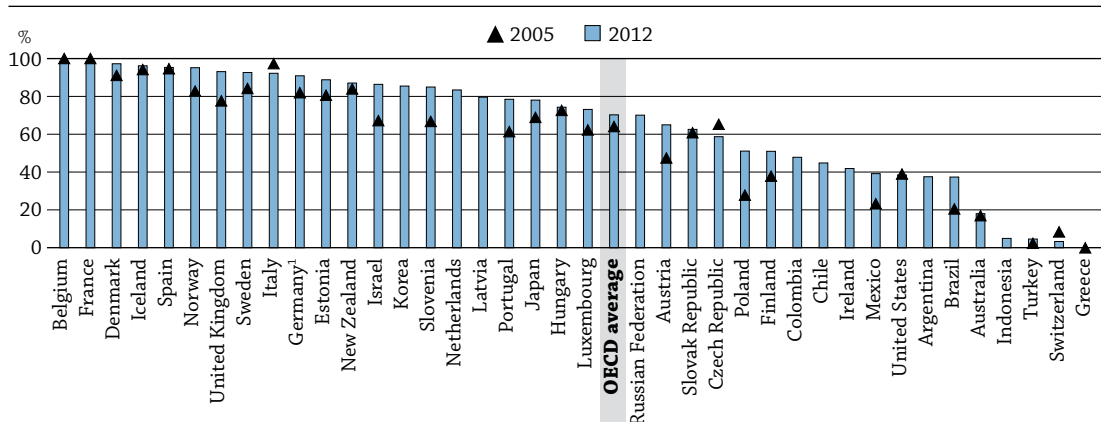


HOW DO EARLY CHILDHOOD EDUCATION SYSTEMS DIFFER AROUND THE WORLD?

- In many OECD countries, early childhood education services have expanded in tandem with the change in women's participation in the labour force. But improving access without also improving the quality of these services will not ensure good individual and social outcomes.
- Early childhood education is associated with better performance in school later on. Fifteen-year-old pupils who had attended at least one year of pre-primary education perform better on the OECD Programme for International Student Assessment (PISA) survey than those who did not, even after accounting for their socio-economic backgrounds.
- In a majority of OECD countries, education now begins for most children well before they are 5 years old. More than three-quarters of 4-year-olds (84%) are enrolled in early childhood education and primary education across OECD countries; among OECD countries that are part of the European Union, 89% of 4-year-olds are.
- In Belgium, Denmark, France, Germany, Iceland, Italy, Norway, Spain, Sweden and the United Kingdom, more than 90% of 3-year-olds are enrolled in early childhood education.

Chart C2.1. Enrolment rates at age 3 in early childhood education (2005 and 2012)



1. Year of reference 2006 instead of 2005.

Countries are ranked in descending order of the enrolment rates of 3 year-olds in 2012.

Source: OECD, Table C2.1. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

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Context

As family structures change, so do the relative ages of parents. More women and men are waiting until later in life to begin their families. They do so for a number of reasons, including planning for greater financial security and emotional maturity, taking more time to find a stable relationship, and committing to their careers before turning their attention to having children. As parents are also more likely to be in the workforce today, there is a growing need for early childcare. In addition, there is a growing awareness of the key role that early childhood education plays in the cognitive and emotional development of the young. As a result, ensuring the quality of early childhood education and care (ECEC) has become a policy priority in many countries.

Enrolling pupils in early childhood education can also mitigate social inequalities and promote better student outcomes overall. Many of the inequalities found in education systems are already evident when pupils enter formal schooling and persist as they progress through the school system (Downey et al., 2004). Because inequalities tend to grow when school is not compulsory, earlier entrance into the school system may reduce these inequalities. In addition, pre-primary education helps to prepare pupils to enter and succeed in formal schooling (Heckman, 2000).

As countries continue to expand their early childhood education programmes, it will be important to consider parents' needs and expectations regarding accessibility, cost, programme and staff quality and accountability. When parents' needs for quality, accessibility or accountability are not met, some parents may be more inclined to send their children to private pre-primary institutions, childcare or extra-curricular activities. This can result in heavy financial burdens for parents, even when government subsidies are provided (Shin et al., 2009).

There are many different ECEC systems and structures within OECD countries. Consequently, there is also a range of different approaches to identifying the boundary between early childhood education and childcare (Box C2.1 and see *Definitions* section). These differences should be taken into account when drawing conclusions from international comparisons.

■ Other findings

- **Publicly-funded pre-primary education tends to be more strongly developed in the European than in the non-European countries of the OECD.** Private expenditure varies widely between countries, ranging from 5% or less in Belgium, Estonia, Latvia, Luxembourg and Sweden, to 25% or more in Argentina, Australia, Austria, Colombia, Japan, Korea, Spain and the United States.
- **As a percentage of GDP, expenditure on pre-primary education accounts for an average of 0.6% of GDP.** Differences between countries are significant. For example, while 0.1% of GDP is spent on pre-primary education in Australia, about 0.8% or more is spent in Chile, Denmark, Iceland, Latvia, Luxembourg, Slovenia, Spain and the Russian Federation.
- The ratio of pupils to teaching staff is also an important indicator of the resources devoted to pre-primary education. **The pupil-teacher ratio, excluding non-teaching staff (e.g. teachers' aides), ranges from more than 20 pupils per teacher in Chile, France, Indonesia, Israel, Mexico and Turkey, to fewer than 10 in Estonia, Iceland, New Zealand, Slovenia and Sweden.**
- **Some countries make extensive use of teachers' aides at the pre-primary level.** Twelve countries reported smaller ratios of pupils to contact staff than of pupils to teaching staff. As a result, the ratios of pupils to contact staff are substantially lower than the ratios of pupils to teaching staff (at least two fewer pupils) in Austria, Brazil, Chile, France, Germany, Indonesia, Israel and the United Kingdom.

■ Trends

Over the past decade, many countries have expanded pre-primary education programmes. This increased focus on early childhood education has resulted in the extension of compulsory education to lower ages in some countries, free early childhood education, universal provision of early childhood education and care, and the creation of programmes that integrate care with formal pre-primary education.

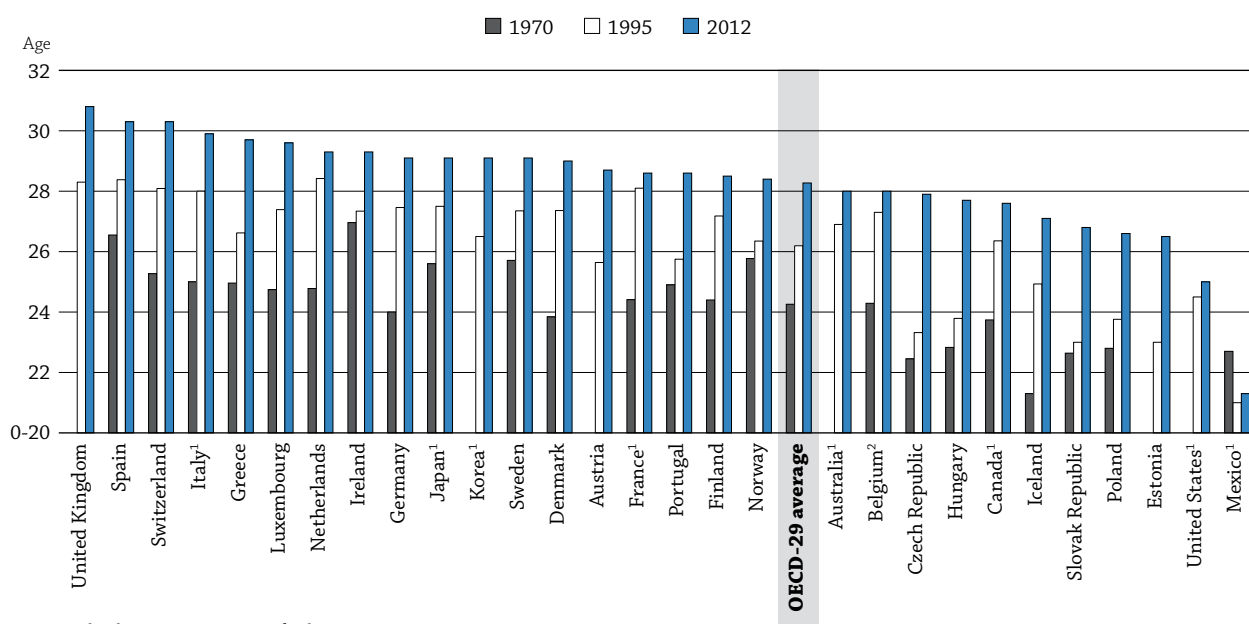
On average across those OECD countries with 2005 and 2012 data, enrolments in early childhood education programmes rose from 64% of 3-year-olds in 2005 to 71% in 2012, and similarly from 79% of 4-year-olds in 2005 to 84% in 2012. The enrolment rates of 4-year-olds in early childhood education programmes increased by 20 percentage points or more in Australia, Brazil and Poland between 2005 and 2012.

Analysis

In a majority of OECD countries, ECEC policy has paralleled the evolution of women's participation in the labour force. More and more women have become salaried employees since the 1970s, as the service- and knowledge-based economies expanded. Because economic prosperity depends on maintaining a high employment-to-population ratio, encouraging more women to enter the labour market has prompted greater government interest in expanding ECEC services. In the 1970s and 1980s, European governments, in particular, put family and childcare policies into place to encourage couples to have children and ensure that it is feasible for women to combine work and family responsibilities (OECD, 2013c; 2011a).

The average age at which mothers have their first child has risen across all OECD countries, except Mexico, over the past 40 years. In 1970, Iceland had the lowest average age of mothers giving birth to their first child: just over 21 years. But Iceland was not an outlier: of the 23 countries for which data are available, five other countries had an average age at first birth of under 23, and the average age across all countries was just over 24. By 1995, the age had risen to over 26, on average across OECD countries, and by 2012 it had risen again to 28. Despite this trend, there is still wide variation among countries. In 2012, Spain, Switzerland and the United Kingdom had the highest average age at first birth – older than 30. By contrast, Mexico had the lowest average age – just over 21 (Chart C2.2).

Chart C2.2. Trends in the age of first-time mothers (1970, 1995, 2012)
Average age at which mothers have their first child




1. Year of reference 2009 instead of 2012.

2. Year of reference 2010 instead of 2012.

Countries are ranked in descending order of the average age at which mothers have their first child in 2012.

Source: OECD (2014), OECD Family Database. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

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Enrolment in early childhood education

Early childhood education is the initial stage of organised instruction for many children and can play a significant role in their development. While primary and lower secondary enrolment patterns are fairly similar throughout OECD countries, there is significant variation in early childhood education programmes among OECD and other G20 countries. This includes the overall level of participation in programmes, the typical starting age for children, financing and programme length.

In most OECD countries, education now begins for most children well before they are 5 years old. More than three-quarters (84%) of 4-year-olds are enrolled in early childhood education and primary education programmes across OECD countries as a whole, rising to 89%, on average, in the OECD countries that are part of the European Union.

Enrolment rates for early childhood education and primary education at this age vary from over 95% in Belgium, Denmark, France, Germany, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Spain and the United Kingdom, to less than 60% in Finland, Indonesia and Turkey. Greece and Switzerland also fall into this group, but because enrolment in integrated programmes is not reported for those countries, the true enrolment rate cannot be calculated and is likely to be higher than that reported here. In the two countries, the enrolment rates in early childhood education programmes are highest for children at the age of five (Table C2.1).

On average across OECD countries, 74% of the 15-year-old pupils assessed by the OECD Programme for International Student Assessment (PISA) survey reported that they had attended more than one year of pre-primary education. According to pupils' responses, enrolment in more than one year of pre-primary education was nearly universal about ten years ago in Belgium, France, Hungary, Iceland, Japan and the Netherlands, where over 90% of 15-year-olds reported that they had attended pre-primary education for more than one year. Pre-primary education is rare in Turkey, where fewer than 30% of 15-year-olds had attended pre-primary education for any period of time. More than one year of pre-primary education is uncommon in Australia, Chile, Ireland and Poland, where fewer than 52% of pupils had attended pre-primary education for that length of time (OECD, 2013a, Table IV.3.33).

Box C2.1. The boundary between early childhood education and childcare

There are many different early childhood education and care (ECEC) systems and structures within OECD countries. Consequently, there is also a range of different approaches to identifying the boundary between early childhood education and childcare. As the educational properties of ISCED 0 programmes can be difficult to assess directly, several proxy measures are used to come up with a technical definition. These include whether or not the programme is being delivered by qualified staff members, whether it takes place in an institutionalised setting, and the target age of children.

In order to help readers of *Education at a Glance* to interpret the early childhood education results, a number of examples of how countries define, in theory, and enforce, in practice, the boundary between early childhood education (ECE) and childcare in the data reported to the OECD are provided below.

For countries with ECE programmes that take place in institutional settings distinct from those that provide childcare, a valid reporting structure is straightforward to implement. In Belgium, for example, the different institutional settings are financed by different government ministries, which makes estimations unnecessary although the international comparability of how education is defined is still unclear (Figure 1).

For countries with programmes that combine an educational programme with childcare (“integrated” programmes), the education/childcare boundary becomes more challenging. OECD countries with integrated ECEC programmes often also have stand-alone programmes that are purely educational. Over half of OECD countries are unable, in practice, to distinguish between early childhood education and childcare in integrated programmes. Of these, most, including Italy, Denmark and the United States, choose to report all of the information under ISCED 0. A minority of countries do not include integrated programmes under ISCED 0 for reporting on personnel (Australia, Norway), expenditure (Korea) or overall reporting (Greece, Switzerland). These differences should be taken into account when drawing conclusions from international comparisons.

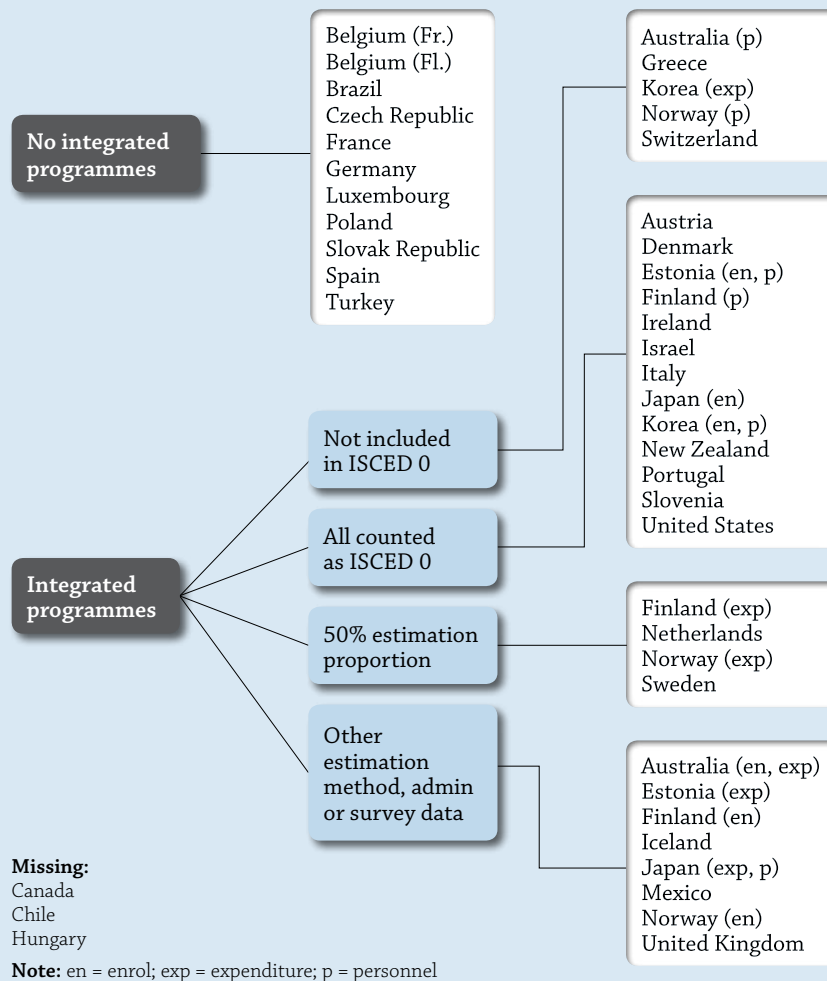
For countries with integrated programmes that do attempt to isolate the education component, a variety of estimation methods are used to isolate enrolments, expenditure and personnel. Some countries, such as the Netherlands, Norway and Sweden, choose to apply a simple 50/50 estimation method, whereby half of all enrolments, staff or expenditure are considered educational. Other countries rely on survey data, assign a different education/childcare split, or apply a more complicated estimation method. Finland, for example, weights expenditure on integrated programmes by the child's age, while Estonia uses an estimated expenditure proportion of 30%.

OECD countries are working together to improve methods of reporting statistics on early childhood education. The improvement, which will take into account the new international classification of ISCED programmes, will be implemented in *Education at a Glance* 2015.

...

Figure 1 diagrams early childhood education systems and approaches to reporting across OECD and partner countries. Country-specific information can be found in Annex 3 of this publication.

Figure 1. Diagrammatical representation of ISCED 0 systems and reporting across the OECD



Notably, PISA analyses also find that in most countries, pupils who had attended at least one year of pre-primary education tend to perform better than those who had not, even after accounting for pupils' socio-economic background. PISA research also shows that the relationship between pre-primary attendance and performance tends to be stronger in school systems with a longer duration of pre-primary education, smaller pupil-to-teacher ratios in pre-primary education, and higher public expenditure per child at the pre-primary level (OECD 2013a, Table II.4.12).

Early childhood education programmes for even younger children are not as pervasive. In some countries, demand for early childhood education for children aged 3 and under far outstrips supply, even in countries that provide for long parental leave. The highest enrolment rates of 3-year-olds in early childhood education are found in Belgium, Denmark, France, Iceland, Italy, Norway, Spain, Sweden and the United Kingdom. In countries where public funding for parental leave is limited, many working parents must either look to the private market, where parents' ability to pay significantly influences access to quality services, or else rely on informal arrangements with family, friends and neighbours (Table C2.1 and *Starting Strong III* [OECD, 2011b]).

Some countries have made access to pre-primary education almost universal for children by the time they are three. The availability of early childhood education is growing quickly in most countries. On average across OECD countries with 2005 and 2012 data, enrolments rose from 64% of 3-year-olds in 2005 to 71% in 2012, and from 79% of 4-year-olds in 2005 to 84% in 2012. In Brazil and Poland, the enrolment rates among 4-year-olds increased by 20 percentage points or more during this period (Table C2.1).

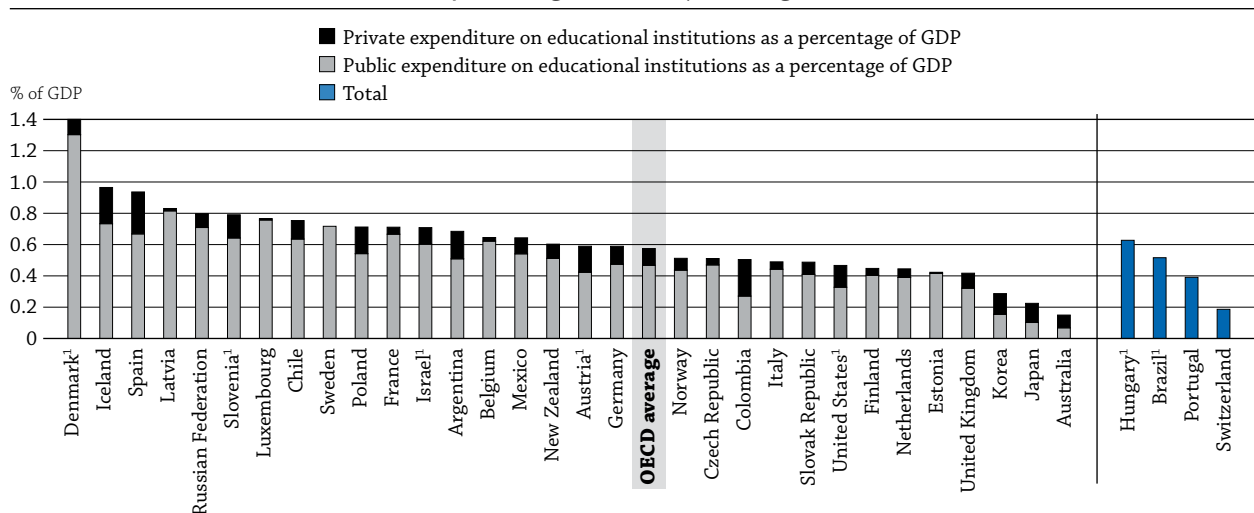
Financing early childhood education

Sustained public funding is critical for supporting the growth and quality of early childhood education programmes. Appropriate funding helps to recruit professional staff who are qualified to support children’s cognitive, social and emotional development. Investment in early childhood facilities and materials also helps support the development of child-centred environments for learning. In countries that do not channel sufficient public funding to cover both quantity and quality, some parents may be more inclined to send their children to private ECEC services, which implies heavy financial burdens (OECD, 2011b); others may prefer to stay home, which can hinder women’s participation in the labour force (OECD, 2011a).

Public expenditure on pre-primary education is mainly used to support public institutions, but in some countries it also funds private institutions to varying degrees. On average across OECD countries, the level of public expenditure on public pre-primary institutions, per pupil, is around twice the level of public expenditure on private pre-primary institutions (USD 6 460 and USD 3 618, respectively) (see Table B3.4). At the pre-primary level, annual expenditure (from both public and private sources) per pupil for both public and private institutions averages USD 7 446 in OECD countries. However, expenditure varies from USD 2 500 or less in Argentina, Brazil, Indonesia and Turkey, to more than USD 10 000 in Australia, Denmark, Luxembourg, New Zealand and the United States (Table C2.2, and see Table B3.3 in Indicator B3).

Expenditure on pre-primary education accounts for an average of 0.6% of the collective GDP. Differences between countries are significant. For example, while 0.1% or less of GDP is spent on pre-primary education in Australia, 0.8% or more is spent in Chile, Denmark, Iceland, Latvia, Luxembourg, Slovenia, Spain and the Russian Federation (Table C2.2 and Chart C2.3). These differences are largely explained by enrolment rates, legal entitlements and costs, and the different starting age for primary education; they are also influenced by the extent to which this indicator covers private early childhood education. In Switzerland, the absence of data on integrated programmes is also likely to understate the true level of expenditure and enrolments in early childhood education programmes (see more details in Box C2.1), and may affect the comparability of the data to that of other countries. Inferences on access to and quality of ECEC should therefore be made with caution (Table C2.2 and Box C2.1).


Chart C2.3. Expenditure on early childhood educational institutions (2011)
As a percentage of GDP, by funding source



1. Includes some expenditure on childcare.

Countries are ranked in descending order of public and private expenditure on educational institutions.

Source: OECD, Table C2.2. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

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Publicly-funded pre-primary education tends to be more strongly developed in the European than the non-European countries of the OECD. In Europe, the concept of universal access to education for 3-6 year-olds is generally accepted. Most countries in this region provide all children with at least two years of free, publicly funded pre-primary education in schools before they begin primary education. With the exception of Ireland and the Netherlands, such access is generally a statutory right from the age of 3, and in some countries, even before then. Compared to primary, secondary and post-secondary non-tertiary education, pre-primary institutions obtain the largest proportion of funds (19%) from private sources. However, this proportion varies widely, ranging from 5% or less in Belgium, Estonia, Latvia Luxembourg and Sweden, to 25% or more in Argentina, Australia, Austria, Colombia, Japan, Korea, Spain and the United States (Table C2.2 and *Starting Strong II* [OECD, 2006]).

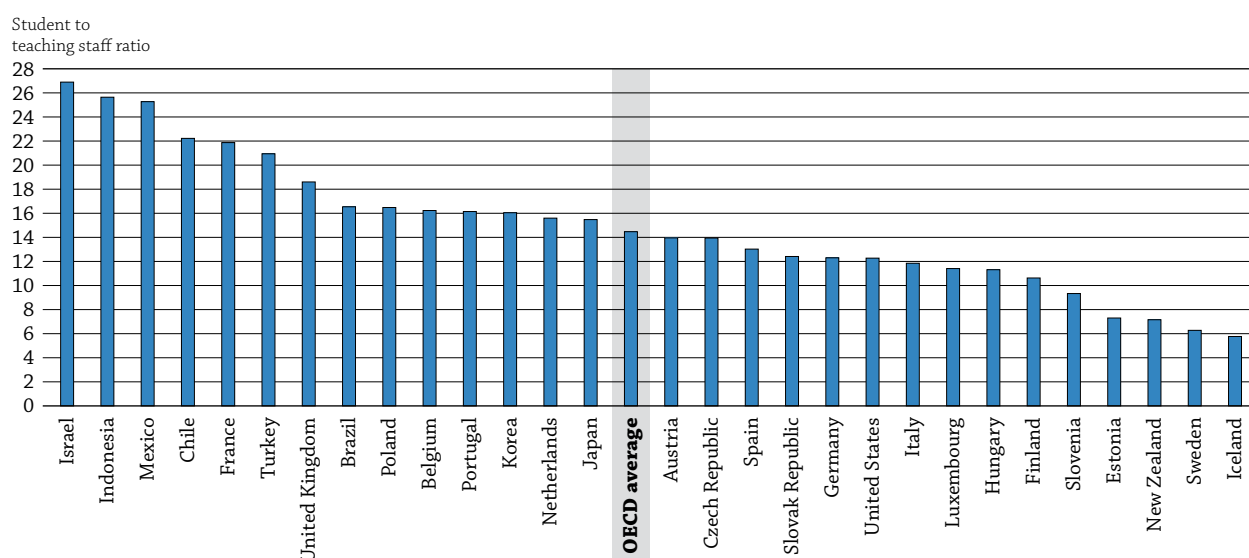
The pupil-teacher ratio varies considerably across OECD countries

Research demonstrates that enriched, stimulating environments and high-quality pedagogy are fostered by better-qualified practitioners, and that better-quality staff-child interactions facilitate better learning outcomes (Heckman, 2000; Shin et al., 2009). While qualifications are one of the strongest predictors of staff quality, the level of qualification tells only part of the story. Qualifications indicate how much specialised and practical training is included in initial staff education, what types of professional development and education are available to and taken up by staff, and how many years of experience staff have accumulated. In addition, working conditions can influence professional satisfaction, which is likely to affect the ability and willingness of professionals to build relationships and interact attentively with children (Shin et al., 2009). High turnover disrupts the continuity of care, undermines professional development efforts, lowers overall quality, and adversely affects child outcomes.

The ratio of pupils to teaching staff is also an important indicator of the resources devoted to education. That ratio is obtained by dividing the number of full-time equivalent pupils at a given level of education by the number of full-time equivalent teachers at that level and in similar types of institutions. However, this ratio does not take into account instruction time compared to the length of a teacher's working day, nor how much time teachers spend teaching. Therefore, it cannot be interpreted in terms of class size. The number of pupils per class summarises different factors, but distinguishing between these factors helps to identify differences in the quality of education systems (see Indicator D2).

Chart C2.4. Ratio of pupils to teaching staff in early childhood education (2012)

Public and private institutions, calculation based on full-time equivalents



Note: the figures should be interpreted with some caution because the indicator compares the teacher/student ratios in countries with “education-only” and “integrated education and daycare” programmes. In some countries, the staff requirements in these two types of provision are very different.

Countries are ranked in descending order of students to teaching staff ratios in early childhood education.

Source: OECD, Table C2.2. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

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Table C2.2 shows the ratio of pupils to teaching staff and also the ratio of pupils to contact staff (e.g. teachers and non-professional staff [teachers' aides]) in early childhood education. Some countries make extensive use of teachers' aides at the pre-primary level. Twelve OECD and G20 countries reported smaller ratios of pupils to contact staff (column 4 of Table C2.2) than of pupils to teaching staff. The ratios of pupils to contact staff are substantially lower in Austria, Brazil, Chile, France, Germany, Indonesia, Israel, the United Kingdom and the United States. On average across OECD countries, there are 15 pupils for every teacher in pre-primary education. The pupil-teacher ratio, excluding teachers' aides, ranges from more than 20 pupils per teacher in Chile, France, Indonesia, Israel, Mexico and Turkey, to fewer than 10 in Estonia, Iceland, New Zealand, Slovenia and Sweden (Table C2.2 and Chart C2.4).

Definitions

Early childhood education, or pre-primary education (ISCED 0), is the initial stage of *organised instruction*, designed primarily to introduce very young children to a school-like environment.

The distinction between programmes that are classified as ISCED 0 and programmes that are outside of the scope of ISCED 0 is based primarily on the *educational properties* of the programme. As the educational properties of these programmes are difficult to assess directly, several proxy measures are used. ISCED 0 programmes:

Include early childhood programmes that

- are in a centre or are school-based;
- are designed to meet the educational and development needs of children;
- are typically designed for children at least 3 years old and not older than 6; and
- have staff that are adequately trained (i.e. qualified) to provide an educational programme for the children;

Exclude early childhood programmes that fail to meet these criteria.

Education only programmes in early childhood education are those that primarily offer education services for a short period of the day. Working parents usually have to use additional care services in the morning and/or afternoon.

Integrated programmes in early childhood education are those that provide both early childhood education and care in the same programme.

Methodology

Two methods are used to classify pupils as full-time/part-time in *Education at a Glance*:

1. Based on national definitions for early childhood education programmes.
2. A proxy method, derived from the duration of the first grade in primary education (ISCED 1).

Though the classification method used by countries differs, the issue does not affect enrolment rates (Table C2.1), as these are based on the total number of enrolments as a proportion of the population, regardless of whether pupils are full time or part time. The differences in classification methods may have some effect on expenditure per pupil and the pupil-teacher ratio, as these data are based on full-time equivalent pupil figures.

The childcare component of integrated programmes is excluded from expenditure reporting in *Education at a Glance*, since the focus of ISCED 0 is on the educational aspects of the programme. Countries that are not able to remove childcare expenditure from data reported in *Education at a Glance* have been footnoted in Table C2.2. The amount of childcare expenditure included is likely to vary between countries and care should be taken when interpreting these results (see more details in Box C2.1).

Some variations at the national level cannot be presented, and information on the “characteristics of programmes” has been simplified in some cases. For example, in some countries, the starting age of early childhood education programmes differs among jurisdictions or regions. In these instances, the information that is the most common or typical is reported.

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.

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Tables of Indicator C2


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Table C2.1 Enrolment rates in early childhood and primary education, by age (2005, 2012)

Table C2.2 Characteristics of early childhood education programmes (2011, 2012)

Table C2.3 Characteristics of education-only and integrated early childhood education programmes (2012)

Table C2.1 Enrolment rates in early childhood and primary education, by age (2005, 2012)

	Enrolment rates (2012)										Enrolment rates (2005)										
	Age 3		Age 4		Age 5			Age 6			Age 3		Age 4		Age 5			Age 6			
	ISCED 0	ISCED 1	ISCED 1	Total	ISCED 0	ISCED 1	Total	ISCED 0	ISCED 1	Total	ISCED 0	ISCED 0	ISCED 1	Total	ISCED 0	ISCED 1	TOTAL	ISCED 0	ISCED 1	Total	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	
OECD																					
Australia	18	74	1	76	16	86	100	n	100	100	17	51	2	53	18	72	91	n	100	100	
Austria	65	91	n	91	96	n	96	38	59	97	47	82	n	82	93	n	93	39	57	96	
Belgium	98	99	n	99	98	1	99	5	94	98	100	100	n	100	99	1	100	6	94	100	
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Chile	45	79	n	79	88	2	90	11	80	91	m	m	m	m	m	m	m	m	m	m	
Czech Republic	59	82	n	82	90	n	90	51	48	99	65	91	n	91	97	n	97	49	51	100	
Denmark ¹	97	98	n	98	96	2	98	8	91	99	91	93	n	93	84	n	84	95	3	98	
Estonia	89	89	n	89	91	n	91	78	14	91	81	84	n	84	88	n	88	100	12	100	
Finland	51	59	n	59	68	n	68	98	1	98	38	47	n	47	56	n	56	98	1	99	
France	98	100	n	100	100	1	100	1	98	100	100	100	n	100	99	1	100	2	94	96	
Germany ²	91	96	n	96	97	n	97	33	64	98	82	93	n	93	93	n	93	38	58	96	
Greece	a	53	a	53	94	a	94	2	96	98	a	58	a	58	83	2	84	n	100	100	
Hungary	74	93	n	93	96	n	96	71	23	94	73	91	n	91	97	n	97	74	25	99	
Iceland	96	96	n	96	98	n	98	n	98	98	94	95	n	95	96	n	96	n	98	98	
Ireland	42	58	39	97	1	99	100	n	100	100	m	m	m	m	m	m	m	m	m	m	
Israel	86	92	n	92	96	n	97	13	84	97	67	84	n	84	93	n	94	13	81	95	
Italy	92	96	a	96	89	8	97	1	97	98	97	100	a	100	94	7	100	1	100	100	
Japan	78	94	a	94	95	a	95	a	100	100	69	95	a	95	99	a	99	a	100	100	
Korea	85	87	n	87	88	1	88	1	94	95	m	m	m	m	m	m	m	m	m	m	
Luxembourg ³	73	98	n	98	93	5	98	5	93	98	62	96	n	96	92	3	95	3	97	100	
Mexico	39	87	n	87	83	28	100	1	100	100	23	70	a	70	88	10	98	1	100	100	
Netherlands	83	100	a	100	100	a	100	a	100	100	m	m	m	m	m	m	m	m	m	m	
New Zealand	87	94	n	94	3	96	99	n	100	100	84	94	n	94	3	97	100	n	100	100	
Norway	95	97	n	97	97	n	97	1	100	100	83	89	n	89	91	n	91	1	99	100	
Poland	51	65	a	65	94	x(9)	94	76	19	95	28	38	a	38	48	m	48	98	1	99	
Portugal	78	92	n	92	98	n	98	5	96	100	61	84	n	84	87	3	90	3	100	100	
Slovak Republic	63	73	n	73	81	n	81	40	50	91	61	74	n	74	85	n	85	40	54	94	
Slovenia	85	89	n	89	92	x(9)	92	6	93	99	67	76	n	76	84	n	84	4	96	100	
Spain	95	97	n	97	98	n	98	1	97	97	95	99	n	99	100	n	100	1	99	100	
Sweden	93	94	n	94	95	n	95	97	1	98	84	89	n	89	90	n	90	96	3	99	
Switzerland	3	40	n	40	94	1	96	54	44	99	8	38	n	39	90	1	91	60	40	100	
Turkey	5	19	n	19	70	n	70	n	96	96	2	5	n	5	23	8	32	n	83	83	
United Kingdom	93	61	37	98	1	97	98	n	98	98	78	60	32	92	n	100	100	n	100	100	
United States	38	66	n	66	87	5	93	21	77	98	39	68	n	68	87	6	93	18	80	98	
OECD average	70	82	2	84	81	13	94	22	76	98	64	77	1	79	77	11	88	29	70	99	
OECD average for countries with 2005 and 2012 data	71	82	1	84	83	11	94	24	74	98	64	77	1	79	77	11	88	29	70	99	
EU21 average	79	85	4	89	84	10	94	29	68	97	73	82	2	84	83	6	89	39	61	100	
Partners																					
Argentina	38	77	n	77	100	n	100	n	100	100	m	m	m	m	m	m	m	m	m	m	
Brazil	37	61	n	61	82	n	83	54	37	91	21	37	n	37	62	1	63	63	21	83	
China	m	m	n	m	m	n	m	n	m	m	m	m	m	m	m	m	m	m	m	m	
Colombia	48	75	1	75	65	14	79	8	65	73	m	m	m	m	m	m	m	m	m	m	
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Indonesia	5	25	n	25	41	4	46	24	72	97	m	m	m	m	m	m	m	m	m	m	
Latvia	80	87	n	87	96	n	96	92	5	97	m	m	m	m	m	m	m	m	m	m	
Russian Federation	70	77	a	77	80	n	80	72	12	84	m	m	a	m	m	n	m	m	23	m	
Saudi Arabia	m	m	m	m	m	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	m	m	m	m	m	

Note: Enrolment rates at young ages should be interpreted with care; mismatches between the coverage of the population data and the enrolment data mean that the participation rates may be underestimated for countries such as Luxembourg that are net exporters of students and may be overestimated for those that are net importers.

1. Mandatory classes have been included in ISCED 1 as of 2011.

2. Year of reference 2006 instead of 2005.

3. Underestimated because a lot of resident students go to school in the neighbouring countries.

Source: OECD. Argentina, China, Colombia, Indonesia: UNESCO Institute for Statistics. Latvia: Eurostat. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

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


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Table C2.2. **Characteristics of early childhood education programmes (2011, 2012)**

	Distribution of pupils in ISCED 0, by type of institution (2012)					Ratio of pupils to teaching staff in full-time equivalents (2012)		Expenditure on educational institutions (2011)			Characteristics of early childhood education programmes					
	Public	Government-dependant private	Independent private	Pupils to contact staff (teachers and teachers aides)	Pupils to teaching staff	Total expenditure (from public and private sources) as a % of GDP	Proportion of total expenditure from public sources	Proportion of total expenditure from private sources	Annual expenditure per student (in USD)	Earliest starting age	Usual starting age	Usual duration (in years)	Usual starting age in ISCED 1	Entry age for compulsory programmes (if applicable)	Length of compulsory programmes (if applicable)	Full-time (FT)/Part-time (PT)
	ISCED 0 (1)	ISCED 0 (2)	ISCED 0 (3)	ISCED 0 (4)	ISCED 0 (5)	ISCED 0 (6)	ISCED 0 (7)	ISCED 0 (8)	ISCED 0 (9)	ISCED 0 (10)	ISCED 0 (11)	ISCED 0 (12)	ISCED 1 (13)	ISCED 0 (14)	ISCED 0 (15)	ISCED 0 (16)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD																
Australia	22.0	78.0	n	m	m	0.1	45	55	10 734	3	4	1	5	a	a	PT
Austria ¹	70.3	29.7	x(2)	9.6	13.9	0.6	72	28	8 933	3	3	3	6	5	1	FT
Belgium	47.1	52.9	m	16.2	16.2	0.6	96	4	6 333	2.5	2.5	3 to 4	6	a	a	FT
Canada ²	m	m	m	m	m	m	m	m	m	m	m	m	6	m	m	m
Chile	33.5	60.4	6.0	10.8	22.2	0.8	84	16	5 083	0.25	4	2	m	a	a	FT/PT
Czech Republic	97.9	2.1	a	13.6	13.9	0.5	92	8	4 302	3	3	3	6	a	a	FT
Denmark ¹	80.7	19.3	n	m	m	1.4	92	8	14 148	0	1	5	6	m	m	FT
Estonia	96.7	a	3.3	m	7.3	0.4	98	2	2 618	0	3	4	7	m	m	FT
Finland	91.5	8.5	a	m	10.6	0.4	90	10	5 700	0	a	a	7	a	a	FT
France	87.2	12.5	0.4	14.5	21.9	0.7	94	6	6 615	2	2 to 3	3	6	a	a	FT
Germany	34.9	65.1	x(2)	9.7	12.3	0.6	80	20	8 351	3	3	3	6	a	a	FT
Greece	93.1	a	6.9	m	m	m	m	m	m	4	4	1 to 2	6	5	1	FT
Hungary ^{1, 3}	92.6	7.4	a	m	11.3	0.6	m	m	4 564	2.5	3	3	7	5	1	FT
Iceland	87.7	12.3	n	5.8	5.8	1.0	76	24	9 138	0	2	4	6	a	a	FT/PT
Ireland	1.9	a	98.1	m	m	m	m	m	m	3	3	1	4 to 5	a	a	FT/PT
Israel ^{1, 4}	90.9	a	9.1	12.8	26.9	0.7	85	15	4 058	3	3	3	6	3	3	FT
Italy ³	70.2	a	29.8	11.8	11.8	0.5	90	10	7 868	m	m	m	m	a	a	FT
Japan	28.7	a	71.3	14.6	15.5	0.2	45	55	5 591	3	3	3	6	a	a	FT
Korea	16.0	84.0	a	16.0	16.0	0.3	54	46	6 861	3.0	3 to 5	3.0	6.0	m	m	FT
Luxembourg ³	90.9	n	9.1	m	11.4	0.8	99	1	25 074	3	3	3	6	4	2	FT
Mexico	86.1	a	13.9	25.3	25.3	0.6	84	16	2 568	3	4 to 5	3	6	3	3	FT
Netherlands	70.1	a	29.9	14.0	15.6	0.4	88	12	8 020	3	3 to 4	2 to 3	6	5	1	FT
New Zealand	1.4	98.6	n	m	7.2	0.6	85	15	11 088	0	3	2	5	a	a	FT/PT
Norway	54.3	45.7	x(2)	m	m	0.5	85	15	7 283	0	1	5	6	a	a	FT/PT
Poland ³	84.3	1.3	14.4	m	16.5	0.7	76	24	6 409	2.5	3	4	7	6	1	FT
Portugal ³	53.2	30.4	16.5	m	16.1	0.4	m	m	5 674	3	3	3	6	a	a	FT
Slovak Republic	95.9	4.1	n	12.3	12.4	0.5	84	16	4 653	2	3	3	6	a	a	FT
Slovenia ¹	97.1	2.5	0.4	9.3	9.3	0.8	81	19	8 136	3	3	3	6	a	a	FT
Spain	65.0	24.5	10.6	m	13.0	0.9	71	29	6 725	0	2 to 3	3 to 4	6	a	a	FT
Sweden	82.9	17.1	n	6.2	6.3	0.7	100	n	6 915	0	2 to 3	4 to 5	7	a	a	FT/PT
Switzerland ^{3, 5}	96.2	0.3	3.5	m	m	0.2	m	m	5 267	4	5	2	6	5	1	FT
Turkey	90.5	a	9.5	m	20.9	0.2	m	m	2 412	3	5	1 to 3	6	a	a	FT
United Kingdom	62.5	31.2	6.3	11.6	18.6	0.4	77	23	9 692	3	3	1.5	5	a	a	FT/PT
United States ^{1, 6}	59.8	a	40.2	10.4	12.3	0.5	70	30	10 010	3	4	1	6	a	a	FT/PT
OECD average	68.4	20.4	11.1	12.5	14.5	0.6	81.3	18.7	7 446							
OECD total	-	-	-	-	-	0.5	-	-	7 047							
EU21 average	74.6	14.7	10.7	11.3	13.1	0.6	80.3	19.7	7 933							
Partners																
Argentina	68.1	24.7	7.2	m	m	0.7	74	26	1 979	m	m	m	m	m	m	FT
Brazil ¹	71.0	a	29.0	12.2	16.5	0.5	m	m	2 349	0	1	5	6	4	2	FT
China	50.5	49.5	x(2)	m	m	m	m	m	m	m	m	m	m	m	m	FT
Colombia	78.5	a	21.5	m	m	0.5	54	46	3 491	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	2.8	a	97.2	23.0	25.6	m	90	10	205	m	m	m	m	m	m	FT
Latvia	94.9	a	5.1	m	m	0.8	98	2	4 359	m	m	m	m	m	m	m
Russian Federation	99.1	a	0.9	m	m	0.8	89	11	m	m	m	m	m	m	m	m
Saudi Arabia	59.3	40.7	x(2)	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	93.9	6.1	x(2)	m	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	59.3	23.1	17.6	14.4	17.0	0.5	74	26	5 854	m	m	m	m	m	m	m

1. Includes some expenditure on childcare.

2. ISCED 0 programmes are available in all 13 jurisdictions, and compulsory for students in two jurisdictions. Earliest starting age, typical starting age and duration of ISCED 0 programmes vary by jurisdiction.

3. Data on expenditure refers only to public institutions.

4. By recently enacted law, ISCED 0 programmes have been made compulsory and gratuitous nationwide. Implementation will gradually commence from 2013.

5. ISCED 0 programmes are compulsory for two years in some jurisdictions and only one year in others.

6. ISCED 0 programmes are compulsory in about one third of states.

Source: OECD. Argentina, China, Colombia, Indonesia, Saudi Arabia, South Africa: UNESCO Institute for Statistics. Latvia: Eurostat. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

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


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Table C2.3 **Characteristics of education-only and integrated early childhood education programmes (2012)**

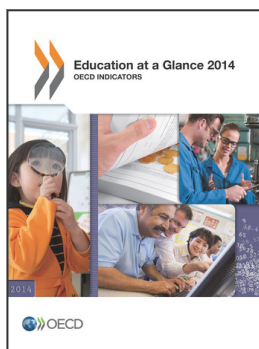
Existence and characteristics of education-only and integrated early childhood education programmes
Proportion of enrolments in Education at a Glance from “education-only” and “integrated early childhood education” programmes

	Education-only programmes			Integrated programmes (includes education and childcare services)			Relative proportion of enrolments reported in Education at a Glance (%)		
	Exist nationally	Delivered by qualified teacher	Have a formal curriculum	Exist nationally	Delivered by qualified teacher	Have a formal curriculum	Education- only programmes	Integrated programmes	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OECD									
Australia	Yes	Yes	Yes	Yes	Yes	Yes	x(9)	x(9)	100
Austria	Yes	Yes	Yes	Yes	Yes	No	3	97	100
Belgium	Yes	Yes	Yes	No	a	a	100	a	100
Canada	Yes	Yes	Yes	Yes	Yes	Yes	m	m	m
Chile	Yes	Yes	Yes	Yes	Yes	Yes	x(9)	x(9)	100
Czech Republic	Yes	Yes	Yes	No	a	a	100	a	100
Denmark	No	a	a	Yes	Yes	Yes	a	100	100
Estonia	No	a	a	Yes	Yes	Yes	a	100	100
Finland	Yes	Yes	Yes	Yes	Yes	Yes	37	63	100
France	Yes	Yes	Yes	No	a	a	100	a	100
Germany	Yes	Yes	Yes	No	a	a	100	a	100
Greece	Yes	Yes	Yes	Yes	m	m	100	m	100
Hungary	No	a	a	Yes	Yes	Yes	a	100	100
Iceland	Yes	Yes	Yes	Yes	Yes	Yes	1	99	100
Ireland	No	a	a	Yes	a	a	a	100	100
Israel	Yes	Yes	Yes	Yes	Yes	Yes	98	2	100
Italy ³	No	a	a	Yes	m	m	a	100	m
Japan	Yes	Yes	Yes	Yes	Varies	Varies	x(9)	x(9)	100
Korea	Yes	Yes	Yes	Yes	Yes	Yes	x(9)	x(9)	100
Luxembourg	Yes	Yes	Yes	No	a	a	100	a	100
Mexico	Yes	Yes	Yes	Yes	Yes	Yes	99	1	100
Netherlands	Yes	Yes	Yes	Yes	No	Varies	70	30	100
New Zealand	No	a	a	Yes	Yes	Yes	a	100	100
Norway	No	a	a	Yes	Yes	Yes	a	100	100
Poland	Yes	Yes	Yes	No	a	a	100	a	100
Portugal	No	a	a	Yes	Yes	Yes	a	100	100
Slovak Republic	Yes	Yes	Yes	No	a	a	100	a	100
Slovenia	No	a	a	Yes	Yes	Yes	a	100	100
Spain	Yes	Yes	Yes	No	a	a	100	a	100
Sweden	Yes	Yes	Yes	Yes	Yes	Yes	25	75	100
Switzerland	Yes	Yes	Yes	Yes	Yes	m	100	m	100
Turkey	Yes	Yes	Yes	No	a	a	100	a	100
United Kingdom	Yes	Yes	Yes	Yes	Varies	Yes	x(9)	x(9)	100
United States	Yes	Varies	Varies	Yes	Varies	Varies	x(9)	x(9)	100
OECD average									
OECD total									
EU21 average									
Partners									
Argentina	m	m	m	m	m	m	m	m	m
Brazil	Yes	Yes	No	Yes	Yes	No	x(9)	x(9)	100
China	m	m	m	m	m	m	m	m	m
Colombia	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m
Latvia	m	m	m	m	m	m	m	m	m
Russian Federation	m	m	m	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m

Source: OECD, INES Working Party special data collection on early childhood education programs. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

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

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