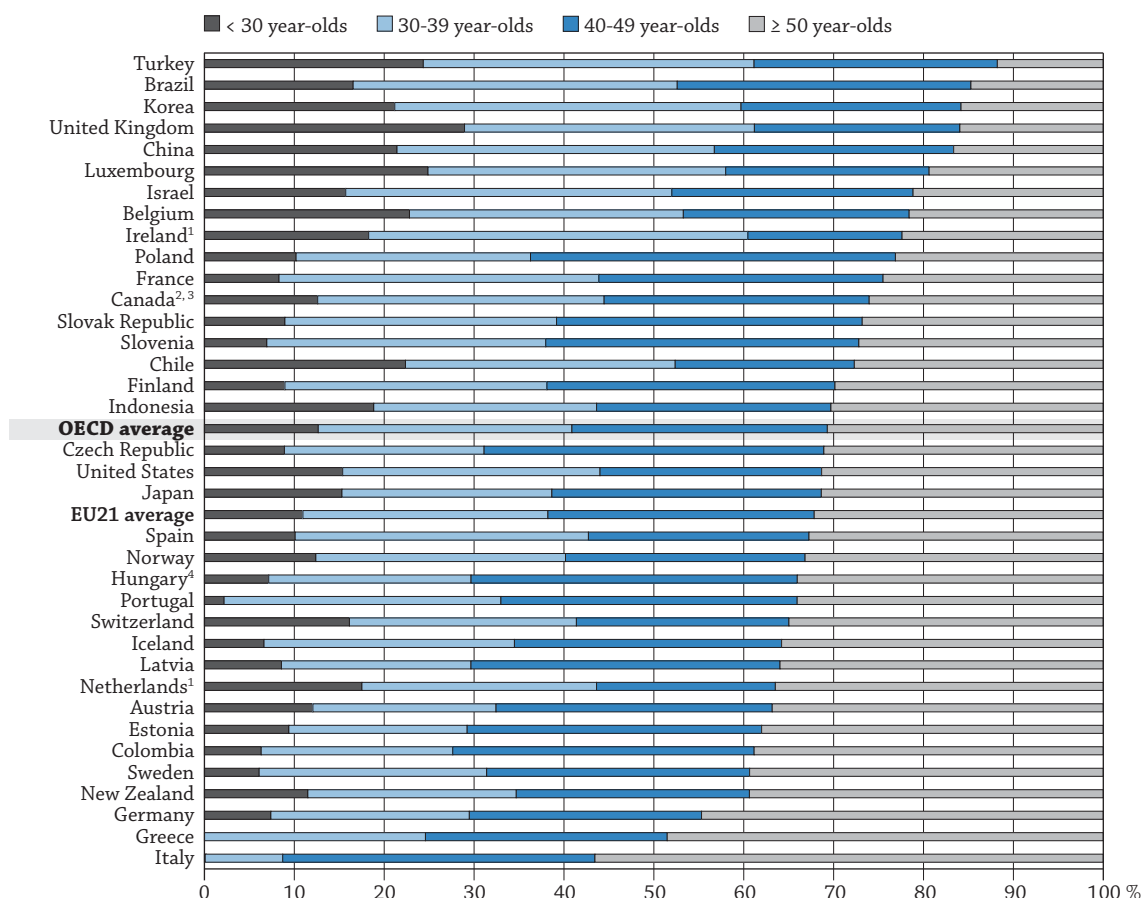


WHO ARE THE TEACHERS?

- On average across OECD countries, 30% of primary school teachers were at least 50 years old in 2013. The average increases to 34% at the lower secondary level and to 38% at the upper secondary level.
- More than two out of three teachers and academic staff are women, on average across OECD countries; but the percentage of female teachers decreases as the level of education increases: 96% at the pre-primary level, 82% at the primary level, 68% at the lower secondary level, 58% at the upper secondary level, and 42% at the tertiary level.
- On average, 83% of teachers have moderate or good skills in using information and communication technologies (ICT) to solve problems.

Chart D5.1. Age distribution of teachers in primary education (2013)

Distribution of teachers in educational institutions, by age group



1. Public institutions only.

2. Year of reference 2012.

3. Primary includes pre-primary and lower secondary.

4. Includes data on management personnel.

Countries are ranked in ascending order of the percentage of teachers aged 50 years or older at the primary level.

Source: OECD, Table D5.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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Context

The demand for teachers depends on a range of factors, including the age structure of the school-age population, average class size, the required instruction time for students, the use of teaching assistants and other “non-classroom” staff in schools, enrolment rates at the different levels of education, and starting and ending age of compulsory education. With large proportions of teachers in several OECD countries set to reach retirement age in the next decade, and/or the projected increase in the size of

the school-age population, governments will be under pressure to recruit and train new teachers. Given compelling evidence that the calibre of teachers is the most significant in-school determinant of student achievement, concerted efforts must be made to attract top talent to the teaching profession and to provide high-quality training (Hiebert and Stigler, 1999; OECD, 2005).

Teacher-retention policies need to promote work environments that encourage effective teachers to continue teaching. In addition, as teaching at the pre-primary, primary and lower secondary levels remains largely dominated by women, this gender imbalance in the teaching profession and its impact on student learning warrant detailed study.

■ Other findings

- In nearly all countries except Finland, Latvia and the Russian Federation, most teachers at the tertiary level are men.
- The United Kingdom has the largest proportion (29%) of primary teachers under the age of 30 of all countries with available data. By contrast, Greece and Italy have almost no primary teachers in that age group.
- Teachers in Korea use their ICT skills at work more than adults in any other country or sub-national entity that participated in the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). Korea also has one of the largest proportions of teachers with good skills in using ICT to solve problems.

■ Trends

Between 2005 and 2013, the proportion of secondary teachers aged 50 or older climbed by 3 percentage points, on average among countries with comparable data. The increase is 10 percentage points or more in Greece, Korea, Portugal and Slovenia; Austria saw a 19 percentage-point increase in this proportion during the period. In countries that stand to lose a significant number of teachers through retirement and whose school-age population is expected to remain the same or grow, governments will have to boost the appeal of teaching to upper secondary and tertiary students, expand teacher-training programmes and, if necessary, provide alternate routes to certification for mid-career professionals intent on changing careers. Fiscal constraints – particularly those driven by pension obligations and health-care costs for retirees – are likely to result in greater pressure on governments to reduce academic offerings, increase class size, integrate more self-paced, online learning, or implement some combination of these measures (Abrams, 2011; Peterson, 2010).

Analysis

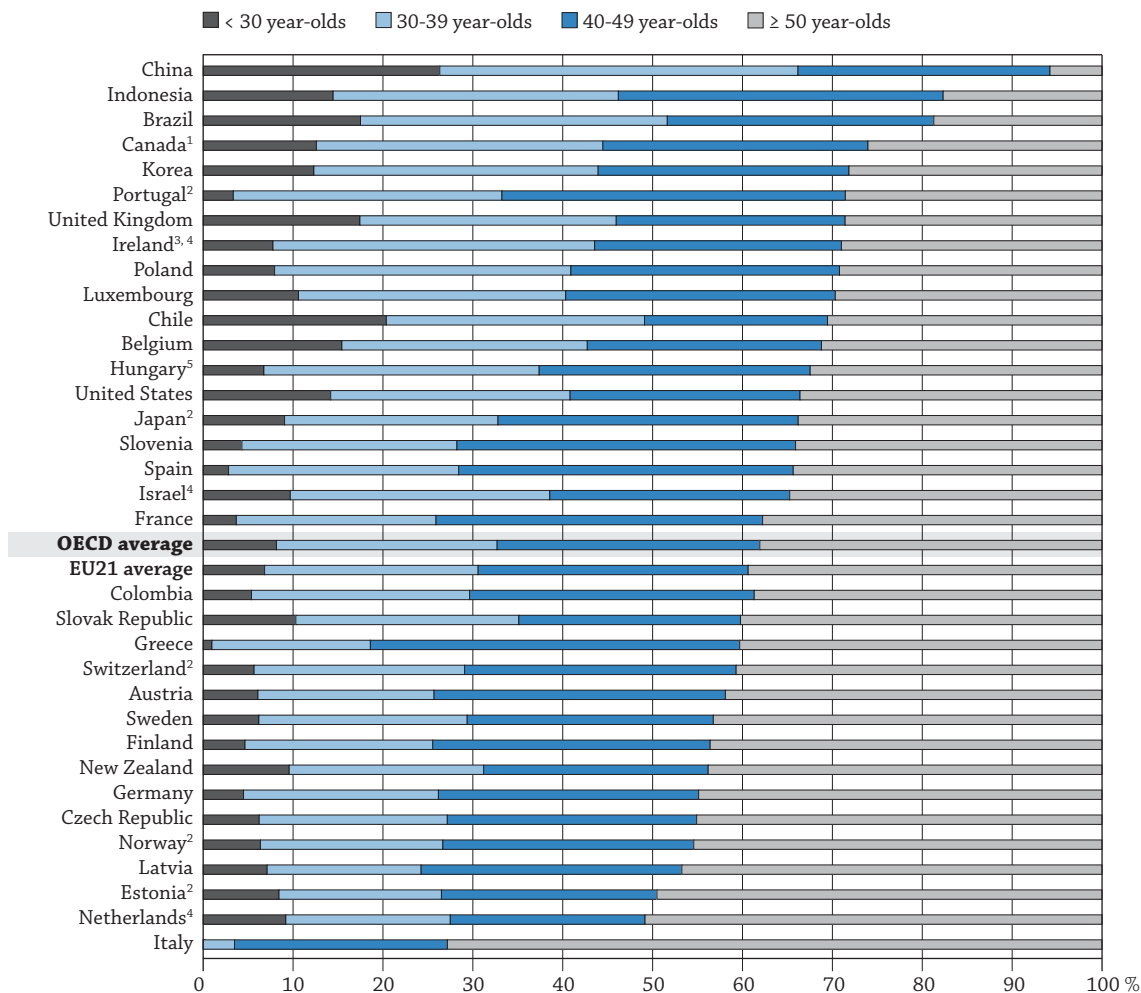
Age distribution of teachers

The age distribution of teachers varies considerably across countries and can be affected by a variety of factors, such as the size and age distribution of the population, the duration of tertiary education, or teachers' salaries and working conditions. Declining birth rates, for example, may drive down the demand for new teachers; longer tertiary education can delay the entrance of teachers to the labour market. Competitive salaries and good working conditions may, in some countries, attract young people to teaching and, in others, help to retain effective teachers.

The age distribution of teachers is similar for the primary and secondary levels of education: about 82% of teachers are aged between 30 and 59. At the primary level, 30% of school teachers are at least 50 years old, on average across OECD countries. The proportion exceeds 40% in Germany, Greece and Italy. At the other end of the spectrum, in most countries with available data, only 15% or less of primary teachers are under the age of 30. Only in Belgium, Chile, China, Korea, Luxembourg, Turkey and the United Kingdom does the proportion of primary teachers under the age of 30 equal or exceed 20% (Chart D5.1).

Chart D5.2. Age distribution of teachers in upper secondary education (2013)

Distribution of teachers in educational institutions, by age group



1. Year of reference 2012.

2. Upper secondary includes programmes from post-secondary non-tertiary.

3. Upper secondary includes lower secondary.

4. Public institutions only.

5. Includes data on management personnel.

Countries are ranked in ascending order of the percentage of teachers aged 50 years or older at the secondary level.

Source: OECD, Table D5.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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At the lower secondary level, on average across OECD countries, 34% of teachers are at least 50 years old, of which 7% are 60 or older. The proportion of lower secondary teachers aged 60 or older varies from 1% or less in China, Indonesia, Japan, Korea and Turkey, to 19% in Estonia and Italy. At the upper secondary level, the proportion of teachers aged 50 or older is 4 percentage points larger than it is in lower secondary education, on average across OECD countries. Only in Brazil (52%) and China (66%) are most upper secondary teachers below the age of 40.

The ageing of the teaching force has a number of implications for countries' education systems. In addition to prompting recruitment and training efforts to replace retiring teachers, it may also affect budgetary decisions. In most school systems, there is a positive link between teachers' salaries and years of teaching experience. Thus, the ageing of teachers increases school costs, which, in turn, can limit the resources available to implement other initiatives (see Indicator D3).

Gender profile of teachers

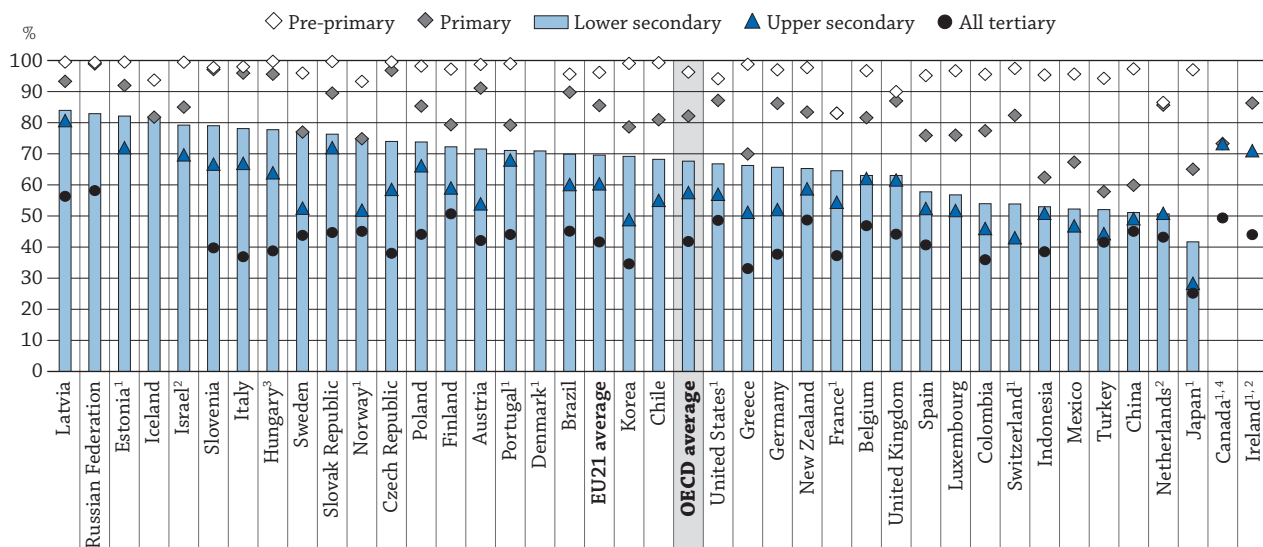
On average across OECD countries, more than two out of three teachers in all levels of education combined are women. The highest proportions of female teachers, however, are concentrated in the earlier years of schooling and shrink at each successive level of education. Indeed, women represent only 42% of the teaching staff at the tertiary level, on average across OECD countries.

In 33 of the 36 OECD and G20 countries with available data, 93% or more of pre-primary teachers are women. The exceptions are France, the Netherlands and the United Kingdom where 83%, 87% and 90% of pre-primary teachers, respectively, are women. In primary education, women occupy 82% of teaching positions, on average across OECD countries. This percentage varies widely, however, from 58% in Turkey to 99% in the Russian Federation (Chart D5.3).

Even though female teachers are still the majority in lower and upper secondary education, the proportion of male teachers is larger at these levels than at the pre-primary and primary levels. On average across OECD countries, 68% of teachers are women in lower secondary education. Indeed, female teachers comprise over half of the teaching staff at that level in all but one country with available data, Japan, where women represent 42% of the teaching staff. At the upper secondary level, the OECD average drops to 58%, and the proportion of female teachers varies considerably from 28% in Japan to 81% in Latvia.

Chart D5.3. Gender distribution of teachers (2013)

Percentage of women among teaching staff in public and private institutions, by level of education



1. Some levels of education are included with others. Please refer to "x" code in Table D5.3 for details.

2. Public institutions only. For the Netherlands, private data are available and included for pre-primary education. For Israel, public institutions only for pre-primary and upper secondary education.

3. Includes data on management personnel.

4. Year of reference 2012.

Countries are ranked in descending order of the percentage of female teachers at the lower secondary level.

Source: OECD, Table D5.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink <http://dx.doi.org/10.1787/888933284558>

At the tertiary level, the gender profile of teachers is reversed. Male teachers represent 58% of the teaching staff at that level, on average across OECD countries. As at the lower and upper secondary levels, Japan has the smallest share of female teachers at the tertiary level – 25%. Of the 26 OECD countries with available data, only one – Finland – has a larger share of female teachers (51%) than male teachers at this level.

The potential impact of gender imbalance in the teaching profession on student achievement, student motivation and teacher retention is worthy of study, especially in countries where few men are attracted to the profession (Drudy, 2008; OECD, 2005; 2009). There is little evidence that a teacher's gender has an impact on student performance (e.g. Antecol, Eren and Ozbeklik, 2012; Holmlund and Sund, 2008), but some research has shown that female teachers' attitudes towards school subjects, such as mathematics, can influence their female students' achievement (Beilock et al., 2009; OECD, 2014a).

In addition, school leadership does not reflect the gender balance among teachers (OECD, 2014a). While the proportion of male teachers in primary schools is relatively small in many countries, there is an over-representation of male principals, relative to male teachers, especially at that level of education. This suggests that male teachers tend to be promoted to principal positions more often than female teachers – which is surprising, given that most principals are former teachers, and most teachers are female.

Change in the age distribution of teachers between 2005 and 2013

The average annual growth rate between 2005 and 2013 in the proportion of secondary teachers aged 50 or older varied considerably among countries. In Austria, Korea, Portugal and Slovenia, it was more than 4%. The proportion of secondary teachers aged 50 or older increased the most in Korea, by an average of 8.5% per year. In France, Germany, Ireland, Luxembourg and the United Kingdom, the proportion of secondary teachers aged 50 or older decreased by an average of 1% or more per year during the period (Table D5.2).

In all countries, changes in the number of teachers should be balanced against changes in the school-age population. In countries with an increase in the school-age population over the period (see Indicator C1), new teachers will be needed to compensate for the significant number of staff hired in the late 1960s and 1970s who will reach retirement age over the next decade. Teacher-training programmes will likely have to grow in these countries, and incentives for students to enter the teaching profession may have to increase (see Indicator D6 in *Education at a Glance* [OECD, 2014b]).

Skills and readiness to use information and communication technologies for problem solving

The 2012 Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), measured problem-solving skills in technology-rich environments and estimated the frequency with which adults use those skills at work and at home. Greater proficiency in problem solving in technology-rich environments reflects both better problem-solving skills and better skills in using digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks (PIAAC Expert Group in Problem Solving in Technology-Rich Environments, 2009).

The information gathered through the Survey of Adult Skills allows for the creation of an indicator that measures skills and readiness to use ICT for problem solving. This indicator combines data about performance in the problem-solving assessment and information about why some adults did not participate in the computer-based assessment and thus do not have a score in problem solving (see the *Definitions* section at the end of this chapter).

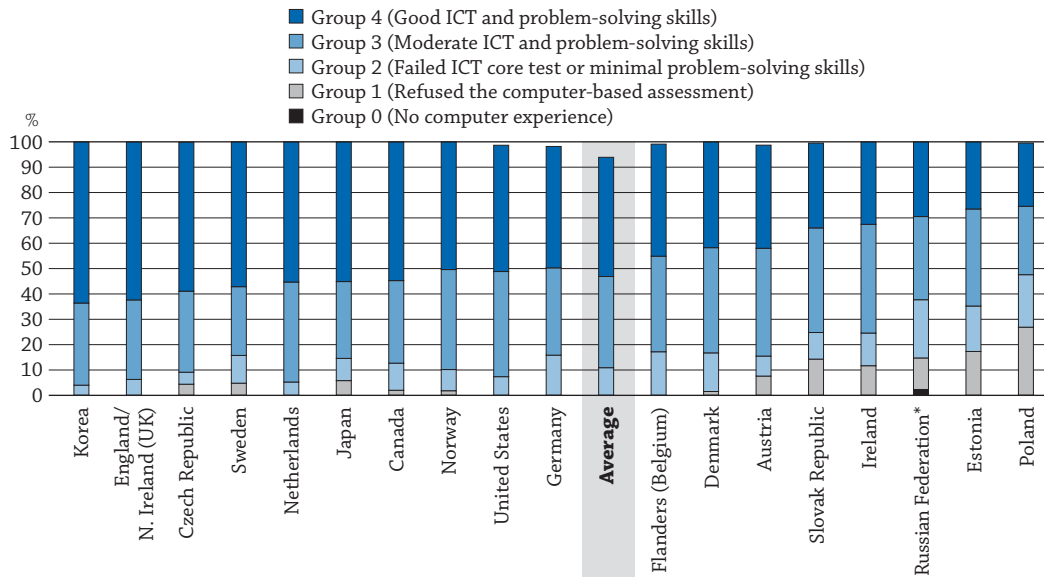
Teachers' skills

Based on data drawn from the Survey of Adult Skills, Chart D5.4 shows that, on average, 47% of teachers (defined as those who teach both pre-primary and primary school, primary teachers and secondary teachers) have good ICT and problem-solving skills (Group 4). This proportion ranges from 64% in Korea and 62% in England/Northern Ireland (UK) to less than 30% in the Russian Federation (29%), Estonia (27%) and Poland (25%). On average across participating countries and sub-national entities, 83% of teachers have moderate or good ICT and problem-solving skills (Table D5.4a).

Teachers' use of information and communication technologies at work

In the Survey of Adult Skills, respondents were asked if they had the computer skills needed to do their job. In all national and sub-national entities that participated in the survey, 87% of teachers replied that they did. In the Czech Republic (99%) and Korea (97%) more than 95% of teachers replied affirmatively. In general, the use of ICT skills at work is around the average (index value of 1.9) in the Czech Republic, while it is the highest recorded (index value of 2.5) in Korea. By contrast, much lower percentages of teachers in Japan (63%) and Norway (72%) reported that they had the computer skills needed to do their job (Table D5.4b).

Chart D5.4. Teachers' skills and readiness to use information and communication technologies for problem solving (2012)
 Survey of Adult Skills, teachers who teach both pre-primary and primary school, primary teachers and secondary teachers, 25-64 year-olds



Notes: Teachers who teach both pre-primary and primary school, primary teachers and secondary teachers refer to teachers who were currently working as teachers at the moment of the survey. The bars may not add up to 100% because of the presence categories for which there are too few observations to provide reliable estimates.

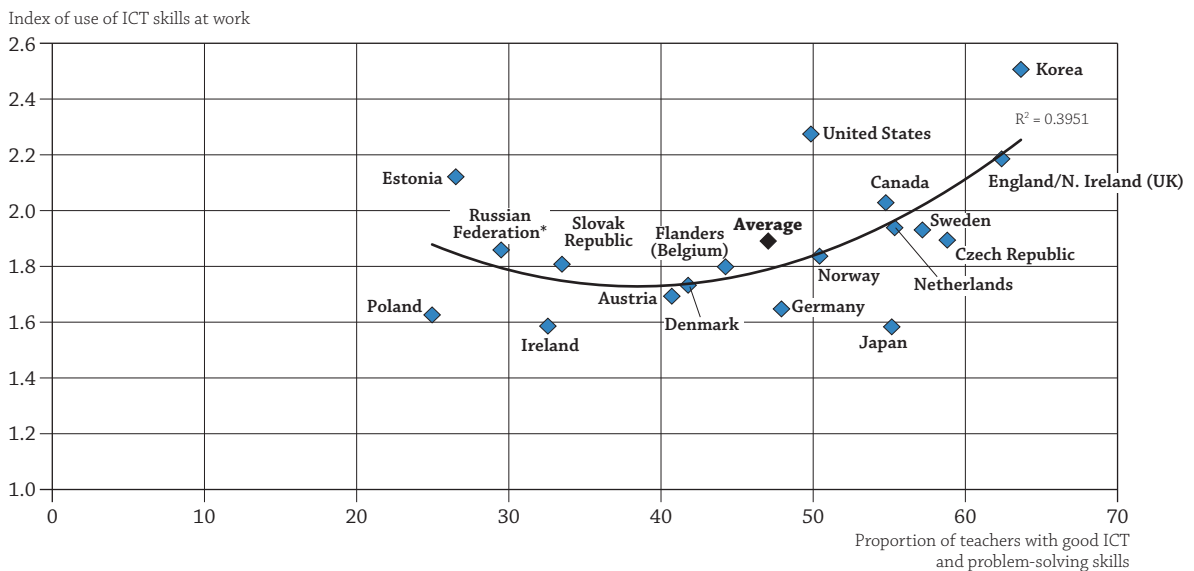
* See note on data for the Russian Federation in the *Methodology* section.

Countries are ranked in descending order of the percentage of teachers with good ICT and problem-solving skills (Group 4).

Source: OECD, Table D5.4a. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink <http://dx.doi.org/10.1787/888933284562>

Chart D5.5. Relationship between teachers' use of information and communication technologies skills at work and proficiency in those skills (2012)
 Survey of Adult Skills, teachers who teach both pre-primary and primary school, primary teachers and secondary teachers, 25-64 year-olds



Notes: Teachers who teach both pre-primary and primary school, primary teachers and secondary teachers refer to teachers who were currently working as teachers at the moment of the survey. The index of use of ICT indicates the frequency of use of ICT skills at work. The higher the index, the more frequent the use of ICT skills at work. See the *Definitions* section.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD, Tables D5.4a and D5.4b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink <http://dx.doi.org/10.1787/888933284572>

Respondents were also asked about the level of ICT skills required at work. On average, 73% reported that moderate or complex ICT skills were required. These percentages ranged from below 55% in Poland (50%) and the Russian Federation (51%) to 85% or more in Korea (85%), the Netherlands (87%), Japan (88%) and Estonia (89%). Only 1% to 7% of teachers reported that complex ICT skills are required at work; the vast majority of teachers reported that moderate ICT skills are required (Table D5.4b).

Chart D5.5 shows the positive relationship between teachers' use of ICT skills at work and the percentage of teachers with good ICT and problem-solving skills (Group 4). The proportion of teachers with good ICT and problem-solving skills (Group 4) tends to increase as teachers use those skills more at work. For example, in Poland 21% of teachers have good ICT and problem-solving skills (Group 4) and they use those skills at work less than the average (1.6 on the index of skills use at work, while the average is 1.9). By contrast, in Korea, 64% of teachers have good ICT and problem-solving skills (Group 4) and use their skills at work far more than the average (index value of 2.5) – the highest values among all countries and sub-national entities that participated in the survey. Estonia and Japan are the two outliers in this chart. Teachers in Estonia use ICT skills frequently at work (index value of 2.1), yet a relatively small proportion of teachers (27%) have good ICT and problem-solving skills, while the reverse is observed in Japan, where teachers use of ICT skills at work is below average (index value of 1.6) while a majority of teachers (55%) has good ICT and problem-solving skills (Tables D5.4a and D5.4b).

Definitions

ICT Skills required at work refers to the use of computers needed at work. Four levels of use are identified: “ICT skills not required at work” corresponds to individuals who reported they do not use a computer in their job; “Straightforward” indicates using a computer for routine tasks, such as data entry or sending and receiving e-mails; “Moderate” indicates using a computer for word-processing, spreadsheets or database management; and “Complex” indicates developing software or modifying computer games, programming using languages like java, sql, php or perl, or maintaining a computer network.

Index of use of ICT skills at work indicates the frequency of use of ICT skills at work. The higher the value on the index, the more frequent the use of ICT skills at work. The variable was derived from several questions from the background questionnaire of the Survey of Adult Skills, and has been transformed so that it has a mean of 2 and a standard deviation of 1 across the pooled sample of all participating countries. For more details, see page 143 of the *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills* (OECD, 2013).

ISCED type of final qualification refers to the type of education qualification that a new teacher would be required to have to teach primary, lower secondary or upper secondary school (general programmes) in the public sector.

Skill groups refer to skills and readiness to use information and communication technologies (ICT) for problem solving in technology-rich environments. Each group is described in terms of the characteristics of the types of tasks that can be successfully completed by adults and the related scores in the assessment of problem solving in technology-rich environments in the Survey of Adult Skills.

- Group 0 (no computer experience)
- Group 1 (refused the computer-based assessment)
- Group 2 (failed ICT core stage 1 or minimal problem-solving skills – scored below Level 1 in the problem solving in technology-rich environments assessment)
- Group 3 (moderate ICT and problem-solving skills – scored at Level 1 in the problem solving in technology-rich environments assessment)
- Group 4 (good ICT and problem-solving skills – scored at Level 2 or Level 3 in the problem solving in technology-rich environments assessment)

Methodology

Data refer to the academic year 2012/13 and are based on the UOE data collection on education statistics administered by the OECD in 2013 (for details, see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm). Data on teachers by age for 2005 may have been revised in 2015 to ensure consistency with 2013 data.

Data on skills and readiness to use ICT for problem solving are based on data from the Survey of Adult Skills (PIAAC) (2012), which was not specifically designed for teachers. The sample is smaller than in other indicators that use the whole population, explaining why standard errors are slightly higher than usual. Data should, therefore, be interpreted with caution. PIAAC is the OECD Programme for the International Assessment of Adult Competencies.

Note regarding data from Israel

The statistical data for Israel are supplied by and are under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Note regarding data from the Russian Federation in the Survey of Adult Skills (PIAAC)

Readers should note that the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in Russia but rather the population of Russia *excluding* the population residing in the Moscow municipal area. More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the *Technical Report of the Survey of Adult Skills* (OECD, 2014c).

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Indicator D5 Tables


StatLink  <http://dx.doi.org/10.1787/888933286275>

Table D5.1 Age distribution of teachers (2013)

Table D5.2 Age distribution of teachers (2005, 2013)

Table D5.3 Gender distribution of teachers (2013)

Table D5.4a Teachers’ skills and readiness to use information and communication technologies for problem solving (2012)

Table D5.4b Teachers’ use of information and communication technologies at work, ICT skills required at work, and teachers’ confidence in their computer skills (2012)

Cut-off date for the data: 23 October 2015. Updates can be found on line at <http://dx.doi.org/10.1787/eag-data-en>.

Table D5.1. Age distribution of teachers (2013)

Percentage of teachers in public and private institutions, by level of education and age group, based on head counts

	Primary					Lower secondary					Upper secondary				
	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD															
Australia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Austria	12	20	31	34	3	7	17	27	45	4	6	20	32	37	5
Belgium	23	30	25	21	1	18	28	25	26	3	15	27	26	28	3
Canada ^{1, 2}	13 ^d	32 ^d	29 ^d	22 ^d	5 ^d	x(1)	x(2)	x(3)	x(4)	x(5)	13	32	29	22	5
Chile	22	30	20	20	7	21	28	19	21	9	20	29	20	22	9
Czech Republic	9	22	38	27	4	9	25	35	27	5	6	21	28	35	10
Denmark	x(6)	x(7)	x(8)	x(9)	x(10)	5 ^d	30 ^d	29 ^d	25 ^d	11 ^d	m	m	m	m	m
Estonia ³	9	20	33	27	11	8	17	26	31	19	8 ^d	18 ^d	24 ^d	31 ^d	19 ^d
Finland	9	29	32	26	4	9	31	31	25	5	5	21	31	31	12
France	8	36	32	23	1	9	33	31	23	5	4	22	36	29	8
Germany	7	22	26	31	14	7	19	23	35	15	4	22	29	32	13
Greece	0	25	27	46	3	1	20	41	34	3	1	18	41	36	4
Hungary ⁴	7	23	36	33	1	6	23	33	36	2	7	31	30	28	5
Iceland	7	28	30	24	12	7	28	30	24	12	m	m	m	m	m
Ireland ⁵	18	42	17	19	3	x(11)	x(12)	x(13)	x(14)	x(15)	8 ^d	36 ^d	27 ^d	24 ^d	5 ^d
Israel ⁵	16	36	27	18	3	11	31	31	22	6	10	29	27	23	12
Italy	0	9	35	43	13	0	8	29	44	19	0	3	24	57	16
Japan ³	15	23	30	30	1	13	25	34	26	1	9 ^d	24 ^d	33 ^d	30 ^d	4 ^d
Korea	21	39	24	13	2	13	33	32	22	1	12	32	28	27	1
Luxembourg	25	33	23	18	1	22	39	22	15	2	11	30	30	25	4
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands ⁵	18	26	20	29	8	14	23	21	31	11	9	18	22	37	14
New Zealand	12	23	26	27	13	11	23	24	28	14	10	22	25	29	15
Norway ³	12	28	27	21	12	12	28	27	21	12	6 ^d	20 ^d	28 ^d	27 ^d	18 ^d
Poland	10	26	41	22	2	10	36	33	20	2	8	33	30	23	7
Portugal ³	2	31	33	31	3	1	25	41	30	3	3 ^d	30 ^d	38 ^d	25 ^d	3 ^d
Slovak Republic	9	30	34	23	4	14	28	22	29	7	10	25	25	32	9
Slovenia	7	31	35	27	1	6	34	28	30	2	4	24	38	28	6
Spain	10	33	25	28	5	3	26	37	29	5	3	26	37	30	5
Sweden	6	25	29	24	15	6	25	29	24	16	6	23	27	27	17
Switzerland ³	16	25	24	29	6	11	28	25	28	8	6 ^d	23 ^d	30 ^d	31 ^d	10 ^d
Turkey	24	37	27	11	1	35	41	16	7	0	m	m	m	m	m
United Kingdom	29	32	23	13	3	22	33	24	18	4	17	29	25	21	7
United States	15	29	25	24	8	17	29	25	22	8	14	27	26	23	10
OECD average	13	28	28	25	5	11	27	28	27	7	8	25	29	29	9
EU21 average	11	27	30	27	5	9	26	29	29	7	7	24	30	31	9
Partners															
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	17	36	33	13	2	18	35	30	15	3	18	34	30	16	3
China	21	35	27	17	0	22	42	28	8	0	26	40	28	6	0
Colombia	6	21	34	30	9	5	24	32	30	9	5	24	32	29	9
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	19	25	26	30	0	14	26	41	19	0	14	32	36	18	0
Latvia	9	21	34	28	8	6	18	32	34	10	7	17	29	33	13
Russian Federation	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	16	29	28	23	4	16	30	28	22	5	12	27	30	25	6

1. Year of reference 2012.

2. Primary includes pre-primary.

3. Upper secondary includes programmes from post-secondary non-tertiary.

4. Includes data on management personnel.

5. Public institutions only. For Israel, public institutions only for upper secondary education.

Source: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Latvia: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.


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Table D5.2. Age distribution of teachers (2005, 2013)
 Percentage of teachers in public and private institutions, by level of education and age group, based on head counts

	Secondary (2013)					Secondary (2005)					Percentage of teachers aged 50 years or older	
	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years	Average annual growth rate (2005-2013)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
OECD												
Australia	m	m	m	m	m	m	m	m	m	m	m	
Austria	7	18	30	41	4	7	22	45	25	1	7.2	
Belgium	17	28	26	28	3	17	23	31	27	2	0.2	
Canada ¹	13	32	29	22	5	m	m	m	m	m	m	
Chile	21	29	20	22	9	12	25	30	25	7	-0.8	
Czech Republic	7	23	31	31	8	m	m	m	m	m	m	
Denmark	m	m	m	m	m	m	m	m	m	m	m	
Estonia ²	8 ^d	17 ^d	25 ^d	31 ^d	19 ^d	m	m	m	m	m	m	
Finland	7	25	31	28	9	8	25	30	32	5	0.1	
France	6	28	34	26	7	12	29	24	34	1	-1.0	
Germany ³	6	20	25	34	14	3	18	26	44	9	-1.0	
Greece	1	19	41	35	4	6	24	41	27	2	3.8	
Hungary ⁴	6	27	31	32	3	15	26	30	24	4	2.6	
Iceland ⁵	m	m	m	m	m	11 ^d	27 ^d	30 ^d	25 ^d	8 ^d	m	
Ireland ⁶	8	36	27	24	5	11	25	27	29	7	-2.8	
Israel ⁶	10	30	28	23	10	10	29	30	26	5	0.6	
Italy	0	5	26	51	18	0	6	32	55	8	1.3	
Japan ^{2,7}	11 ^d	24 ^d	34 ^d	28 ^d	3 ^d	9	28	40	21	2	3.7	
Korea	13	32	30	24	1	17	30	40	12	1	8.5	
Luxembourg ⁸	15	33	27	22	3	18	25	26	29	2	-2.6	
Mexico	m	m	m	m	m	m	m	m	m	m	m	
Netherlands ^{6,8}	12	21	21	34	12	10	17	31	37	5	1.1	
New Zealand	10	22	25	28	15	14	21	29	29	8	2.0	
Norway ²	9 ^d	24 ^d	27 ^d	25 ^d	15 ^d	m	m	m	m	m	m	
Poland	9	34	31	21	5	16	33	29	19	3	2.1	
Portugal ²	2 ^d	28 ^d	39 ^d	27 ^d	3 ^d	16	35	31	16	2	6.2	
Slovak Republic	12	27	23	30	8	16	21	25	30	7	0.1	
Slovenia	5	29	33	29	4	11	33	34	20	2	5.0	
Spain	3	26	37	29	5	8	32	35	21	4	3.8	
Sweden	6	24	28	26	16	10	24	24	30	13	-0.3	
Switzerland ²	9 ^d	26 ^d	27 ^d	29 ^d	9 ^d	13	24	30	28	5	1.7	
Turkey	35	41	16	7	0	m	m	m	m	m	m	
United Kingdom	19	30	25	20	6	15	24	28	31	2	-2.9	
United States	16	28	25	23	9	17	26	23	26	8	-0.8	
OECD average	10	26	28	28	8	12	25	31	27	5	~	
Average for countries with available data for both reference years	9	26	29	28	7	12	25	30	28	5	1.5	
EU21 average	8	25	30	30	8	11	25	30	29	4	~	
Partners												
Argentina	m	m	m	m	m	m	m	m	m	m	m	
Brazil	18	34	30	15	3	m	m	m	m	m	m	
China	24	41	28	7	0	m	m	m	m	m	m	
Colombia	5	24	32	30	9	m	m	m	m	m	m	
India	m	m	m	m	m	m	m	m	m	m	m	
Indonesia	14	29	39	18	0	m	m	m	m	m	m	
Latvia	7	18	30	34	12	m	m	m	m	m	m	
Russian Federation	m	m	m	m	m	m	m	m	m	m	m	
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	
South Africa	m	m	m	m	m	m	m	m	m	m	m	
G20 average	15	29	28	23	5	m	m	m	m	m	m	

1. Year of reference 2012.

2. Upper secondary includes programmes from post-secondary non-tertiary.

3. Year of reference 2006 instead of 2005.

4. Includes data on management personnel.

5. Secondary includes primary education.

6. Public institutions only. For Israel, public institutions only for upper secondary education.

7. Year of reference 2004 instead of 2005.

8. Secondary in 2005 only includes upper secondary education.

Source: OECD, Argentina, China, Colombia, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Latvia: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.


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Table D5.3. **Gender distribution of teachers (2013)**

Percentage of women among teaching staff in public and private institutions by level of education, based on head counts

	Pre-primary education	Primary	Lower secondary	Upper secondary			Post-secondary non-tertiary	Tertiary			All levels of education
				General programmes	Vocational programmes	All programmes		Short-cycle tertiary	Bachelor's, master's, doctoral or equivalent level	All tertiary	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD											
Australia	m	m	m	m	m	m	m	m	44	44	m
Austria	99	91	72	62	49	54	68	53	40	42	65
Belgium	97	82	63	62	62	62	46	x(10)	x(10)	47	70
Canada ¹	x(2)	73 ^d	x(2)	73 ^d	x(4)	73	m	54	43	49	m
Chile	99	81	68	57	50	55	a	m	m	m	m
Czech Republic	100	97	74	59	59	59	96	81	38	38	75
Denmark	m	x(3)	71 ^d	m	m	m	m	m	m	m	m
Estonia ²	100 ^d	92	82	78	64 ^d	72 ^d	x(5)	m	m	m	m
Finland	97	79	72	69	54	59	53	a	51	51	71
France	83	83	65	56	52	54	x(10)	39 ^d	37 ^d	37 ^d	66
Germany	97	86	66	54	47	52	56	43	38	38	65
Greece	99	70	66	54	47	51	56	a	33	33	63
Hungary ³	100	96	78	68	49	64	53	50	37	39	76
Iceland	94	82	82	m	m	m	m	m	m	m	m
Ireland ⁴	m	86	x(4)	71 ^d	m	71 ^d	m	x(9)	44 ^d	44	m
Israel ⁴	99	85	79	70 ^d	x(4)	70	m	m	m	m	m
Italy	98	96	78	74	62	67	m	a	37	37	m
Japan ⁵	97	65	42	m	m	28 ^d	x(6, 10)	47 ^d	19 ^d	25 ^d	48
Korea	99	79	69	50	43	49	m	43	32	35	60
Luxembourg	97	76	57	57	45	52	m	m	m	m	m
Mexico	96	67	52	48	45	47	a	m	m	m	m
Netherlands ⁴	87	86	51	51	51	51	51	(9)	43 ^d	43	66
New Zealand	98	83	65	60	54	59	54	49	49	49	70
Norway ²	93 ^d	75	75	x(6)	x(6)	52 ^d	x(6)	x(6)	45	45	69
Poland	98	85	74	71	62	66	65	69	44	44	74
Portugal	99	79	71	68 ^d	x(4)	68	x(4, 9)	a	44 ^d	44 ^d	70
Slovak Republic	100	90	76	74	71	72	67	64	44	45	76
Slovenia	98	97	79	70	64	67	a	47	38	40	75
Spain	95	76	58	55	47	52	m	45	40	41	m
Sweden	96	77	77	52	54	53	43	43	44	44	74
Switzerland	97	82	54	45	42 ^d	43 ^d	x(5)	m	33	33	60
Turkey	94	58	52	45	44	44	a	34	43	42	53
United Kingdom	90	87	63	63	59	62	a	48	44	44	69
United States	94	87	67	57 ^d	x(4)	57	x(10)	x(10)	x(10)	49 ^d	70
OECD average	96	82	68	61	53	58	59	51	40	42	67
EU21 average	96	86	70	63	55	60	60	53	41	42	70
Partners											
Argentina	m	m	m	m	m	m	m	m	m	m	m
Brazil	96	90	70	62	51	60	46	43	45	45	72
China	97	60	51	49	49	49	x(10)	47 ^d	44 ^d	45 ^d	58
Colombia	96	77	54	46 ^d	x(4)	46	64	x(9)	36 ^d	36	61
India	m	m	m	m	m	m	m	m	m	m	m
Indonesia	95	62	53	52	49	51	a	(9)	39 ^d	39	60
Latvia	99	93	84	85	70	81	70	68	54	56	83
Russian Federation	99	99	83 ^d	x(3)	x(7, 8)	x(3, 7, 8)	63 ^d	73 ^d	52	58 ^d	82
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m
G20 average	95	78	62	57	50	53	55	47	40	42	64

Note: The data in "All levels of education" does not include early childhood educational development (ISCED 01).

1. Year of reference 2012.

2. Pre-primary includes early childhood education.

3. Includes data on management personnel.

4. Public institutions only. For the Netherlands, private data are available and included for pre-primary education. For Israel, public institutions only for pre-primary and upper secondary education.

5. Upper secondary includes programmes from post-secondary non-tertiary.

Source: OECD. Argentina, China, Colombia, India, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Latvia: Eurostat. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.


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Table D5.4a. **Teachers' skills and readiness to use information and communication technologies for problem solving (2012)***Teachers who teach both pre-primary and primary school, primary teachers and secondary teachers, 25-64 year-olds*

	Group 0 (No computer experience)		Group 1 (Refused the computer-based assessment)		Group 2 (Failed ICT core test or minimal problem-solving skills)		Group 3 (Moderate ICT and problem-solving skills)		Group 4 (Good ICT and problem-solving skills)	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD										
National entities										
Australia	m	m	m	m	m	m	m	m	m	m
Austria	c	c	8	(2.7)	8	(2.9)	43	(5.6)	41	(5.7)
Canada	c	c	2	(1.2)	11	(3.0)	33	(4.7)	55	(5.2)
Czech Republic	c	c	4	(2.5)	5	(3.0)	32	(10.4)	59	(11.0)
Denmark	c	c	1	(0.5)	15	(2.7)	42	(4.1)	42	(4.1)
Estonia	c	c	17	(3.5)	18	(4.3)	38	(5.2)	27	(4.5)
Finland	m	m	m	m	m	m	m	m	m	m
France	m	m	m	m	m	m	m	m	m	m
Germany	c	c	c	c	16	(5.4)	34	(6.6)	48	(7.3)
Ireland	c	c	12	(2.9)	13	(3.6)	43	(5.5)	33	(5.7)
Italy	m	m	m	m	m	m	m	m	m	m
Japan	c	c	6	(3.0)	9	(4.1)	30	(7.4)	55	(7.5)
Korea	c	c	c	c	4	(2.9)	32	(8.3)	64	(8.3)
Netherlands	c	c	c	c	5	(2.6)	39	(6.7)	55	(7.0)
Norway	c	c	2	(0.8)	8	(2.6)	39	(4.1)	50	(4.5)
Poland	c	c	27	(5.0)	21	(4.4)	27	(5.3)	25	(5.1)
Slovak Republic	c	c	14	(4.8)	11	(4.4)	41	(8.6)	33	(7.8)
Spain	m	m	m	m	m	m	m	m	m	m
Sweden	c	c	5	(2.2)	11	(3.3)	27	(5.9)	57	(6.1)
United States	c	c	c	c	7	(3.8)	41	(7.9)	50	(7.3)
Sub-national entities										
Flanders (Belgium)	c	c	c	c	17	(3.7)	38	(5.3)	44	(5.3)
England (UK)	c	c	c	c	6	(2.8)	31	(5.8)	63	(6.2)
Northern Ireland (UK)	c	c	c	c	6	(3.4)	36	(6.4)	57	(6.6)
England/N. Ireland (UK)	c	c	c	c	6	(2.7)	31	(5.6)	62	(5.9)
Average	m	m	m	m	11	(0.9)	36	(1.6)	47	(1.6)
Partners										
Russian Federation*	2	(1.4)	12	(6.1)	23	(7.4)	33	(9.6)	29	(8.3)

Note: Teachers who teach both pre-primary and primary school, primary teachers and secondary teachers refer to teachers who were currently working as teachers at the moment of the survey.

* See note on data for the Russian Federation in the *Methodology* section.

Source: OECD, Survey of Adult Skills (PIAAC) (2012). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

Please refer to the *Reader's Guide* for information concerning symbols for missing data and abbreviations.


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Table D5.4b. **Teachers' use of information and communication technologies at work, ICT skills required at work, and teachers' confidence in their computer skills (2012)**

Teachers who teach both pre-primary and primary school, primary teachers and secondary teachers, 25-64 year-olds

	Index of use of ICT skills at work ¹		Moderate or complex ICT skills required at work ²		I have the computer skills needed to do my job		
	Index	S.E.	%	S.E.	%	S.E.	
	(1)	(2)	(3)	(4)	(5)	(6)	
OECD	National entities						
Australia	m	m	m	m	m	m	
Austria	1.7	(0.1)	56	(4.5)	90	(3.0)	
Canada	2.0	(0.1)	73	(3.3)	94	(2.0)	
Czech Republic	1.9	(0.1)	72	(6.5)	99	(0.8)	
Denmark	1.7	(0.0)	63	(3.3)	83	(2.1)	
Estonia	2.1	(0.1)	89	(2.6)	86	(3.0)	
Finland	m	m	m	m	m	m	
France	m	m	m	m	m	m	
Germany	1.6	(0.1)	66	(5.1)	93	(2.7)	
Ireland	1.6	(0.1)	55	(4.2)	85	(3.3)	
Italy	m	m	m	m	m	m	
Japan	1.6	(0.1)	88	(4.0)	63	(6.4)	
Korea	2.5	(0.1)	85	(4.4)	97	(2.0)	
Netherlands	1.9	(0.1)	87	(3.8)	91	(3.0)	
Norway	1.8	(0.0)	83	(2.6)	72	(2.7)	
Poland	1.6	(0.1)	50	(5.2)	85	(3.5)	
Slovak Republic	1.8	(0.1)	74	(4.9)	93	(3.4)	
Spain	m	m	m	m	m	m	
Sweden	1.9	(0.0)	70	(3.9)	91	(2.5)	
United States	2.3	(0.1)	75	(5.3)	89	(4.5)	
	Sub-national entities						
Flanders (Belgium)	1.8	(0.0)	80	(3.6)	88	(2.6)	
England (UK)	2.2	(0.1)	79	(5.0)	89	(2.9)	
Northern Ireland (UK)	2.2	(0.1)	85	(3.9)	94	(2.5)	
England/N. Ireland (UK)	2.2	(0.1)	80	(4.8)	89	(2.8)	
Average	1.9	(0.0)	73	(1.1)	87	(0.8)	
Partners	Russian Federation*	1.9	(0.1)	51	(8.6)	88	(5.4)

Note: Teachers who teach both pre-primary and primary school, primary teachers and secondary teachers refer to teachers who were currently working as teachers at the moment of the survey.


* See note on data for the Russian Federation in the *Methodology* section.

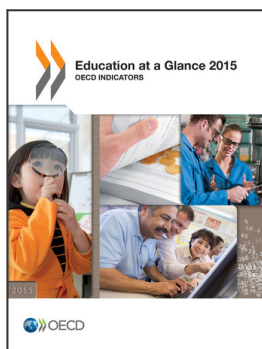
1. The index of use of ICT indicates the frequency of use of ICT skills at work. The higher the index, the more frequent the use of ICT skills at work. See the *Definitions* section.

2. Other categories are: "ICT skills not required at work" and "Straightforward ICT skills required at work".

Source: OECD. Survey of Adult Skills (PIAAC) (2012). See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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