Socially equitable distribution of learning opportunities

Strong socio-economic impact on student performance

High mathematics performance

Average performance of 15-year-olds in mathematics

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

High mathematics performance

France

US

Korea

Japan

Average performance of 15-year-olds in mathematics

Strong socio-economic impact on student performance

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Switzerland
Turkey

US

Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovak Rep.
Slovenia
Spain
Sweden
Switzerland
UK

Socially equitable distribution of learning opportunities

High mathematics performance

Australia
Austria
Belgium
Canada
Chile
Czech Rep.
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland

Low mathematics performance

Sweden
Average performance of 15-year-olds in mathematics.
Contribution of various factors to upper secondary teacher compensation costs, per student as a percentage of GDP per capita.

Percentage points

- Salary as % of GDP/capita
- Instruction time
- 1/teaching time
- 1/class size

Difference with OECD average
A broad consensus on the need for reform
The share of top performing students (Level 5 or 6) has decreased.
Evolution of employment in occupational groups defined by problem-solving skills

- **High level problem-solving skills**
- **Low problem-solving skills**
- **Medium-low problem-solving skills**
Sweden: A system in urgent need of change

**Strengths**

1) A **broad consensus** on the need for change and support for school reforms.

2) A **comprehensive school system** that emphasises inclusion

3) **High student motivation** for learning and **positive student-teacher** relationships.

4) A long-standing tradition in investing in and supporting **disadvantaged students**.

**Challenges**

1) **Student performance** has deteriorated and **learning environments** are not always conducive to learning.

2) Conditions to nurture an excellent **teaching profession** are not adequate and **pedagogical leadership** is insufficiently prioritised.

3) Local autonomy is not matched with **adequate capacity** and **accountability**.

4) **Assessment and evaluation** arrangements remain underdeveloped.

5) There is a lack of clarity on **education priorities** and **lack of a strong strategy**.
A comprehensive reform agenda for school improvement

- Establish the conditions that promote quality with equity across Swedish schools
- Build capacity for teaching and learning through a long term human resource strategy
- Strengthen school evaluation
- Monitoring and evaluation framework
- Student learning
- Steering and accountability
- Evaluation and assessment
- The education profession
- Equity and quality
A comprehensive reform agenda for school improvement

- Establish the conditions that promote quality with equity across Swedish schools
- Strengthen school evaluation
- Monitoring and evaluation framework
- Steer policy and accountability focused on improvements
- Build capacity for teaching and learning through a long term human resource strategy
- Establish the conditions that promote quality with equity across Swedish schools
- The education profession
- Student learning
- Steering and accountability
- Evaluation and assessment
- Strengthen school evaluation
- Monitoring and evaluation framework

Equity and quality

Student learning

Steering and accountability

Evaluation and assessment

The education profession
Policy actions:

Set high expectations for all students building on the existing curriculum.

Consolidate support to disadvantaged groups.

Review school funding to ensure quality learning opportunities for all students.

Revise school choice arrangements to ensure quality with equity.

When confronted with a problem, I do more than what is expected of me.

I continue working on tasks until everything is perfect.

I remain interested in the tasks that I start.

Sweden

OECD average
Countries where students have stronger beliefs in their abilities perform better in mathematics.
Motivation to learn mathematics

Percentage of students who reported "agree" or "strongly agree" with the following statements:

- **I am interested in the things I learn in mathematics**
- **I do mathematics because I enjoy it**
- **I look forward to my mathematics lessons**
- **I enjoy reading about mathematics**

![Bar chart](Fig III.3.9)

- **Sweden**
- **Shanghai-China**
- **OECD average**

The chart shows the percentage of students who agreed or strongly agreed with each statement for Sweden, Shanghai-China, and the OECD average.
Perceived self-responsibility for failure in mathematics

Percentage of students who reported "agree" or "strongly agree" with the following statements:

- Sometimes I am just unlucky
- The teacher did not get students interested in the material
- Sometimes the course material is too hard
- This week I made bad guesses on the quiz
- My teacher did not explain the concepts well this week
- I’m not very good at solving mathematics problems

[Bar chart showing percentage distributions for different countries, including Sweden, Shanghai-China, and OECD average.]
Formal math situated in a word problem, where it is *obvious* to students what mathematical knowledge and skills are needed.
Students' exposure to conceptual understanding

Index of exposure to formal mathematics

OECD average

Figure I.3.1b
Set high expectations for all students building on the existing curriculum (2011)

Exposure to applied mathematics vs. exposure to formal mathematics, PISA 2012

Mean mathematics performance, by school location, after accounting for socio-economic status

Fig II.3.3

19

Set high expectations for all students building on the existing curriculum (2011)

1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3

Index of exposure to applied mathematics

Index of exposure to formal mathematics

OECD average

Sweden: Cutting-edge education (2012)

UK Scotland: Curriculum for Excellence (2011)

Finland: New Curriculum every 10 years

Japan: Course of Study (2008): Guidelines for core competencies, well-being and communication skills

Sweden:

Cutting-edge education (2012)
Mean mathematics performance, by school location, after accounting for socio-economic status.

Fig II.3.3

Ratio

Increased likelihood of students in the bottom quarter of the ESCS index scoring in the bottom quarter of the mathematics performance distribution

Students from disadvantaged or diverse backgrounds face higher risk of low performance (PISA)

Source: OECD, PISA 2012 Database, Table II.2.4a and Table II.3.4a.
Countries with better performance in mathematics tend to allocate educational resources more equitably.

Source: PISA 2012
Review school funding to ensure quality learning opportunities for all students.

A shortage of qualified teachers is more of concern in disadvantaged schools.

- Disadvantaged schools reported more teacher shortage.
- Advantaged schools reported more teacher shortage.

Mean index difference:
Difference between socio-economically disadvantaged and socio-economically advantaged schools.
Revise school choice arrangements to ensure quality with equity

**School competition and social inclusion, PISA 2012**

Low levels of competition among schools, high levels of social inclusion

- More social inclusion
- Less social inclusion

- Norway
- Finland
- Iceland
- Switzerland
- Italy
- Austria
- Sweden
- Greece
- Luxembourg
- USA
- Portugal
- Hungary
- Mexico
- Chile
- Canada
- Estonia
- Czech Rep.
- Ireland
- Japan
- Korea
- UK
- New Zealand
- Australia
- Belgium
- Denmark
- Germany
- Turkey
- Israel
- Spain
- Poland
- Slovenia
- Israel
- Turkey
- Ireland
- Japan
- Korea
- UK
- New Zealand
- Australia
- Belgium
- Denmark
- Germany
- Turkey
- Israel
- Spain
- Poland
- Slovenia
- Sweden
- Finland
- Norway

$R^2 = 0.1735$
Square school choice with equity

- Controlled choice
  - Financial incentives
    - Assistance for disadvantaged parents
    - Inform parents
      - Foster collaboration among teachers and schools
      - Use student and school assessments

Financial incentives for schools

Assistance for disadvantaged parents

Inform parents

Foster collaboration among teachers and schools

Use student and school assessments
Poverty isn’t destiny

PISA performance by decile of social background

Source: PISA 2012
A comprehensive reform agenda for school improvement

- Establish the conditions that promote quality with equity across Swedish schools
- Steer policy and accountability focused on improvements
- Build capacity for teaching and learning through a long term human resource strategy
- Strengthen school evaluation
- Monitoring and evaluation framework
A comprehensive reform agenda for school improvement

- Establish the conditions that promote quality with equity across Swedish schools
- Build capacity for teaching and learning through a long term human resource strategy
- Strengthen school evaluation
- Monitoring and evaluation framework

- Steer policy and accountability focused on improvements
Policy actions:

Create a publicly-funded National Institute of Teacher and School Leader Quality.

Review the number and quality of existing teacher education providers.

Improve the attractiveness of the teaching and school leadership profession.

Recommendation 2: Building capacity for teaching and learning through a long-term human resource strategy

Availability of and participation in mentoring activities, TALIS 2013

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage of teachers working in schools where the principal reports that mentoring programmes are available for all teachers in the school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>80</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>70</td>
</tr>
<tr>
<td>England (United Kingdom)</td>
<td>60</td>
</tr>
<tr>
<td>Australia</td>
<td>60</td>
</tr>
<tr>
<td>Alberta (Canada)</td>
<td>40</td>
</tr>
<tr>
<td>Korea</td>
<td>40</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>30</td>
</tr>
<tr>
<td>Poland</td>
<td>30</td>
</tr>
<tr>
<td>Mexico</td>
<td>20</td>
</tr>
<tr>
<td>Portugal</td>
<td>20</td>
</tr>
<tr>
<td>Estonia</td>
<td>10</td>
</tr>
<tr>
<td>Spain</td>
<td>10</td>
</tr>
<tr>
<td>Norway</td>
<td>10</td>
</tr>
<tr>
<td>Finland</td>
<td>10</td>
</tr>
<tr>
<td>Denmark</td>
<td>10</td>
</tr>
<tr>
<td>France</td>
<td>10</td>
</tr>
<tr>
<td>Flanders (Belgium)</td>
<td>10</td>
</tr>
<tr>
<td>Sweden</td>
<td>10</td>
</tr>
<tr>
<td>Italy</td>
<td>10</td>
</tr>
<tr>
<td>Japan</td>
<td>10</td>
</tr>
</tbody>
</table>

Percentage of teachers who report presently having an assigned mentor to support them

<table>
<thead>
<tr>
<th>Percentage of teachers working in schools where the principal reports that mentoring programmes are available for all teachers in the school</th>
<th>Percentage of teachers who report presently having an assigned mentor to support them</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
Teachers' perceptions of the value of teaching

Percentage of lower secondary teachers who "agree" or "strongly agree" that teaching profession is a valued profession in society.
Countries where teachers believe their profession is valued show higher levels of student achievement.

Relationship between lower secondary teachers' views on the value of their profession in society and the country’s share of top mathematics performers in PISA 2012.

Countries where teachers believe their profession is valued show higher levels of student achievement.
## Teacher skills and graduate skills (numeracy)

<table>
<thead>
<tr>
<th>Country</th>
<th>Numeracy Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td></td>
</tr>
<tr>
<td>Flanders (Belgium)</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
</tr>
<tr>
<td>Slovak Republic</td>
<td></td>
</tr>
<tr>
<td>Northern Ireland (UK)</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td></td>
</tr>
<tr>
<td>England/N. Ireland (UK)</td>
<td></td>
</tr>
<tr>
<td>England (UK)</td>
<td></td>
</tr>
<tr>
<td>Korea</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td></td>
</tr>
<tr>
<td>Estonia</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td></td>
</tr>
</tbody>
</table>

[PIAAC test scores (numeracy)]

Middle half of the numeracy skill distribution of graduates (16-65 years)
Teacher skills and graduate skills (numeracy)

Middle half of the numeracy skill distribution of graduates (16-65 years)

Numeracy skills of teachers

PIAAC test scores (numeracy)
Percentage of lower secondary teachers who report doing the following activities at least once per month.

**Teacher co-operation**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Average</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss individual students</td>
<td>60%</td>
<td>80%</td>
</tr>
<tr>
<td>Share resources</td>
<td>50%</td>
<td>70%</td>
</tr>
<tr>
<td>Team conferences</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Collaborate for common standards</td>
<td>30%</td>
<td>50%</td>
</tr>
<tr>
<td>Team teaching</td>
<td>20%</td>
<td>40%</td>
</tr>
<tr>
<td>Collaborative PD</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>Joint activities</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Classroom observations</td>
<td>0%</td>
<td>5%</td>
</tr>
</tbody>
</table>
The more frequently that teachers report participating in collaborative practices with their colleagues, the higher their level of self-efficacy. The same is true for job satisfaction.
Mean mathematics performance, by school location, after accounting for socio-economic status

Fig II.3.3

Teachers feedback: direct classroom observations

Teachers feedback: direct classroom observations
Teachers' needs for professional development

Percentage of lower secondary teachers indicating they have a high level of need for professional development in the following areas

<table>
<thead>
<tr>
<th>Area</th>
<th>Sweden</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching students with special needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT skills for teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New technologies in the workplace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student behaviour and classroom management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching in a multicultural or multilingual setting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approaches to individualised learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student career guidance and counselling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student evaluation and assessment practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching cross-curricular skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing competencies for future work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedagogical competencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School management and administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge of the subject field(s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge of the curriculum</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Regardless of the content, \textit{over 3/4 of teachers} report that…

…the \textit{professional development} in which they have participated has had a \textit{positive impact on their teaching}. 
Improve the attractiveness of the teaching and school leadership profession

Lower secondary teachers’ salaries at different points in their careers (2012)

- Starting salary and minimum training
- Salary after 15 years of experience and minimum training
- Salary at top of scale and maximum qualifications

Starting salary and minimum training  
Salary after 15 years of experience and minimum training  
Salary at top of scale and maximum qualifications

Equivalent USD converted

Starting salary and minimum training  
Salary after 15 years of experience and minimum training  
Salary at top of scale and maximum qualifications

Lower secondary teachers’ salaries at different points in their careers (2012)
## Ratio of teachers' salary to earnings for full-time, full-year workers with tertiary education aged 25-64 (2011 or latest available year)

<table>
<thead>
<tr>
<th>Country</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td></td>
</tr>
<tr>
<td>Korea</td>
<td></td>
</tr>
<tr>
<td>Luxembourg</td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td></td>
</tr>
<tr>
<td>Israel</td>
<td></td>
</tr>
<tr>
<td>England</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td></td>
</tr>
<tr>
<td>Belgium (Fl.)</td>
<td></td>
</tr>
<tr>
<td>OECD average</td>
<td></td>
</tr>
<tr>
<td>EU21 average</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
</tr>
<tr>
<td>Belgium (Fr.)</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td></td>
</tr>
<tr>
<td>Estonia</td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td></td>
</tr>
<tr>
<td>Slovak Republic</td>
<td></td>
</tr>
</tbody>
</table>

EU/US
Implementing highly effective teacher policy and practice

- Improve the societal view of teaching as a profession
- Recruit top candidates into the profession
- Developing Teaching as a profession
- Retain and recognise effective teachers – path for growth
- Support teachers in continued development of practice

Mean mathematics performance, by school location, after accounting for socio-economic status

Implementing highly effective teacher policy and practice
A comprehensive reform agenda for school improvement

- Establish the conditions that promote quality with equity across Swedish schools
- Steer policy and accountability focused on improvements
- Build capacity for teaching and learning through a long term human resource strategy
- Strengthen school evaluation
- Monitoring and evaluation framework

Student learning

Equity and quality

The education profession

Steering and accountability

Evaluation and assessment
A comprehensive reform agenda for school improvement

- Establish the conditions that promote quality with equity across Swedish schools
- Build capacity for teaching and learning through a long term human resource strategy
- Strengthen school evaluation
- Monitoring and evaluation framework
- Steer policy and accountability focused on improvements
- Student learning
- Evaluation and assessment
- Steering and accountability
- The education profession
- Equity and quality

Equity and quality

The education profession

Student learning

Evaluation and assessment

Steering and accountability

A comprehensive reform agenda
Recommendation 3: Strengthen steering of policy and accountability with a focus on improvement

**Policy actions:**

Together with key stakeholders define a set of ambitious education priorities.

Develop a comprehensive national school improvement strategy.

Strengthen school self-evaluation and planning through an agreed set of indicators.

Strengthen the School Inspectorate to help shift a culture of administrative compliance to responsibility for improvement.

*Align autonomy with accountability*
The question is not how many charter schools you have but how you enable every teacher to assume charter-like autonomy.
Schools with more autonomy perform better than schools with less autonomy in systems with shared math policies.

School autonomy for curriculum and assessment \times system's extent of implementing a shared math policy (e.g. curriculum and instructional materials)

Score points

Less school autonomy

More school autonomy

Shared math policy

No standardised math policy
Schools with more autonomy perform better than schools with less autonomy in systems with more collaboration.

School autonomy for resource allocation $\times$ System's level of teachers participating in school management
Across all participating countries and economies
Percentage of students in schools whose principal reported that their schools have the following for quality assurance and improvement:

- Implementation of a standardised policy for mathematics
- Regular consultation with one or more experts over a period of at least six months with the aim of improving...
- Teacher mentoring
- Written feedback from students (e.g. regarding lessons, teachers or resources)
- External evaluation
- Internal evaluation/self-evaluation
- Systematic recording of data, including teacher and student attendance and graduation rates, test results...
- Written specification of student-performance standards
- Written specification of the school's curriculum and educational goals

Fig IV.4.14

- Sweden
- Singapore
- OECD average

48
Enhancing evaluation and assessment to improve student outcomes

Most common uses of student assessments according to school principals (2012)

To make decisions about students’ retention or promotion
To monitor the school’s progress from year to year
To identify aspects of instruction or the curriculum that could be improved

Source: OECD, PISA 2012 Database, Table IV.5.5. OECD, PISA 2012 Database, Table IV.5.6.
Most schools look at students’ past academic performance when considering admission.

- Students in schools whose principals reported that "students' records of academic performance" or "recommendations of feeder schools" is always considered for admission.
Many countries defined general education strategies

- **Wales (United Kingdom):**
  Qualified for Life (2014)

- **Ontario (Canada):**
  Education strategy (Phase I: 2003-2013)

- **Estonia:**
  Lifelong Learning strategy 2010-2014

- **Mexico:**
  Pact for Mexico 2012; Constitutional Reform (2012-13)

- **Denmark:**
  Denmark that stands together (2011); Folkeskole reform (2013)

Develop a comprehensive national school improvement strategy founded on a set of ambitious priorities.
A comprehensive reform agenda for school improvement

- Establish the conditions that promote quality with equity across Swedish schools
- Strengthen school evaluation
- Monitoring and evaluation framework
- Steer policy and accountability focused on improvements
- Build capacity for teaching and learning through a long term human resource strategy
- Establish the conditions that promote quality with equity across Swedish schools
- The education profession
- Evaluation and assessment
- Student learning
- Steering and accountability
- The education profession
- Evaluation and assessment
- Student learning
- Steering and accountability
Reform challenges

- Reforms that bypass the classroom
- Insufficient investment in capacity
- Insufficient attention to context
Focus on the instructional core

Policy alignment

Focus on leadership and teacher capacity

Understanding and engaging stakeholders
## What it all means

<table>
<thead>
<tr>
<th>Average education systems</th>
<th>High performers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Some</strong> students learn at high levels</td>
<td><strong>All</strong> students need to learn at high levels</td>
</tr>
<tr>
<td>Routine cognitive skills, rote learning</td>
<td>Learning to learn, complex ways of thinking, ways of working</td>
</tr>
<tr>
<td>Few years more than secondary</td>
<td>High-level professional knowledge workers</td>
</tr>
<tr>
<td>‘Tayloristic’, hierarchical</td>
<td>Flat, collegial</td>
</tr>
<tr>
<td>Primarily to authorities</td>
<td>Primarily to peers and stakeholders</td>
</tr>
</tbody>
</table>
Thank you! Tack!

Email: Andreas.Schleicher@OECD.org
Twitter: SchleicherEDU