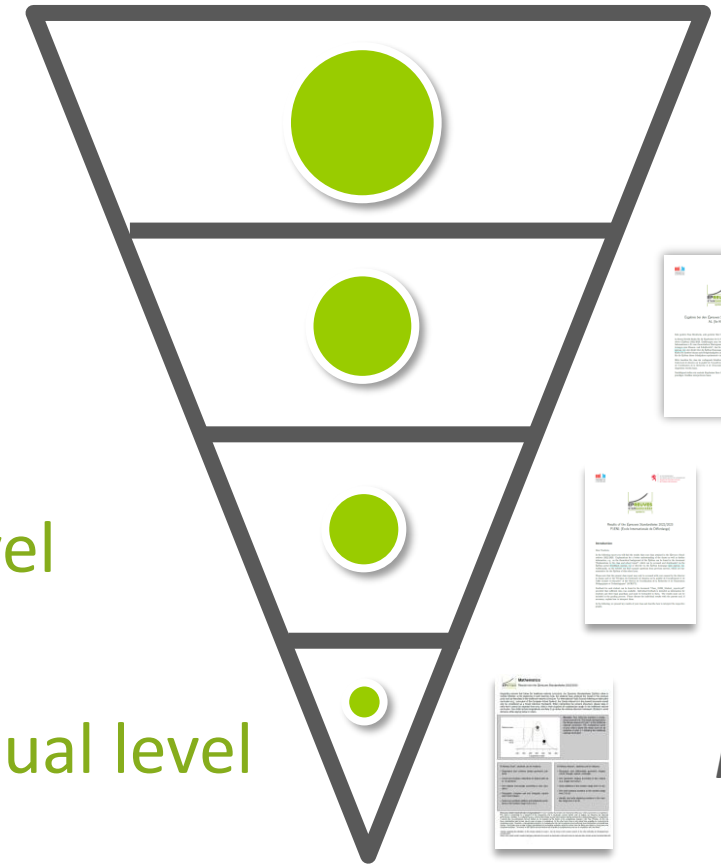
FEEDBACK AT DIFFERENT LEVELS

National level

School level

Class level

Individual level



dashboard.epstan.lu

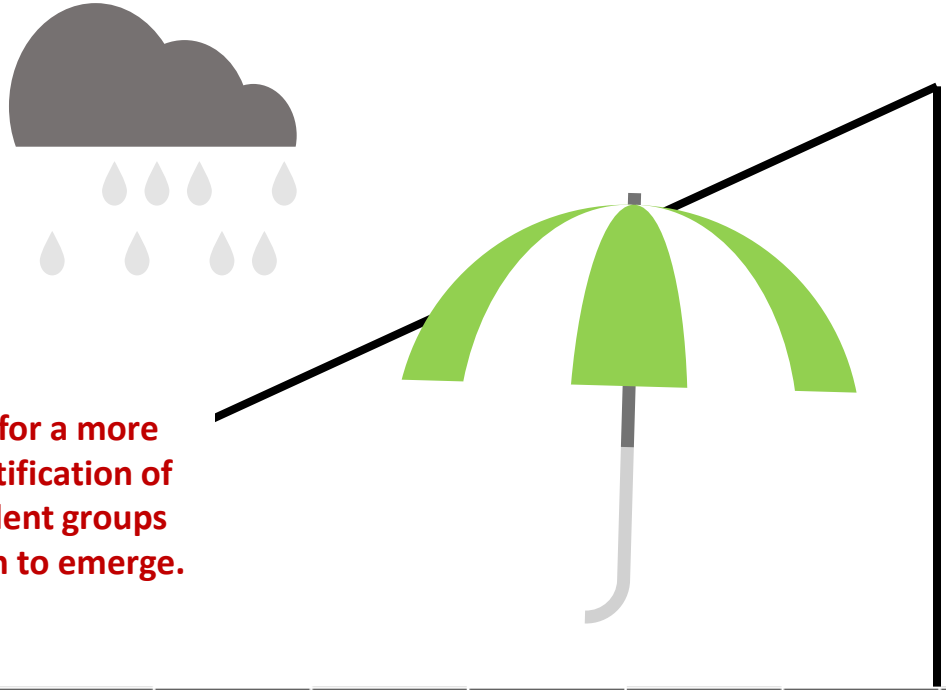
N = 188 school reports

N = 1590 class reports

N = 29.721 individual reports

Feedback provided in **three languages**:

IDENTIFICATION OF EARLY EDUCATIONAL INEQUALITIES



The ÉpStan data allows for a more timely and detailed identification of where and in which student groups existing inequalities begin to emerge.

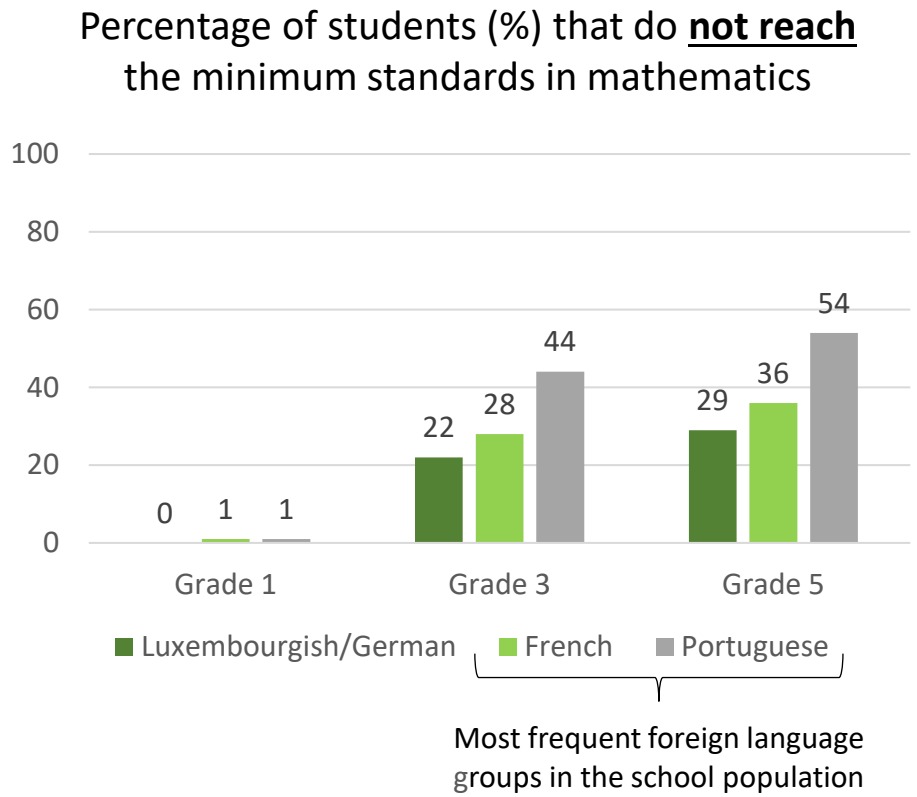
PISA

7e	6e	5e	4e	3e
%	%	%	%	%
0,3	10,0	48,3	40,3	1,1

Presc. 1	Presc. 2	1	2	3	4	5	6	7	8	9
Cycle 1		Cycle 2		Cycle 3		Cycle 4		7e	6e	5e
Elementary school								Secondary school		

IDENTIFICATION OF EARLY EDUCATIONAL INEQUALITIES

Students speaking **another language than Luxembourgish/German** at home have repeatedly been identified to **struggle academically** in Luxembourg's multilingual education system:



These students are:

- less likely to reach the educational minimum standards
- more likely to repeat one (or more) grades
- less likely to attend a higher secondary school track

(Hadjar et al., 2018; Hornung et al., 2021; Figure adapted from Ottenbacher et al., 2024)

RECENT POLICY REFORMS IN THE FIELD OF (PRIMARY) EDUCATION

To respond to the high diversity and to the existing educational inequalities, the government has **broadened the educational offer** by introducing:

Luxembourgish curriculum

Conventional **language offer**

Predetermined order of introduction

German as language of instruction

French as an additional language

European public schools

Flexible language offer **in six EPS**

Possibility to select among language sections

L1 as main language of instruction

L2 and L3 taught as foreign languages

Educational standards based on the **European curriculum**

French literacy project

Flexible language offer **in four pilot schools**

Reversed order of introduction

French as language of instruction

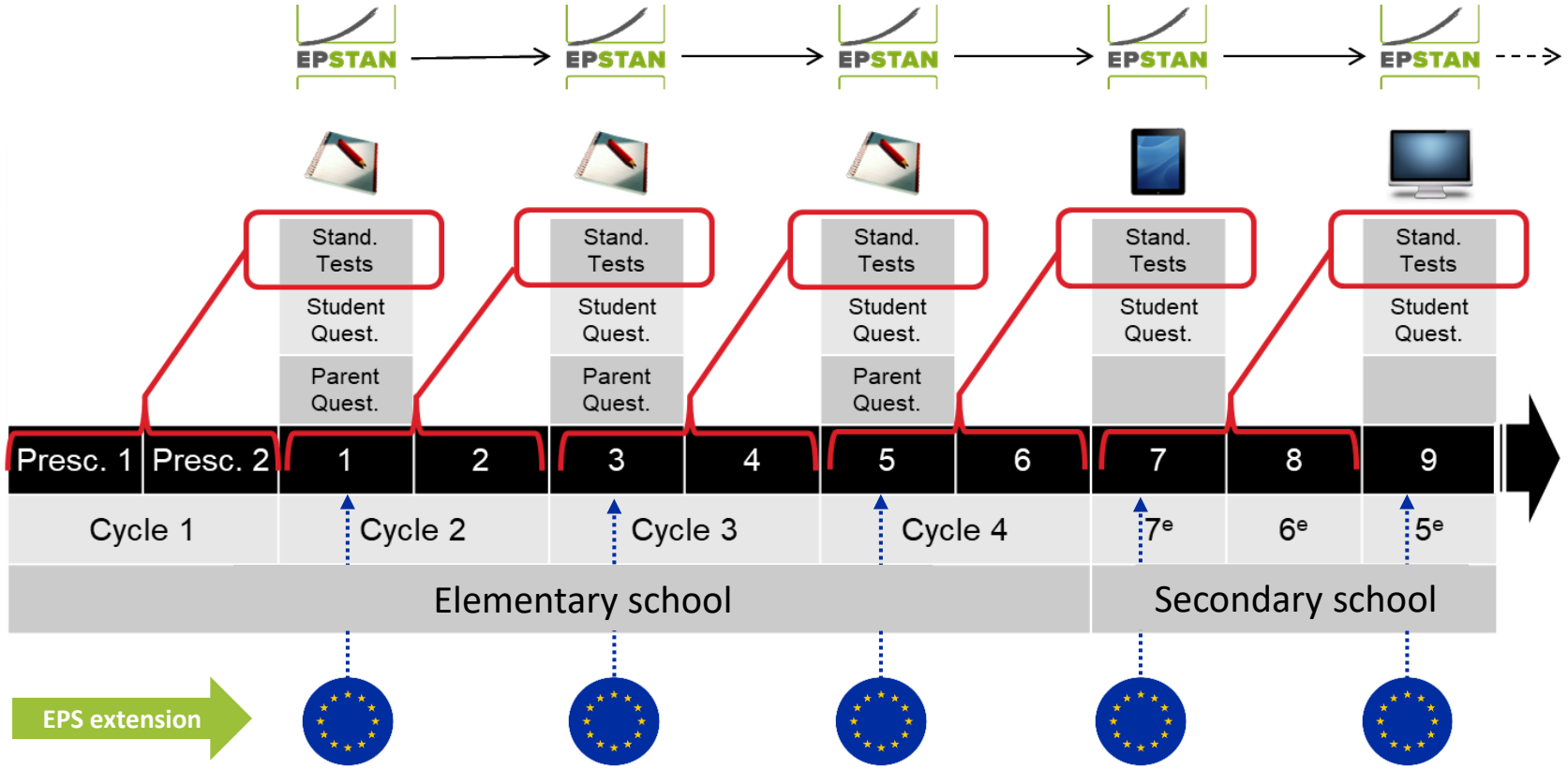
German as an additional language

Educational standards based on the **Luxembourgish curriculum**

These new offers allow students to learn **in a language closer to their home language background**.

(MENJE, 2020; SCRIPT & MENJE, 2023)

STEPWISE EXTENSION TO INCULE EUROPEAN PUBLIC SCHOOLS



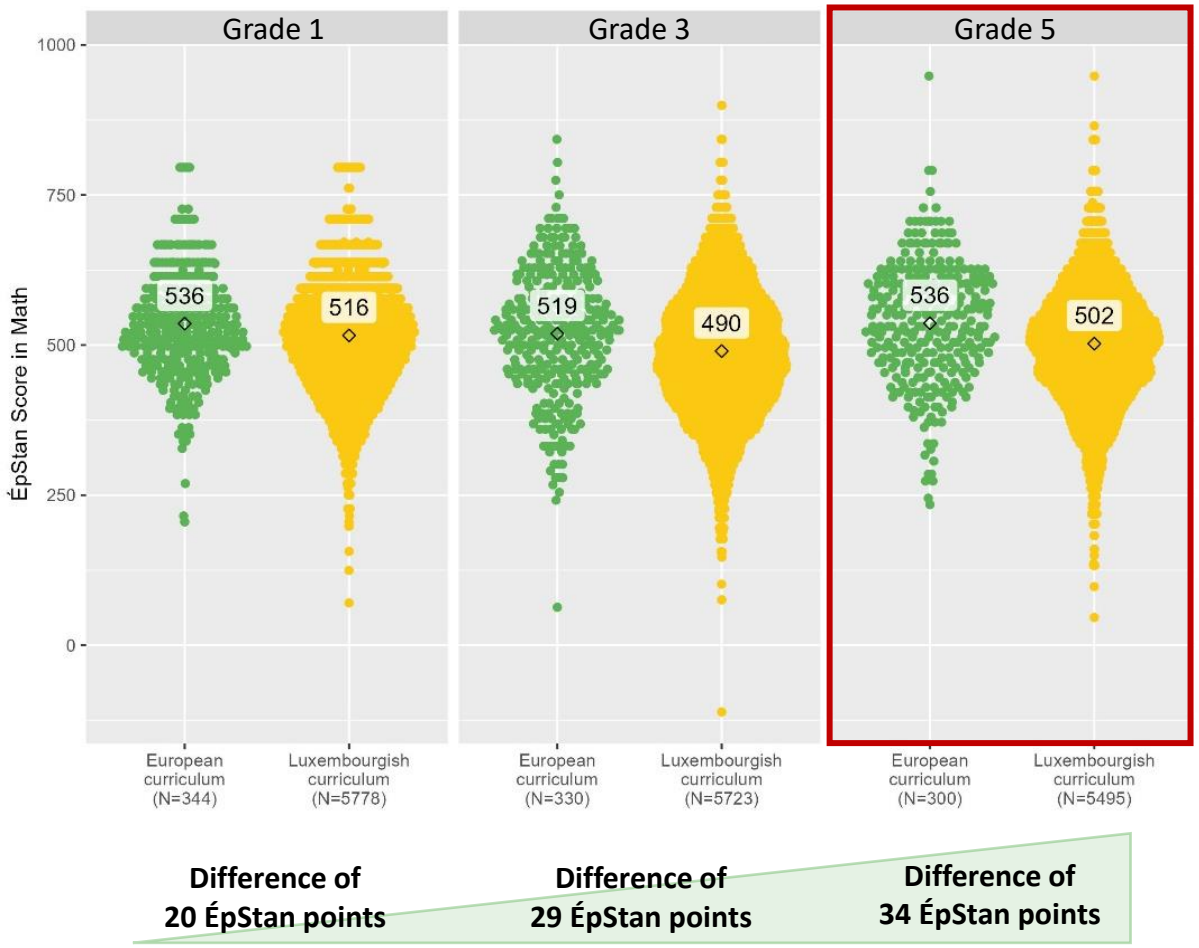
ÉpStan **achievement tests in mathematics** at **all grade levels** administered in German, French, or English (language section).

SAMPLE DESCIPTIVES

						Language background		
		N	HISEI (*M*)	% female	% natives	% Lux/German	% French	% Portuguese
European Public Schools	G1	346	59	49 %	11 %	14 %	41 %	10 %
	G3	331	58	52 %	10 %	12 %	41 %	9 %
	G5	300	59	45 %	9 %	9 %	36 %	10 %
Luxembourgish curriculum	G1	5823	51	48 %	40 %	43 %	21 %	23 %
	G3	5775	51	49 %	39 %	40 %	20 %	22 %
	G5	5546	49	49 %	38 %	43 %	21 %	22 %

The student population in EPS **differs considerably** from the student population following the Luxembourgish curriculum, particularly regarding **SES** (higher share of socioeconomically advantaged students) and **language background** (higher share of French-speaking students).

RESULTS IN MATHEMATICS

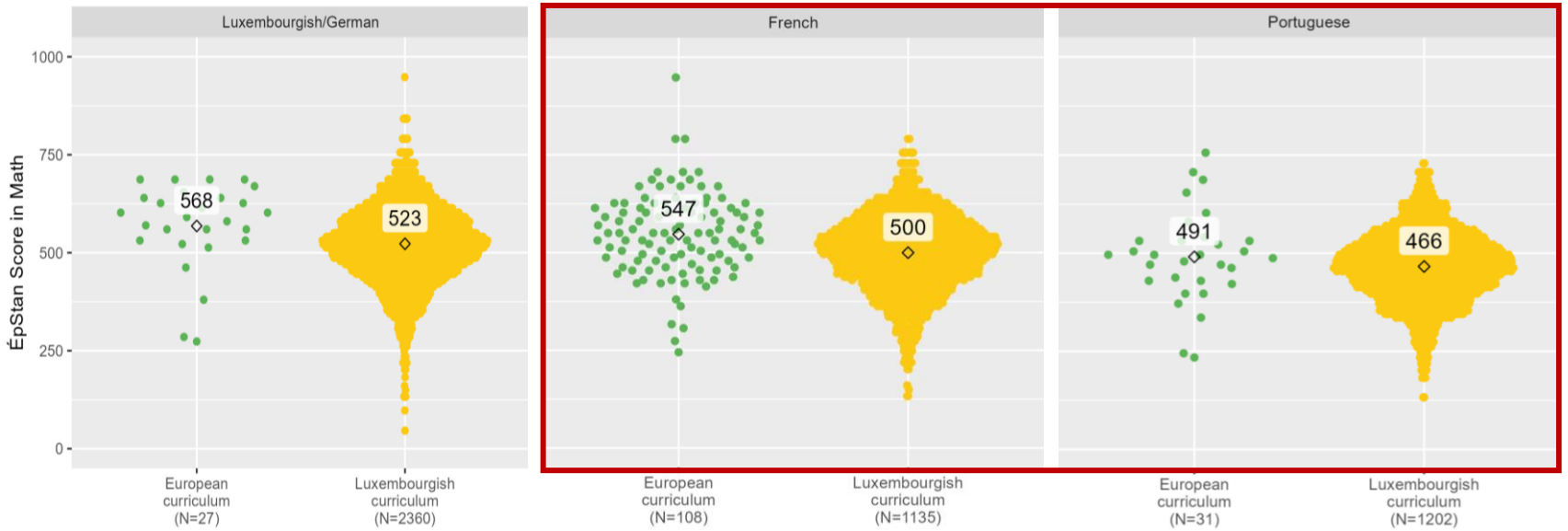


Results indicate that:

- On average, students in EPS **perform better in mathematics** than their peers following the Luxembourgish curriculum across all three grade levels.
- The differences **exceed regularly observed fluctuations** of ± 10 ÉpStan points.
- The difference is **most pronounced in Grade 5**.

RESULTS IN MATHEMATICS SPLIT BY LANGUAGE BACKGROUND

Focus on Grade 5:



Difference of 45 ÉpStan points

Difference of 47 ÉpStan points

Difference of 25 ÉpStan points

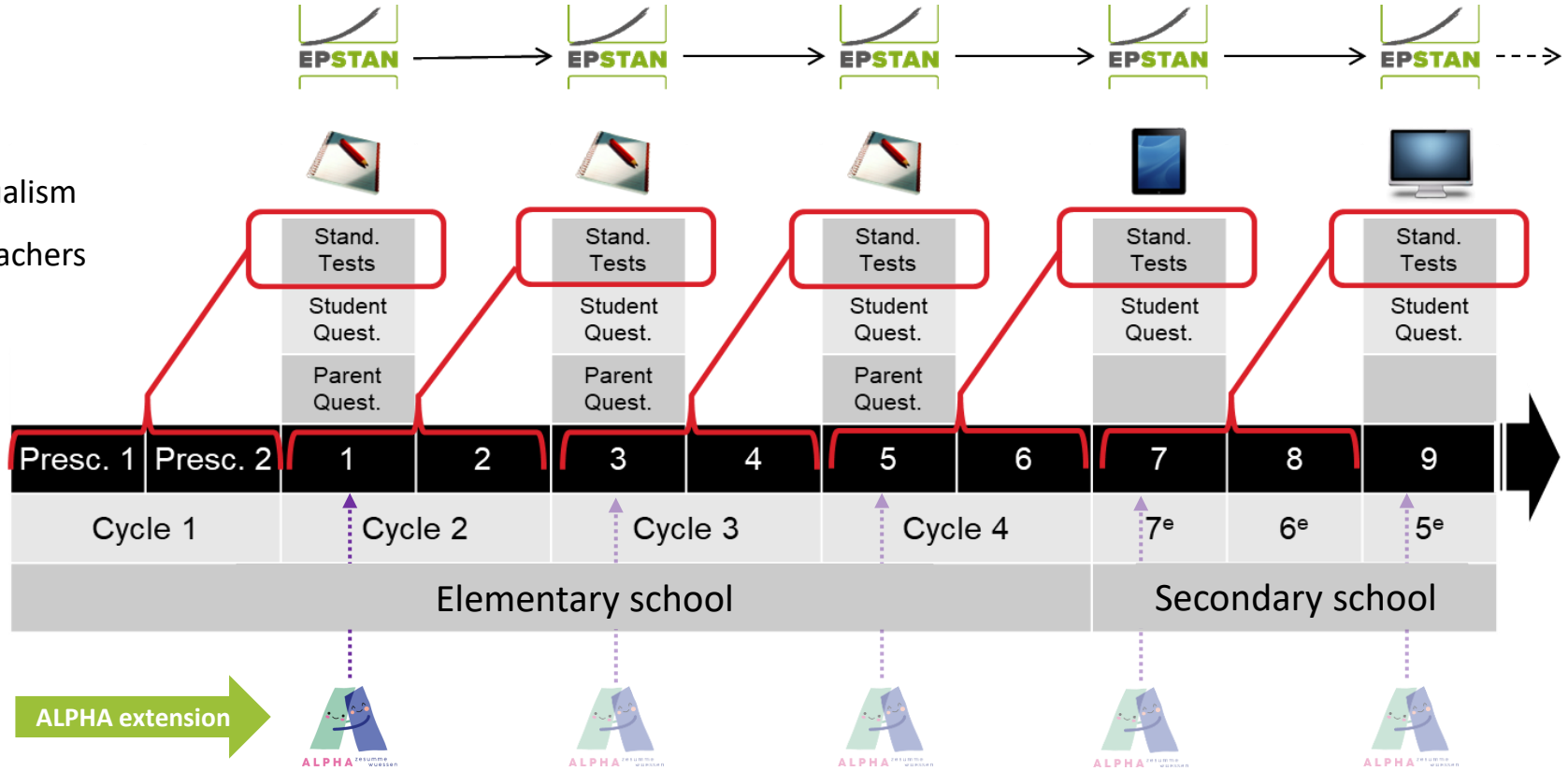
Results indicate that:

- On average, students in EPS perform better in mathematics **irrespective of their language background**.
- **Student groups that have repeatedly been found to struggle academically** perform better in mathematics (e.g., students speaking another language than Luxembourgish or German) than their peers with the same language background following the Luxembourgish curriculum.

STEPWISE EXTENSION TO INCULE FRENCH LITERACY PILOT PROJECT

Parental support

- Perception of multilingualism
- Communication with teachers
- Academic support



ÉpStan **achievement tests in listening comprehension and early literacy** in Grade 1 administered in the selected language of literacy acquisition.

SAMPLE DESCRIPTIVES AND METHODOLOGY

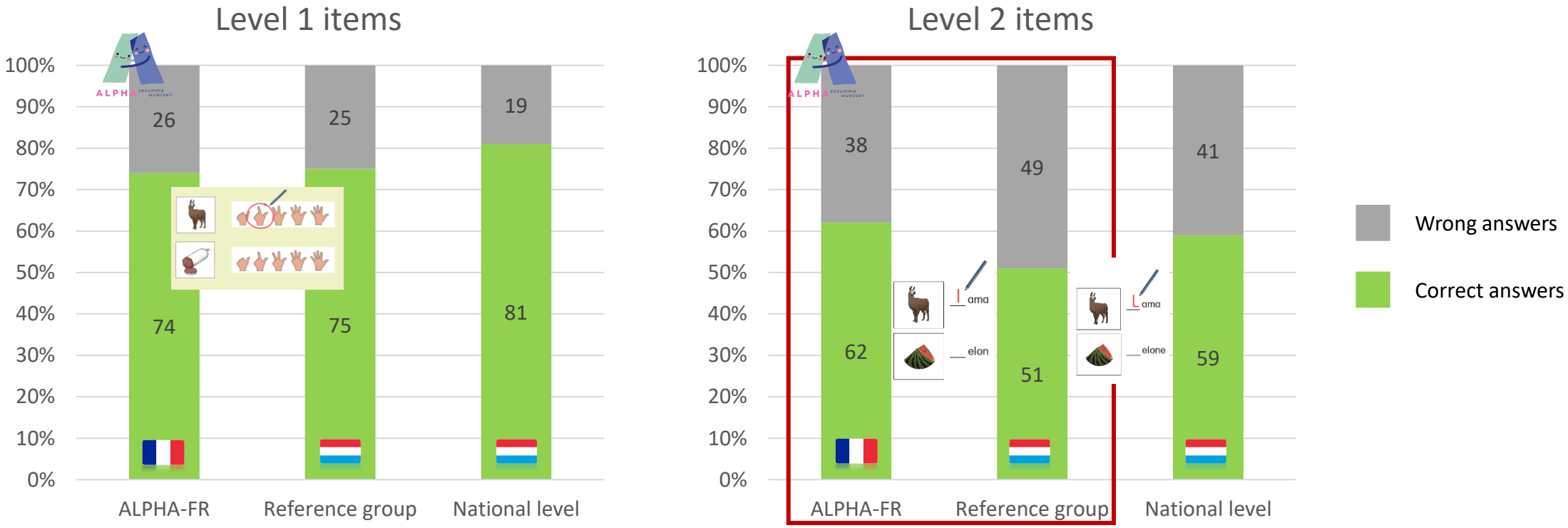
					Language background		
	N	HISEI (*M*)	% female	% natives	% Lux/German	% French	% Portuguese
ALPHA-FR	48	42	56 %	15 %	17 %	29 %	46 %
ALPHA-FR reference group	240	43	56 %	13 %	17 %	27 %	52 %
National level	5824	51	48 %	40 %	42 %	21 %	23 %

The PSM allowed the successful **creation of an ALPHA-FR reference group consisting of students with comparable background characteristics** to the ALPHA-FR group (e.g., comparable SES and language background) and with **comparable academic skills in Luxembourgish listening comprehension and mathematics**.

Important to remember

Only the ALPHA-FR group is learning to read and write in French; the ALPHA-FR reference group is following the regular Luxembourgish curriculum and thus learning to read and write in German.

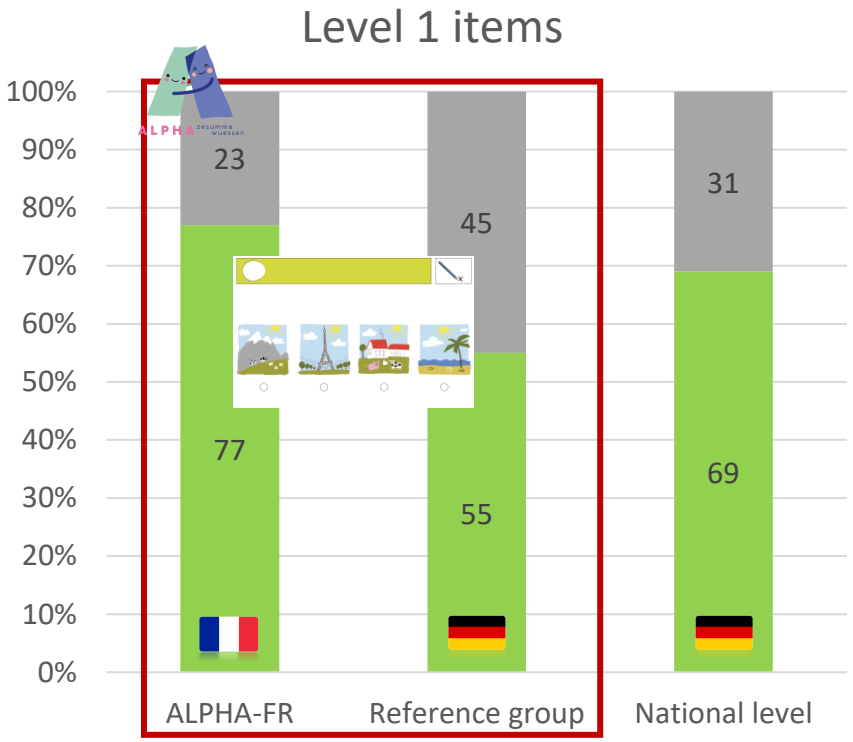
RESULTS IN EARLY LITERACY

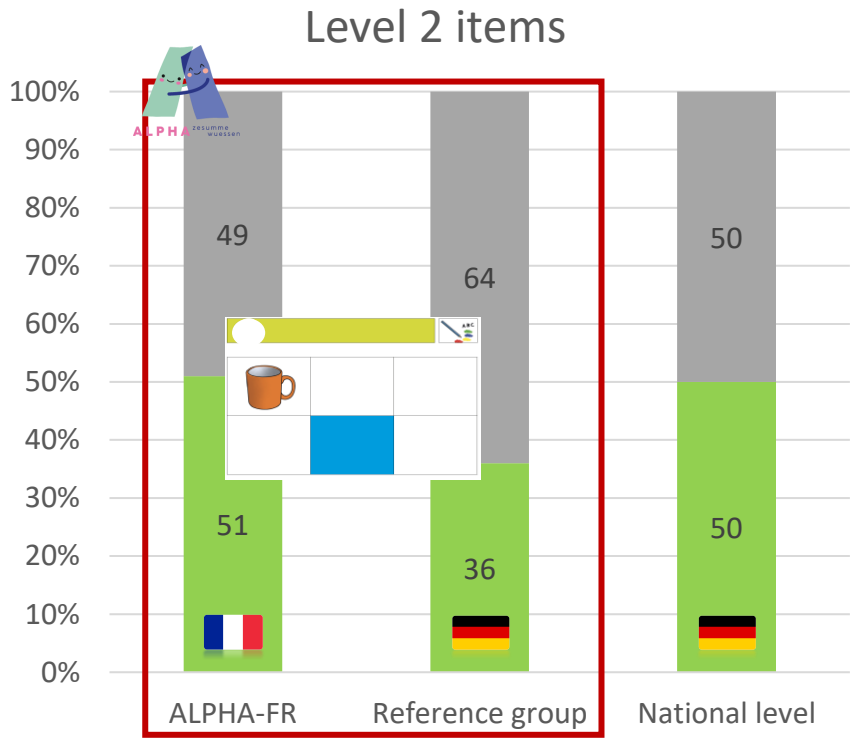


Results indicate that:

- Whereas no differences arise for Level 1 items, students from the ALPHA-FR group are performing slightly better in Level 2 items assessing early literacy (test administered in French) compared to students with similar background variables learning to read and write in German.

RESULTS IN LISTENING COMPREHENSION





Wrong answers

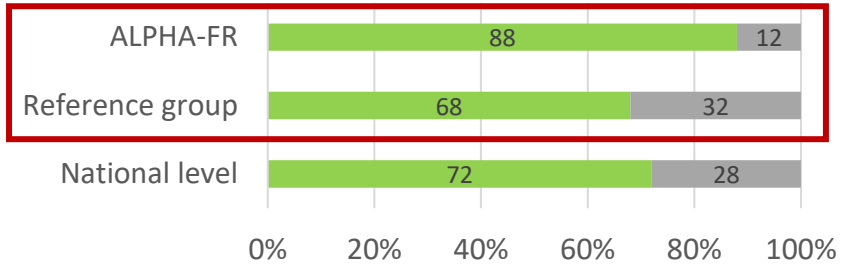
Correct answers

Results indicate that:

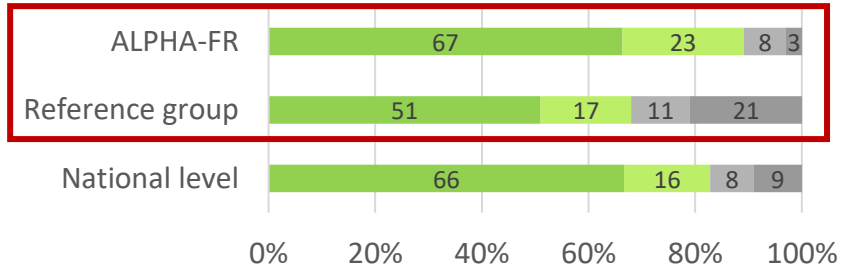
- Student from the ALPHA-FR group are performing considerably better in listening comprehension (test administered in French) at both Level 1 and 2 compared to students with similar background variables learning to read and write in German.

RESULTS FOR STUDENT MOTIVATION AND PARENTAL SUPPORT

I like to read in my language of literacy acquisition.



Our language skills in our child's language of literacy acquisition allow us to support our child in learning how to read and write.



Does apply | Does rather apply | Does rather not apply | Does not apply

Results indicate that:

- Student from the ALPHA-FR group are **more intrinsically motivated to learn in French** compared to students with similar background variables to learn in German and **parents from the ALPHA-FR students perceive themselves as more able to support their child academically**.

DISCUSSION OF RESULTS

Cautious interpretation

The ÉpStan results on **EPS and the French literacy project** offer a first important indication that broadening the educational offer might **contribute to reducing existing educational inequalities**.

1. **Academic achievement and motivational data** are better for the students in general
2. **The at-risk student population** (e.g., low SES, Portuguese-speaking) seems to benefit particularly

- Due to important methodological limitations the results should however be **interpreted with caution**:

Small number of EPS and ALPHA-FR students

→ **Growing number of students and availability of longitudinal data**

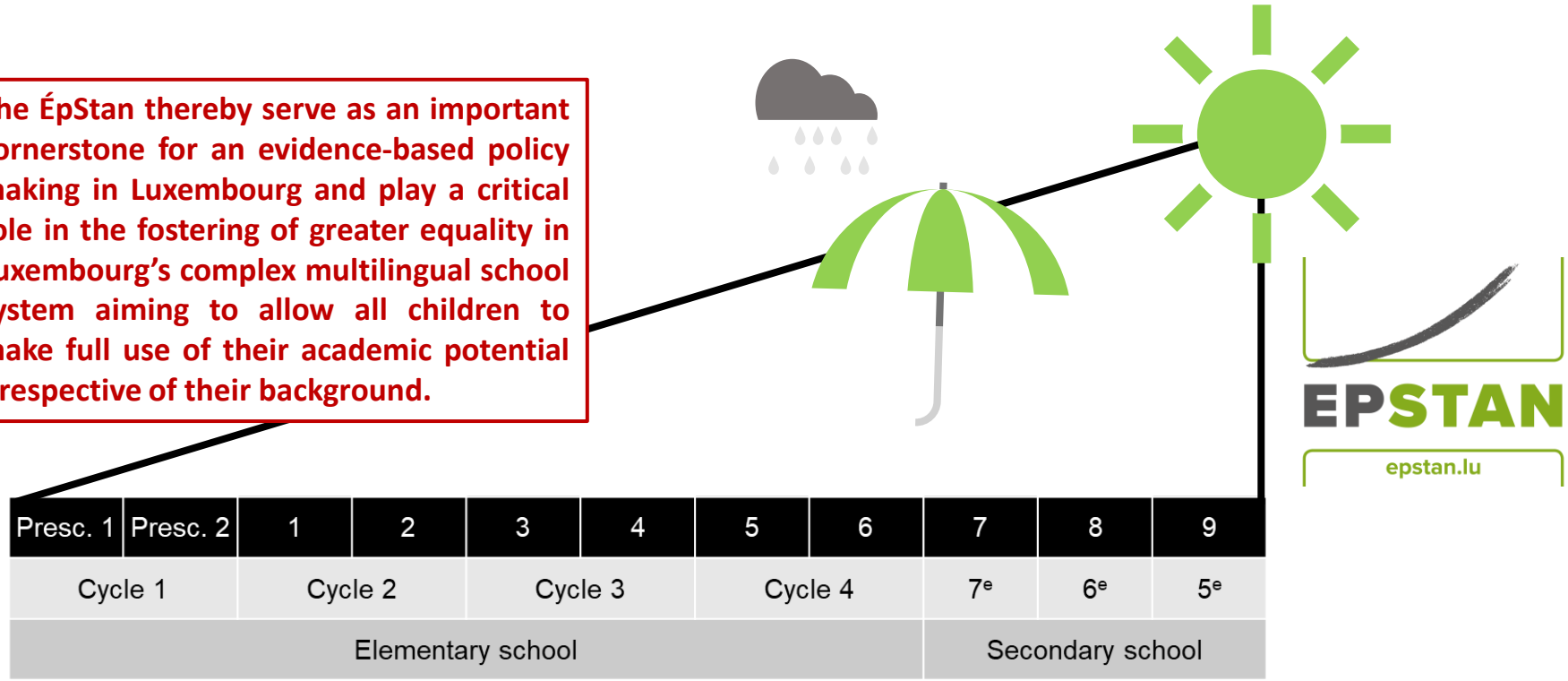
Conceptual comparability of the language tests

ÉpStan based on Luxembourgish curriculum

CONCLUSION AND OUTLOOK

Due to its sound statistical methodology and its strong anchoring in the Luxembourgish education system, **the ÉpStan allow an in-depth & timely analysis of educational reforms and disruptions of the education system** (e.g., COVID-19).

The ÉpStan thereby serve as an important cornerstone for an evidence-based policy making in Luxembourg and play a critical role in the fostering of greater equality in Luxembourg's complex multilingual school system aiming to allow all children to make full use of their academic potential irrespective of their background.



LUCET structure

LUCET | LUXEMBOURG CENTRE FOR EDUCATIONAL TESTING

uni.lu UNIVERSITÉ DU LUXEMBOURG

dashboard.epstan.lu

Development Portfolio

meso level & transversal

Monitoring Portfolio

macro level

1 3 5 7 9

Diagnostics Portfolio

micro level

10.07.
2025

The (Major) Challenges of the Luxembourgish Education System

Fondation IDEA – Internal seminar

Thank you for your attention!

Dr. Sonja Ugen

Dr. Joanne Colling

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Does Luxembourg have a high performing education system?

And how would we know?

Edmund Misson
Head of Division
Innovation and Measuring Progress
Directorate for Education and Skills

OECD
BETTER POLICIES FOR BETTER LIVES

The OECD's Work in Education

Large-scale surveys

Policy advice and thematic reviews

Research and innovation

What would success in education look like?

Individual
- Mastery of basic skills
- Skills for employment
- Skills for civic participation
- Personal growth and fulfilment
- Health and other social outcomes

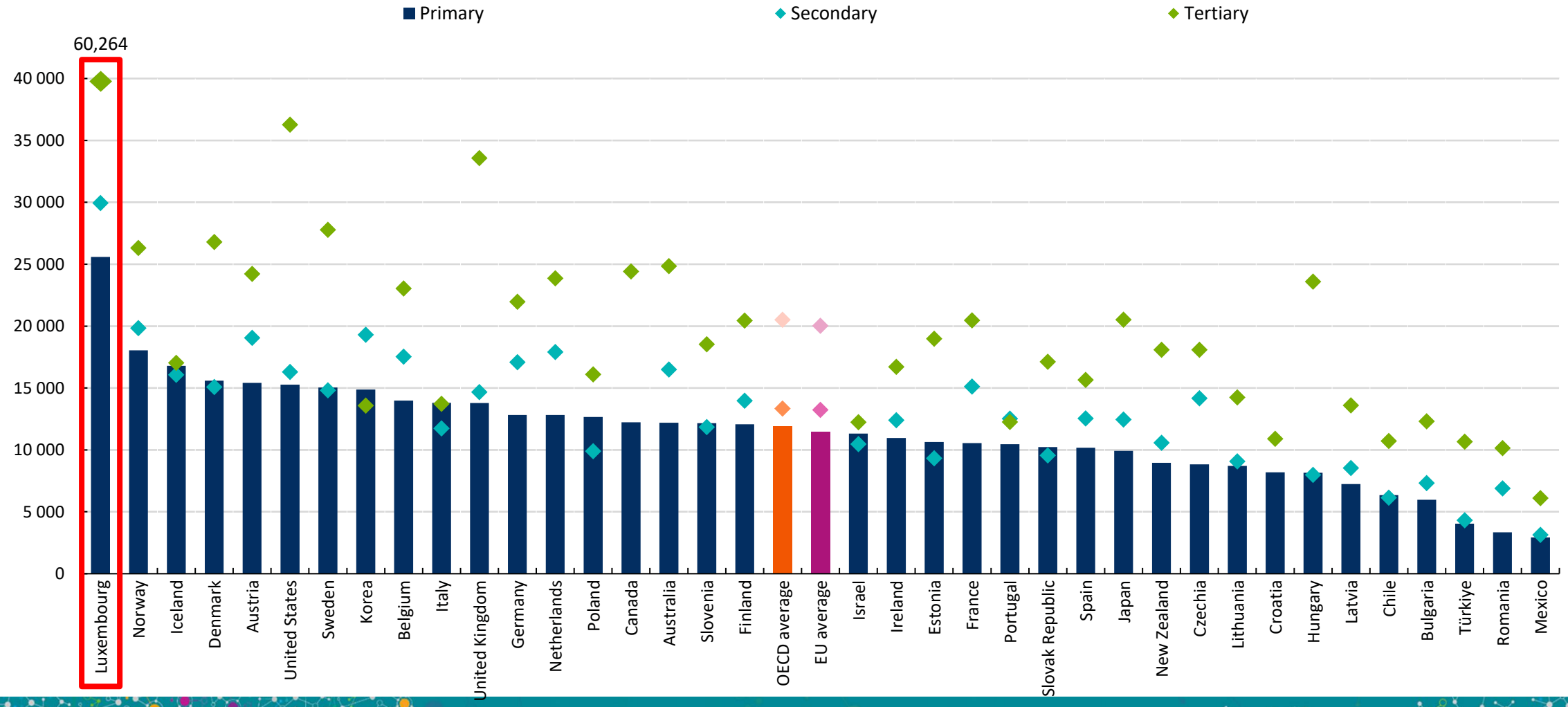
System
- Equity of outcomes
- Efficiency
- Sustainability

Society
- Economic growth
- Trust and democracy
- Sustainability
- Innovation
- Improved health
- Reduced expenditure on crime, health care
- Creation of new knowledge

How does Luxembourg perform?

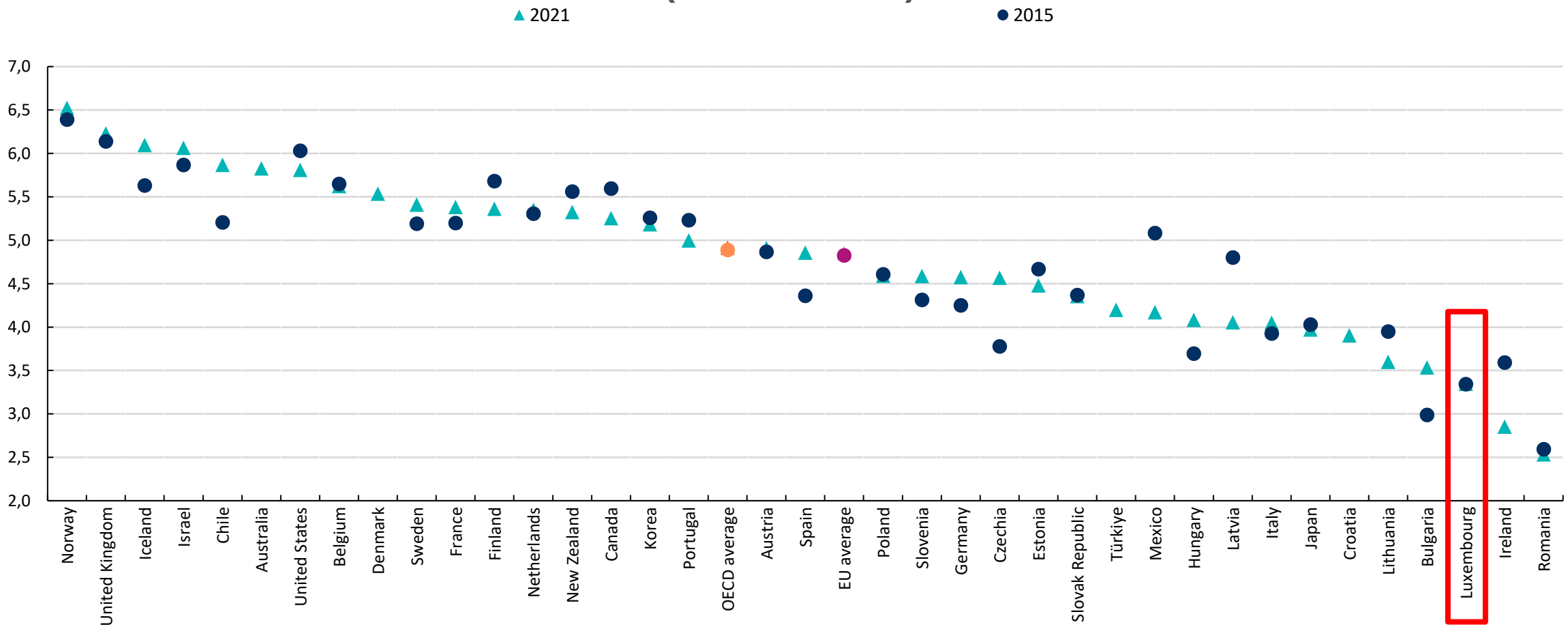
Luxembourg spends a lot on education

Total expenditure per full-time equivalent student in primary, secondary and tertiary education (2021)



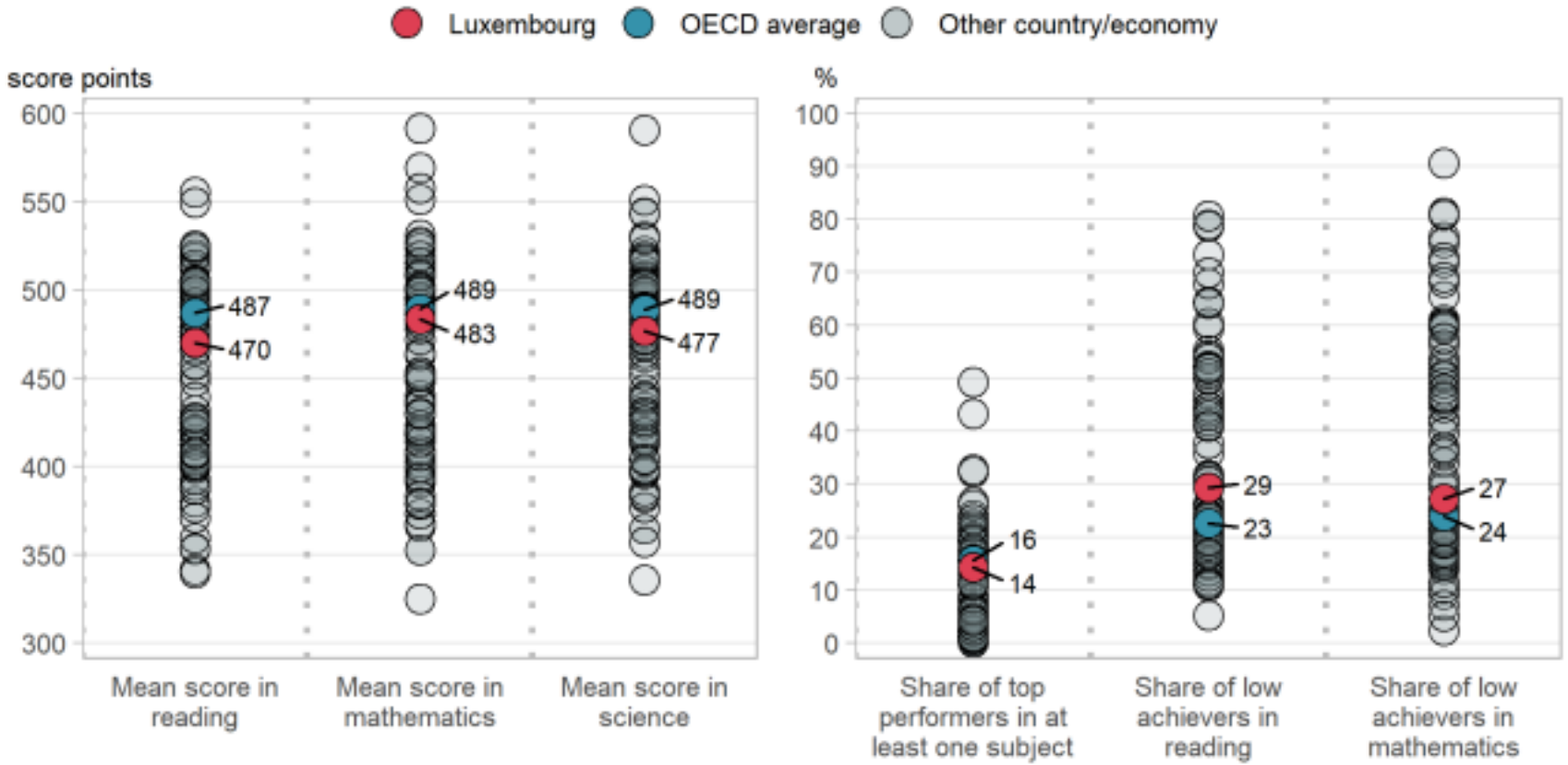
Or does it?

Trends in expenditure on educational institutions as a percentage of GDP, primary to tertiary education (2015 and 2021)



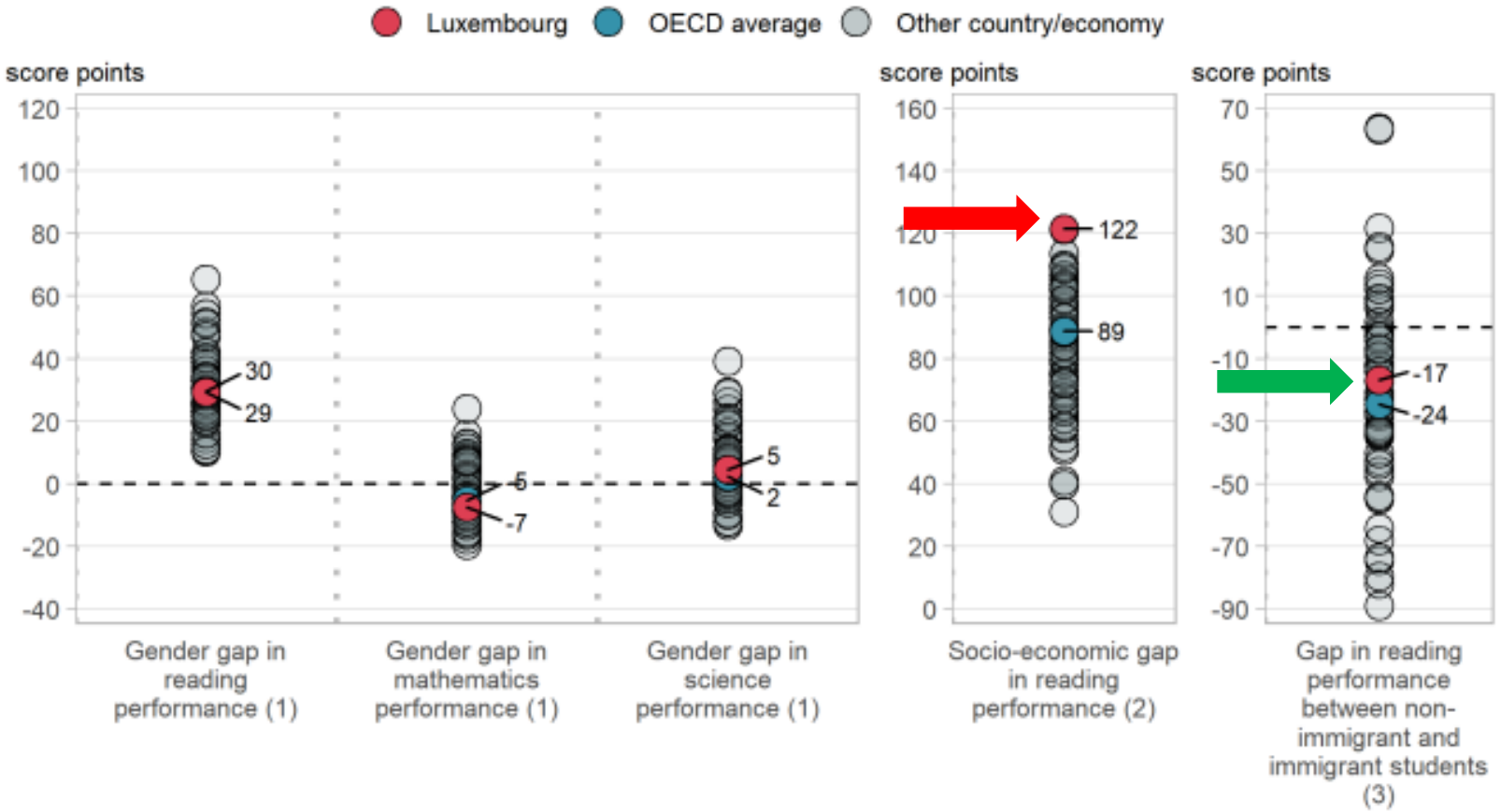
Performance is average at best

PISA scores in reading, mathematics and science – 2018



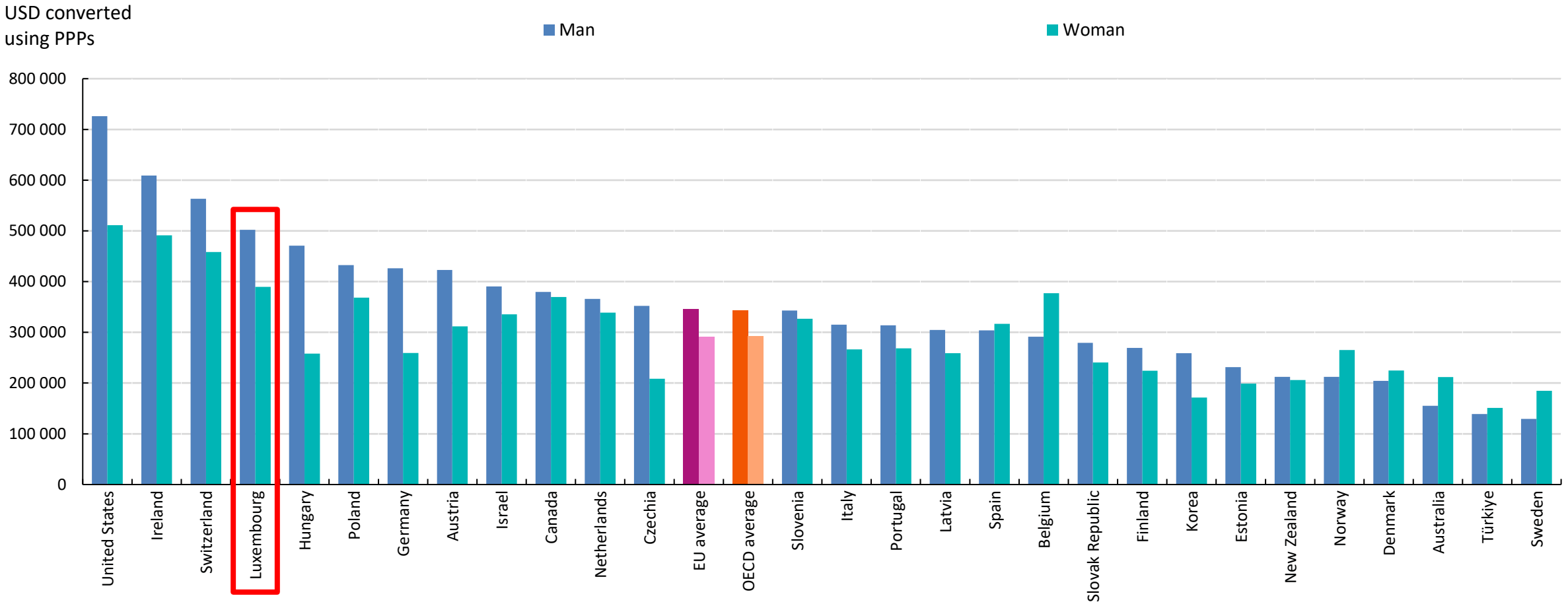
There is an equity issue – but maybe not the one you think

PISA scores for different groups – 2018



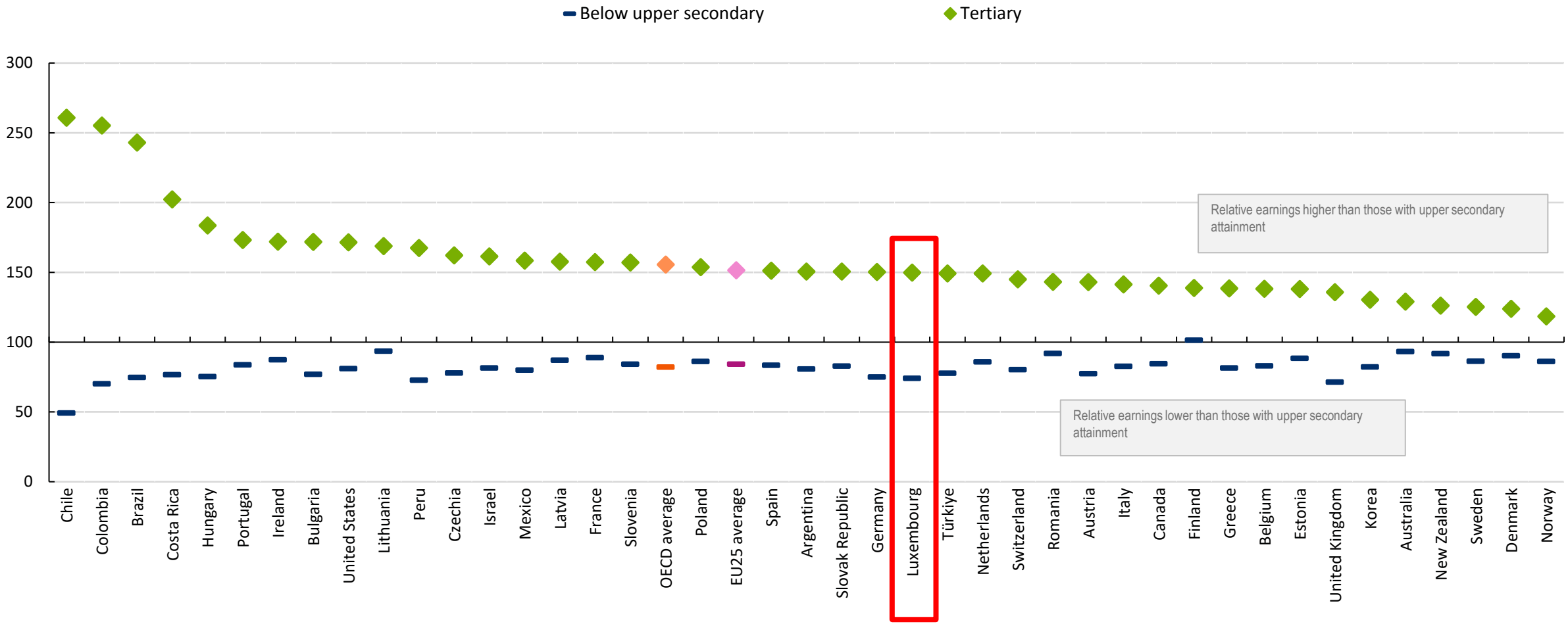
Returns to education are high

Private net financial returns for a man or a woman attaining tertiary education (2021)



But below average in relative terms

Relative earnings of workers compared to those with upper secondary attainment, by educational attainment (2022)

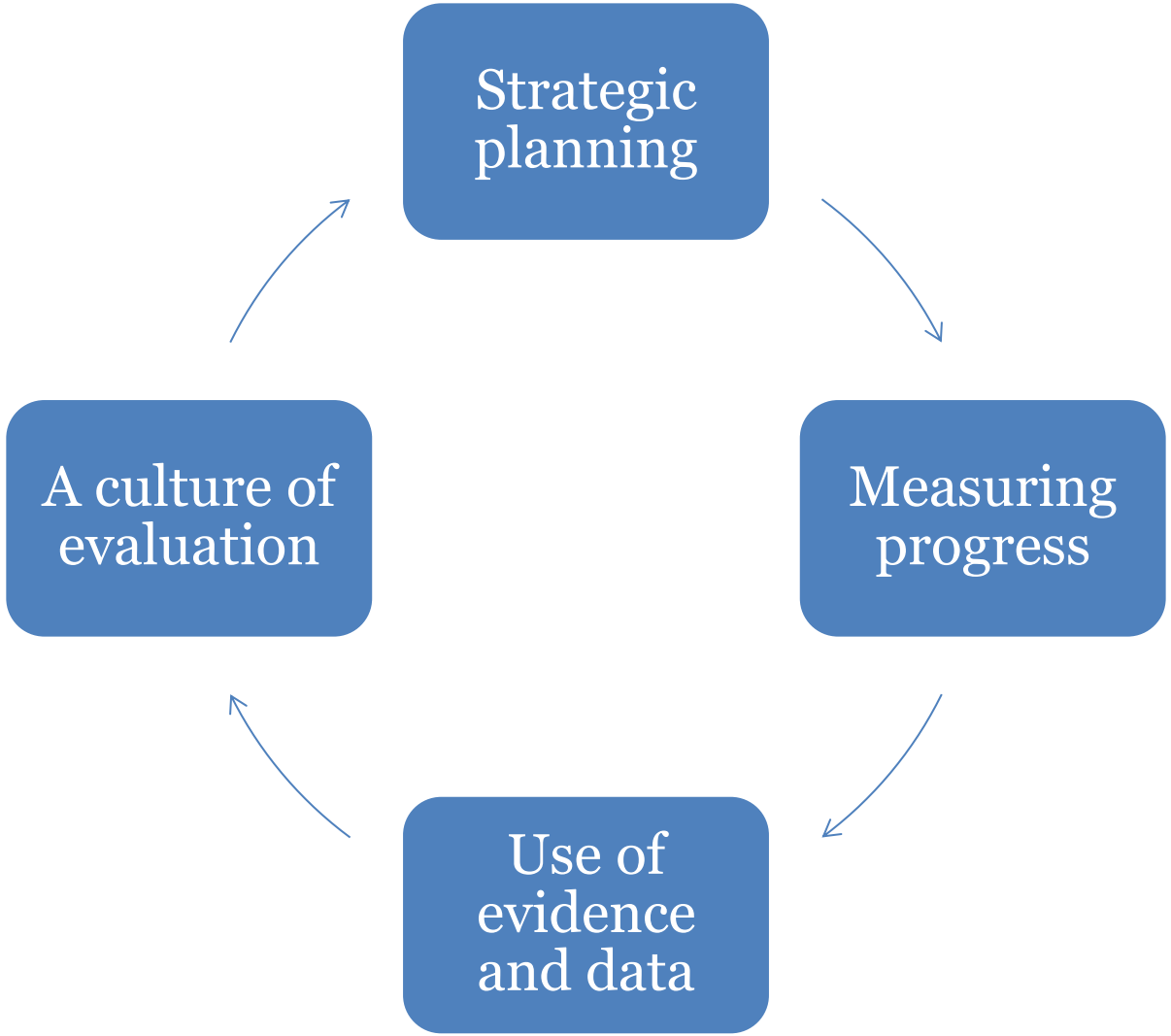


Some questions based on the data

- Is there scope for some targeted investments?
- How can the system better serve immigrant students?
- Why is the socio-economic gap so wide?
- Are the returns on education enough to create incentives?
- How much is education valued culturally?
- What do Luxembourgers want from their education system?

How could Luxembourg link data and research to policy and practice?

From evidence to policy to practice



Strategic planning

- What is the world we're preparing students for?
- What are we trying to achieve?
- What does evidence say will get us there?
- What are we prepared to do?
- How will we know if we're on track?

Trends Shaping Education 2025

Main themes

Global conflict and cooperation

Armed conflict and international **migration**; global **trade** and energy **security**; **climate change, green tech and science cooperation**.

Work and progress

Changing **labour markets** and opportunities for young people; socio-economic and gender **equality**; our **digital and sustainable lives**.

Voices and storytelling

Democracy and diverse voices; **polarisation**, populism and fake news; **digital discourse** and connected devices.

Bodies and minds

Mental health and addictions; **environmental health threats** and fertility; **disability, medical technology and care work.**

Cross-cutting themes: technology, sustainability and (in)equality

Strategic Foresight

Future 2 ⟳ All out digital

Due to advances in digital technologies, AI and robotics, **86% of work is either automated or done remotely**. This aligns with people's wish for flexibility and autonomy, and employers' wish to cut costs.

Poverty is high, with many attaining only partial employment, if any. The few who work in roles that require physical presence are part of a **separate social class**.

Environmental gains from the massive decrease in work-commute are **offset by a rise in energy consumption** to upkeep the digital sphere.

Learning at all levels is **primarily digital and online,** including AI-personalisation and VR immersive experiences, and is distributed in format.

Schools do not exist as physical spaces for children over age 9; instead, students join virtual communities. **Teachers act as online guides**, thus fewer are needed and a 1:85 ratio is common.

The rich pay for **private face-to-face learning**, while others **struggle with the extra burden** of learning-from-home, and its impact on mental health. Yet, some students flourish in digital settings.

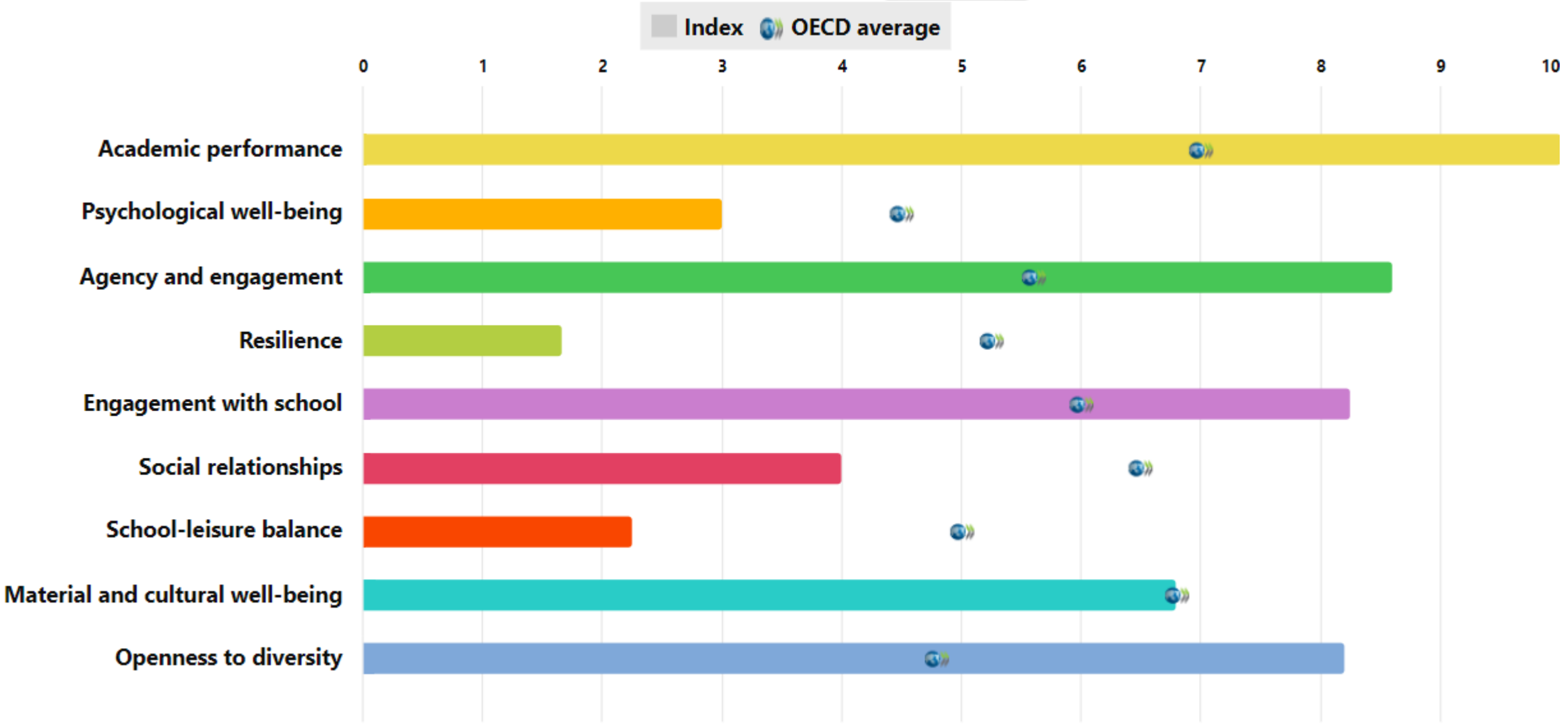
Alex, HR Manager

Some of my colleagues say the recent young recruits breeze through their training, treating it like another online module. But in my sector, emotional support for children, I can barely keep up with the demand. Finding young therapists with the socio-emotional skills we need is tough, probably since they grew up with so little real human interaction. When I do find one, they sometimes struggle with the technical side, like using the AI system that's central to our service. Thankfully, AI translation lets me hire globally now. With more people from diverse backgrounds succeeding with AI-driven education and training, AI-HR offers me a broader talent pool to choose from.

TRENDS SHAPING EDUCATION 2025 © OECD 2025, https://doi.org/10.1787/ce6ba87fd-en

Measuring Progress

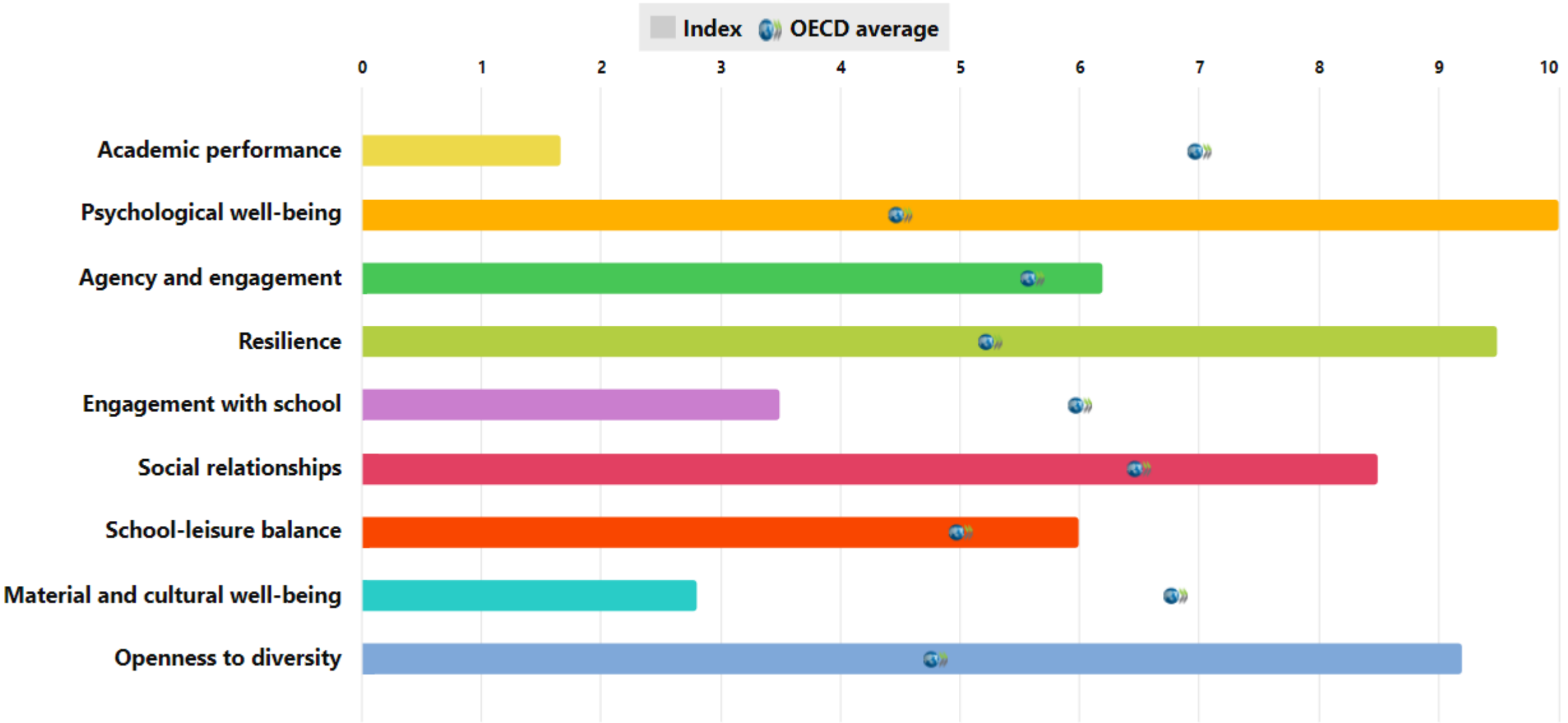
Singapore



Source: OECD, PISA 2018 Database and PISA 2022 Database.

Measuring Progress

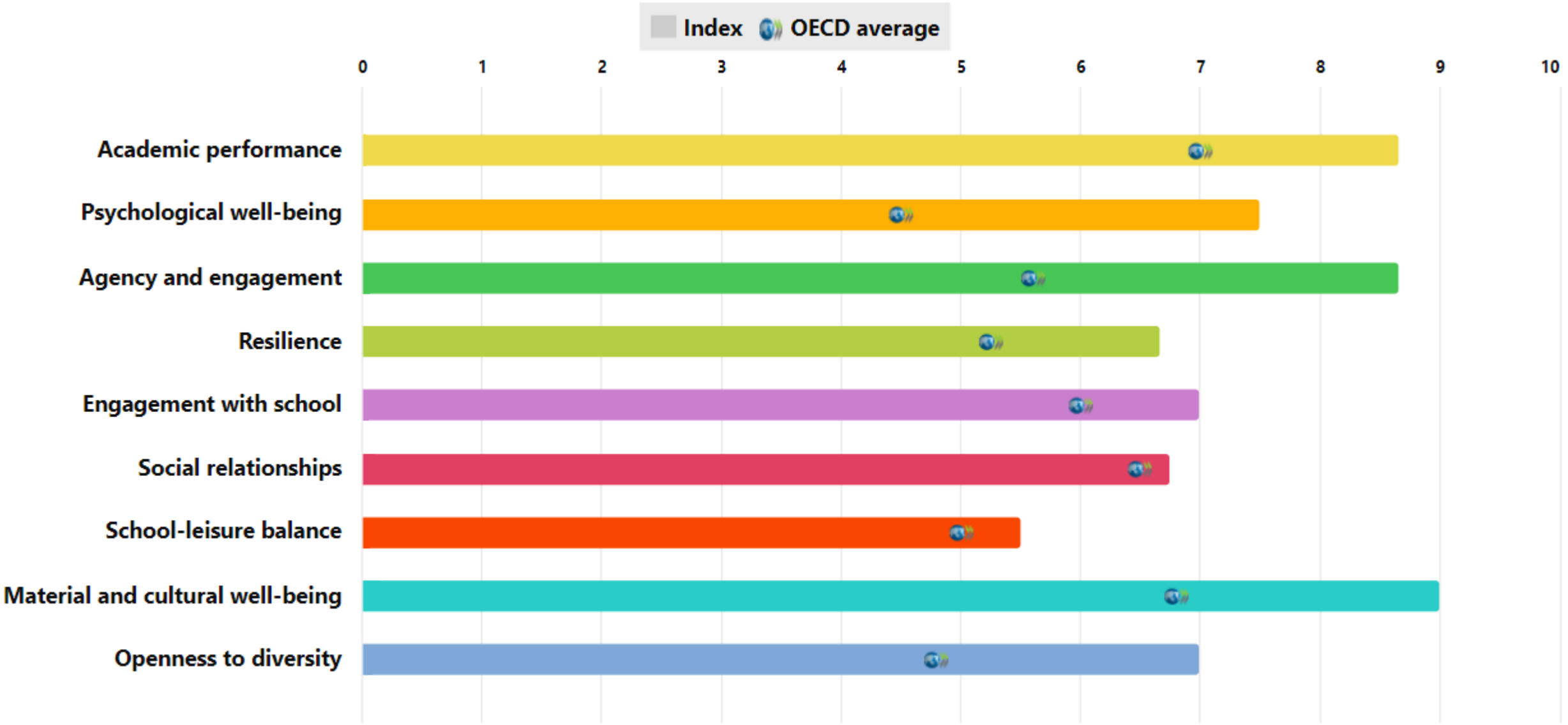
Albania



Source: OECD, PISA 2018 Database and PISA 2022 Database.

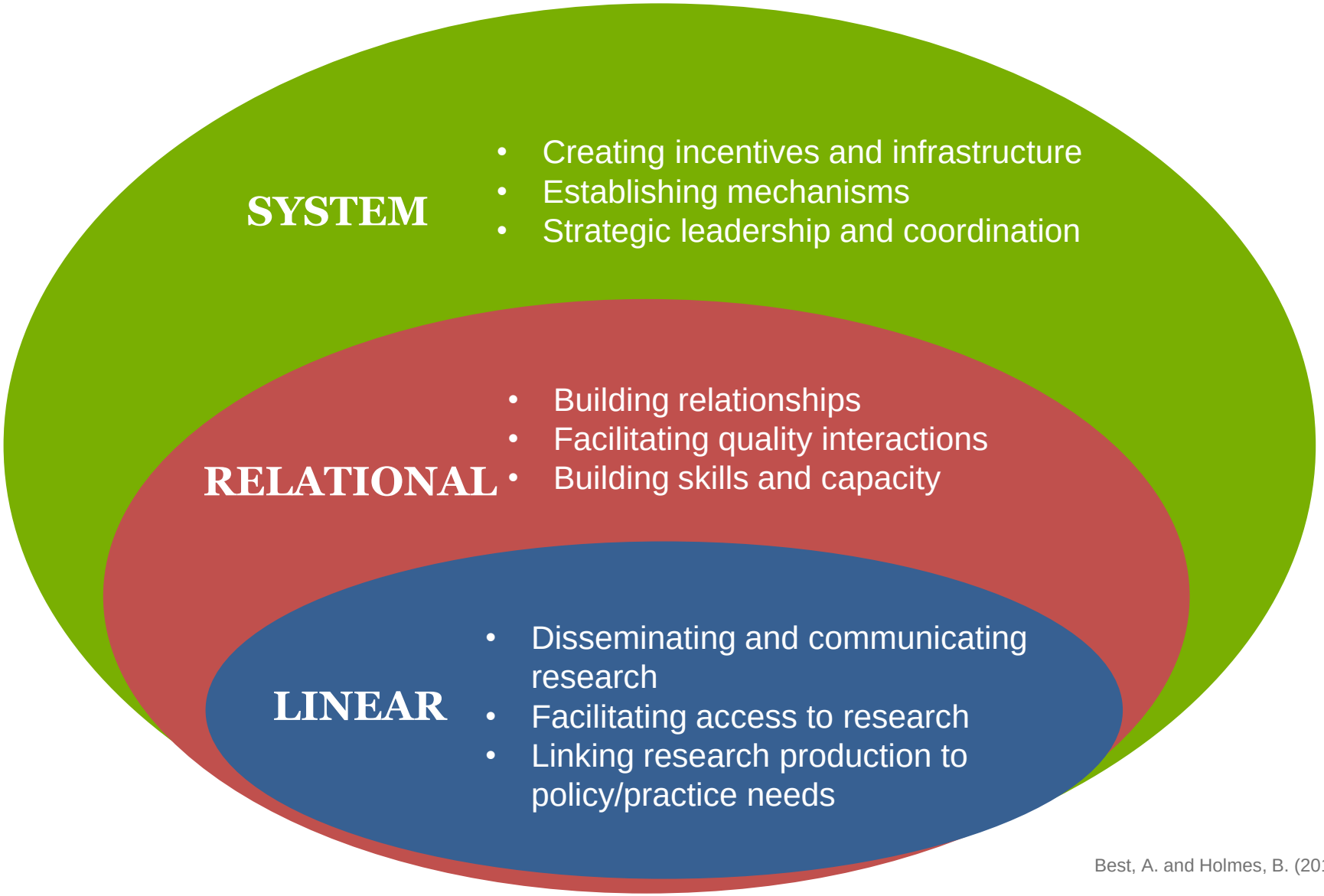
Measuring Progress

Denmark



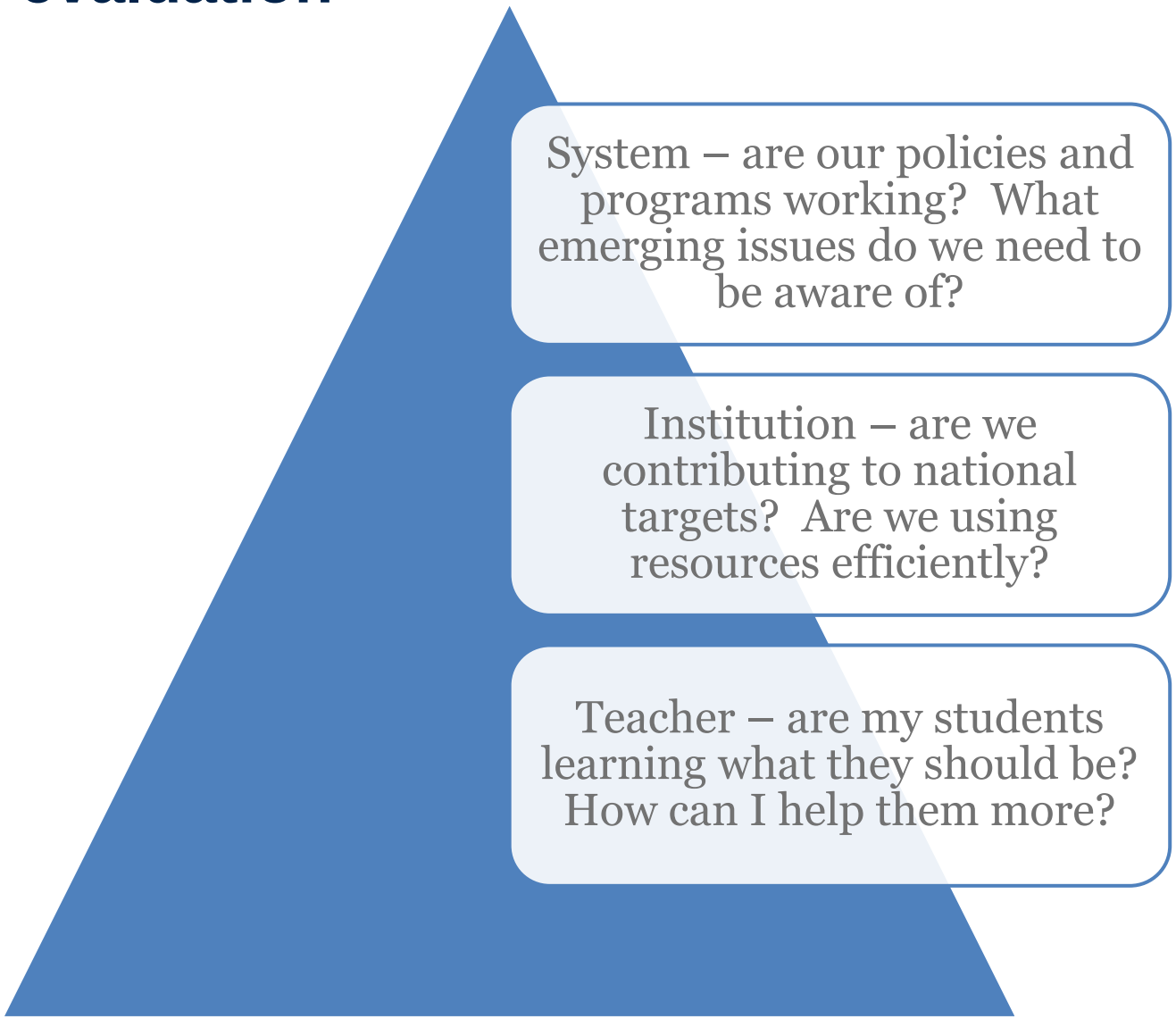
Source: OECD, PISA 2018 Database and PISA 2022 Database.

Use of evidence and data



Based on:
Best, A. and Holmes, B. (2011) and Boaz (2021)

A culture of evaluation



Some considerations

- Pick a small number of areas of focus and be consistent
- What can be measured vs what really matters
- What incentives are you creating?
- Managing processes or outcomes?
- Bringing people with you