OECD and SDG 4 - Education

• All OECD Directorates are reviewing their relevant policy instruments and indicators that could be used for monitoring the UN-led Sustainable Development Goals (SDGs) – a universal agenda.

• The Education and Skills Directorate has already mapped its policy instruments and indicators against the 10 targets and 43 Education 2030 Framework for Action thematic indicators, including the 10 being considered for global monitoring.

• The edition of Education at a Glance 2015 includes an editorial that sets out OECD’s intention to internalise the education SDG, its associated 10 targets and the global and thematic indicators and the contribution it will make to global and thematic monitoring.
## Thematic Indicators: OECD mapping

### Summary of OECD mapping against the 43 thematic indicators

<table>
<thead>
<tr>
<th>Target</th>
<th>Number of indicators</th>
<th>Concepts</th>
<th>OECD coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>7</td>
<td>Learning</td>
<td>PISA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Completion</td>
<td>EaG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Participation</td>
<td>PISA and EaG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provision</td>
<td>EaG</td>
</tr>
<tr>
<td>4.2</td>
<td>5</td>
<td>Readiness</td>
<td>Early Learning Outcomes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Participation</td>
<td>EaG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provision</td>
<td>EaG</td>
</tr>
<tr>
<td>4.3</td>
<td>3</td>
<td>Skills</td>
<td>PIAAC, EaG</td>
</tr>
<tr>
<td>4.4</td>
<td>2</td>
<td>Completion</td>
<td>EaG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Equity</td>
<td>EaG</td>
</tr>
<tr>
<td>4.5</td>
<td>Parity indexes</td>
<td></td>
<td>PISA, PIAAC, EaG, TALIS, DAC, CRS</td>
</tr>
<tr>
<td></td>
<td>Distributions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Policy</td>
<td></td>
</tr>
<tr>
<td>4.6</td>
<td>3</td>
<td>Skills</td>
<td>PIAAC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provision</td>
<td>EaG</td>
</tr>
<tr>
<td>4.7</td>
<td>5</td>
<td>Provision</td>
<td>EaG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Knowledge</td>
<td>PISA, EaG</td>
</tr>
<tr>
<td>4.a</td>
<td>5</td>
<td>School environment</td>
<td>EaG, LEEP</td>
</tr>
<tr>
<td>4.b</td>
<td>2</td>
<td>Scholarships</td>
<td>DAC, CRS, EaG</td>
</tr>
<tr>
<td>4.c</td>
<td>7</td>
<td>Teachers</td>
<td>PISA, EaG, TALIS</td>
</tr>
<tr>
<td>TOTAL</td>
<td>43</td>
<td></td>
<td>34</td>
</tr>
</tbody>
</table>
Education SDG: Conclusions of last INES WG meeting

INES WP members:

- **Confirmed** their support for the Education SDG with its associated targets and indicators; **Asked** for clarifications and guidance on how the INES WP would contribute to monitor the SDGs plans; **Recommended** to present a progress report on SDGs at next INES meetings.

- **Welcomed** OECD’s planned editorial on the Education SDG in the EaG 2015

- **Noted** that 34 of the 43 thematic indicators were already covered or touched upon by existing OECD surveys and instruments

- **Agreed** that the highest priority were the 10 global indicators together with those of the remaining thematic indicators that were most relevant, such as the out-of-school rate.

- **Agreed** that it was not necessary for OECD to collect data on all 43 thematic indicators but **encouraged** OECD to contribute to the definitions of all of these

- **Encouraged** UIS, OECD, Eurostat and others to work together to develop the new indicators
Global indicators for education

• 4.1 Reading and mathematics learning outcomes
• 4.2 % of under 5s who are developmentally ‘on track’
• 4.3 Participation rate of adults in formal and non-formal education and training (age-groups to be defined)
• 4.4 % of youth/adults with ICT skills
• 4.5 Parity indices (for all indicators that can be disaggregated)
• 4.6 Proficiency of youth/adults in literacy and numeracy
• 4.7 % of 15-year olds proficient in environmental and geoscience
• 4.a % of schools with access to basic services and facilities
• 4.b ODA expenditure on scholarships
• 4.c % of trained teachers
PISA 2015 in brief

• Every three years, over half a million students...
  – representing 28 million 15-year-olds in 71 countries/economies (PISA 2015)
... took an internationally agreed 2-hour test...
  – Focus on students’ capacity to extrapolate from what they know and creatively apply their knowledge in novel situations
  – Less emphasis on whether they can reproduce what they were taught
... and responded to questions on...
  – their personal background, their schools and their engagement with learning and school

• Parents, principals and system leaders provided data on...
  – support for learning as well as school policies, practices, resources and institutional factors that help explain performance differences.
OECD Programme for International Student Assessment

PISA 2012 Results
Andreas Schleicher
3 December 2013

Singapore
Hong Kong-China
Chinese Taipei
Korea
Macao-China
Japan
Liechtenstein
Switzerland
Netherlands
Estonia
Finland
Canada
Poland
Belgium
Germany
Viet Nam
Spain
Italy
Russian Fed.
Slovak Republic
United States
Lithuania
Sweden
Hungary
Croatia
Israel
Greece
Turkey
Serbia
Romania
Bulgaria
U.A.E.
Kazakhstan
Thailand
Chile
Malaysia
Mexico

High mathematics performance

Average performance of 15-year-olds in mathematics

... Shanghai-China performs above this line (613)

Low mathematics performance

... 8 countries perform below this line

Fig I.2.13
How proficient are students in mathematics?

At Level 3 students can execute clearly described procedures, including those that require sequentially sound reasoning from a single source and make use of a single representational mode. They are able to interpret and use information in complex situations, procedures, or contexts. They can reason directly from interpretations and apply percentages, fractions and proportional relationships. Their solutions reflect that they have engaged in basic interpretation and reasoning.

At Level 2 students can interpret and recognise situations in contexts that require no more than direct inference. They can extract relevant information from a single source and make use of a single representational mode. They can employ basic algorithms, formulae, procedures, or conventions to solve problems involving whole numbers. They are capable of making literal interpretations of the results.

At Level 1 students can answer questions involving familiar contexts where all relevant information is present and the questions are clearly defined. They are able to identify information and to carry out routine procedures according to direct instructions in explicit situations. They can perform actions that are almost always obvious and follow immediately from the given stimuli.
Percentage of low-performing students in mathematics in 2003 and 2012

- 2012 higher than 2003
- 2012 lower than 2003

OECD average 2003

Fig I.2.23
Students at Level 5 can handle texts that are unfamiliar in either form or content. They can find information in such texts, demonstrate detailed understanding, and infer which information is relevant to the task. They are also able to critically evaluate such texts and build hypotheses about them, drawing on specialised knowledge and accommodating concepts that may be contrary to expectations.

Students at Level 1a are capable of locating pieces of explicitly stated information that are rather prominent in the text, recognising a main idea in a text about a familiar topic, and recognising the connection between information in such a text and their everyday experience.
How proficient are students in reading?

PISA 2009 Results, Table I.2.1
Most students complete upper secondary education in the standard time allotted, but some need more time.

Successful completion of upper secondary programmes (N: theoretical duration of the programmes)

- Completion after N years
- Completion after N+2 years

Chart A2.4
Girls are more likely than boys to complete their upper secondary education in the standard time allotted.

Successful completion of upper secondary programmes, by gender (N: theoretical duration of the programmes)

- Girls completion after N years
- Boys completion after N years

Countries: Korea, Japan, Israel, Ireland, Slovak Republic, United States, Greece, Hungary, Poland, Estonia, Turkey, Belgium (F), Canada, Slovenia, Austria, OECD average, Sweden, Italy, New Zealand, Finland, United Kingdom, Chile, Netherlands, Norway, Mexico, Denmark, France, Spain, Iceland, Luxembourg.
Global indicators for education

- 4.1 Reading and mathematics learning outcomes
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Survey of Adult Skills in brief

166 thousand adults...
Representing 724 million 16-65 year-olds in 24 countries/economies

Took an internationally agreed assessment...
in literacy, numeracy and problem solving in technology-rich environments.

Also surveyed were generic skills such as collaborating with others and organising one’s time, and how adults use their skills

(See notes A and B in the Reader’s Guide).
## Survey of Adult Skills Skills assessed

“Key information-processing skills”

<table>
<thead>
<tr>
<th>Literacy</th>
<th>The ability to...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Understand, evaluate, use and engage with written texts.</td>
</tr>
<tr>
<td></td>
<td>In order to..</td>
</tr>
<tr>
<td></td>
<td>Achieve one’s goals, and to develop one’s knowledge and potential.</td>
</tr>
<tr>
<td></td>
<td>Literacy encompasses a range of skills from..</td>
</tr>
<tr>
<td></td>
<td>The decoding of written words and sentences</td>
</tr>
<tr>
<td></td>
<td>The comprehension, interpretation and evaluation of complex texts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Numeracy</th>
<th>The ability to...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Access, use, interpret and communicate mathematical information and ideas</td>
</tr>
<tr>
<td></td>
<td>In order to..</td>
</tr>
<tr>
<td></td>
<td>Engage in and manage the mathematical demands of a range of situations in adults.</td>
</tr>
<tr>
<td></td>
<td>Numeracy involves</td>
</tr>
<tr>
<td></td>
<td>Managing a situation or solving a problem in a real context, by responding to mathematical</td>
</tr>
<tr>
<td></td>
<td>content/information/ideas represented in multiple ways.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technology Rich Problem Solving</th>
<th>The ability to...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use digital technology communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks.</td>
</tr>
<tr>
<td></td>
<td>The assessment focuses on the abilities to...</td>
</tr>
<tr>
<td></td>
<td>Solve problems for personal, work and civic purposes by setting up appropriate goals and plans, and accessing and making use of information through computers and computer networks.</td>
</tr>
</tbody>
</table>
Skills of adults
Literacy

7 points are roughly equal to one year of education
What adults can do

Literacy

Adults at Level 4/5 can
- Perform multiple-step operations to integrate, interpret, or synthesise information from complex or lengthy texts that involve conditional and/or competing information.
- Make complex inferences and appropriately apply background knowledge as well as interpret or evaluate subtle truth claims or arguments.

Adults at Level 3 can
- Understand and respond appropriately to dense or lengthy texts.
- Understand text structures and rhetorical devices.
- Identify, interpret, or evaluate one or more pieces of information and make appropriate inferences.
- Perform multi-step operations and select relevant data from competing information in order to identify and formulate responses.

Adults at Level 2 can
- Integrate two or more pieces of information based on criteria.
- Compare and contrast or reason about information and make low-level inferences.
- Navigate digital texts to access and identify information from various parts of a document.

Adults at Level 1 can
- Read relatively short digital or print continuous, non-continuous, or mixed texts to locate a single piece of information.
- Complete simple forms, understand basic vocabulary, determine the meaning of sentences, and read continuous texts with a degree of fluency.

Technicians, Professionals

No information
Numeracy proficiency among adults

158 million adults score at Level 1 or below
How proficiency varies by socio-demographic characteristics

Proficiency affected by:

- Age
- Migration status
- Socio-economic background
- Level of education