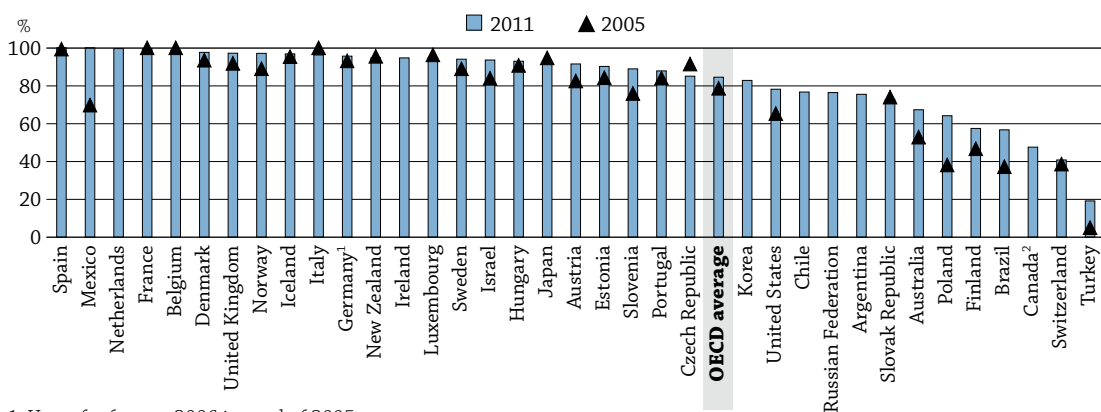


HOW DO EARLY CHILDHOOD EDUCATION SYSTEMS DIFFER AROUND THE WORLD?

- In many OECD countries, early childhood education (ECE) 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 students who attended at least one year of pre-primary education perform better on the OECD Programme for International Student Assessment (PISA) 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. In Belgium, France, Iceland, Italy, Norway, Spain and Sweden, more than 90% of 3-year-olds are enrolled in early childhood education.
- More than three-quarters of 4-year-olds (82%) are enrolled in early childhood education across OECD countries; among OECD countries that are part of the European Union, 86% of 4-year-olds are.

Chart C2.1. Enrolment rates at age 4 in early childhood and primary education (2005 and 2011)



1. Year of reference 2006 instead of 2005.

2. Year of reference 2010 instead of 2011.

Countries are ranked in descending order of the enrolment rates of 4 year-olds in 2011.

Source: OECD. Argentina: UNESCO Institute for Statistics (World Education Indicators Programme). Table C2.1. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

StatLink <http://dx.doi.org/10.1787/888932847393>

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 these older parents are also likely to be in the workforce, 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 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 (Entwisle et al., 1997; 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 (Hart and Risely, 1995; 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 early childhood education and care 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 (see Box C2.1). These differences should be taken into account when drawing conclusions from international comparisons.

■ Other findings

- **The average age at which mothers have their first child has risen across all OECD countries over the past 40 years.** In 2009, Germany and the United Kingdom had the highest national averages, recording an average age at first birth of 30 years. In contrast, Mexico had the lowest average age of just over 21 years.
- **Publicly-funded pre-primary education tends to be more strongly developed in the European than in the non-European countries of the OECD.** Private funding varies widely between countries, ranging from 5% or less in Belgium, Estonia, Luxembourg and Sweden, to 25% or more in Argentina, Australia, Austria, 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% or less of GDP is spent on pre-primary education in Australia and Turkey, 0.8% or more is spent in Denmark, Iceland, Israel, Luxembourg, the Russian Federation and Spain.
- 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-professional staff (e.g. teachers' aides) ranges from more than 20 pupils per teacher in Chile, China, France, 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, China, France, Germany, Israel, the United Kingdom and the United States.

■ Trends

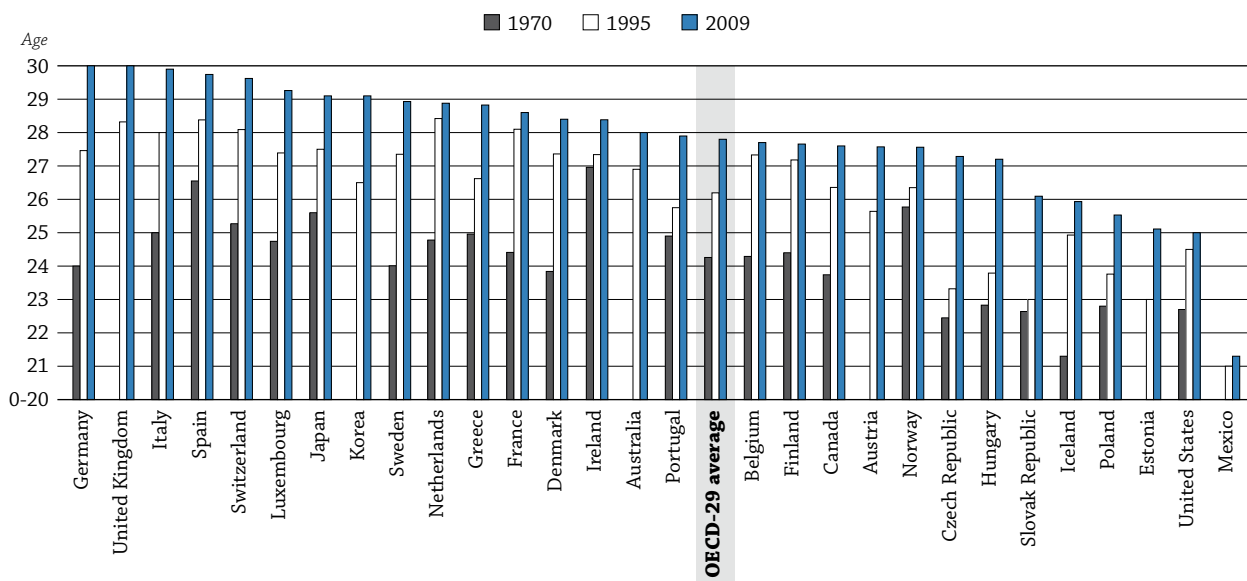
Over the past decade, many countries have expanded pre-primary education programmes. This increased focus on early childhood education has resulted in the extension of compulsory education to lower ages in some countries, free early childhood education, universal provision of early childhood education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

On average across those OECD countries with 2005 and 2011 data, enrolments in early childhood education programmes rose from 64% of 3-year-olds in 2005 to 70% in 2011, and similarly from 78% of 4-year-olds in 2005 to 84% in 2011. The enrolment rates of 4-year-olds in early childhood education programmes increased by 20 percentage points or more in Brazil, Mexico and Poland between 2005 and 2011.

Analysis

In a majority of OECD countries, early childhood education and care (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, 2013a and b; 2011a).

Chart C2.2. Starting parenthood later
Average age when mothers have their first child, in 1970, 1995 and 2009



Source: OECD (2011) OECD Family Database. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

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The average age at which mothers have their first child has risen across all OECD countries 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 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 2009 it had risen again to almost 28. Despite this trend, there is still wide variation among countries. In 2009, Germany and the United Kingdom had the highest average age at first birth of 30 years. By contrast, Mexico had the lowest average age of just over 21 years (Chart C2.2).

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 (82%) of 4-year-olds are enrolled in early childhood education programmes across OECD countries as a whole, rising to 86%, on average, across the OECD countries that are part of the European Union.

Enrolment rates for early childhood education at this age vary from over 95% in Belgium, Denmark, France, Germany, Iceland, Italy, Mexico, the Netherlands, Norway, Spain, and the United Kingdom, to less than 60% in Brazil, Finland and Turkey. Canada 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 (Table C2.1 and Chart C2.1).

Results from the OECD Programme for International Student Assessment (PISA) assessment support these figures. On average across OECD countries, 72% of the 15-year-old pupils assessed by PISA 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. More than 90% of pupils in 27 OECD countries had attended pre-primary education for at least some time, and more than 98% of students in France, Hungary, Japan and the United States reported having done so. Pre-primary education is rare in Turkey, where fewer than 30% of 15-year-olds attended pre-primary education for any period of time. More than one year of pre-primary education is uncommon in Chile, Ireland and Poland, where fewer than 50% of students had attended pre-primary education for that length of time (see OECD, 2010, Table II.5.5, and Table C2.2 at the end of this indicator).

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

There are many different early childhood education and care 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 targeted 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 early childhood education (ECE) programmes that take place in institutional settings distinct from those providing childcare, the education/childcare boundary is easy to define. In Belgium, for example, the different institutional settings are financed by different government ministries, which makes estimations unnecessary (see Figure 1).

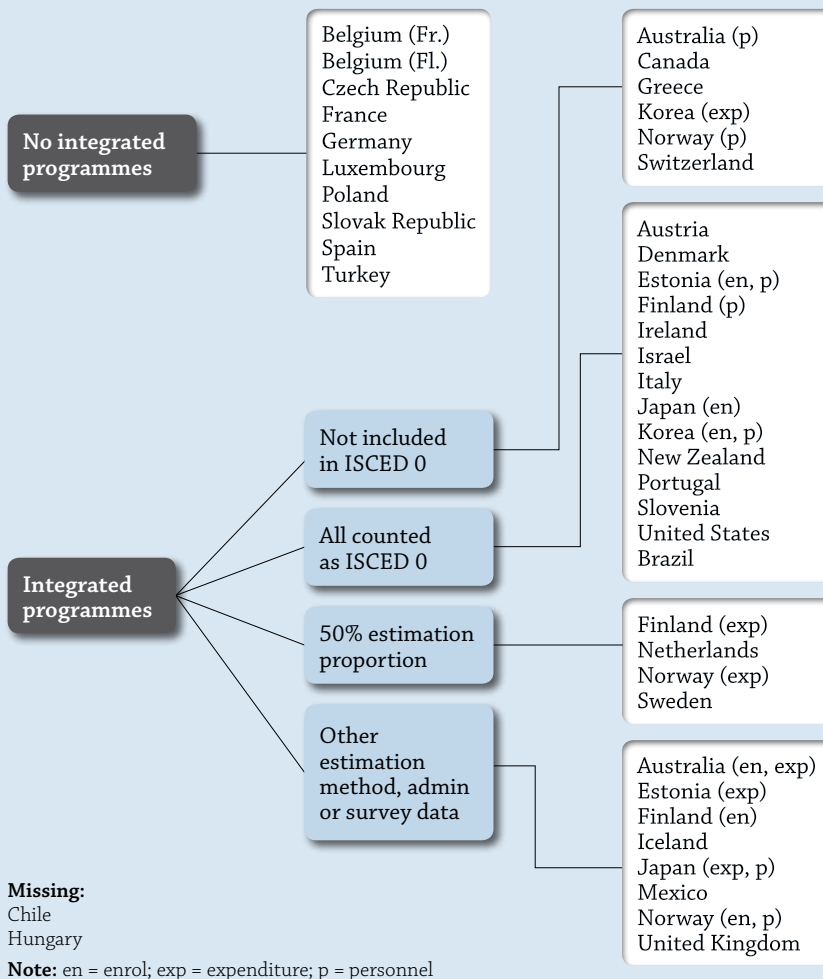
For countries with programmes that combine an educational programme with childcare (“integrated” programmes), the education/childcare boundary becomes more challenging. OECD countries with integrated early childhood education and care programmes often also have stand-alone programmes that are purely 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 (Canada, 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%.

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



OECD member 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 ISCED 2011.

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

Notably, PISA analyses also find that in most countries, students who have attended at least one year of pre-primary education tend to perform better than those who have 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 greater 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 2010, Table II.5.6).

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, France, Iceland, Italy, Norway and Spain. 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]).

Since early childhood education helps to build a strong foundation for lifelong learning and ensure equity in education later on, 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 2011 data, enrolments rose from 64% of 3-year-olds in 2005 to 70% in 2011, and from 78% of 4-year-olds in 2005 to 84% in 2011. In Brazil, Mexico 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).

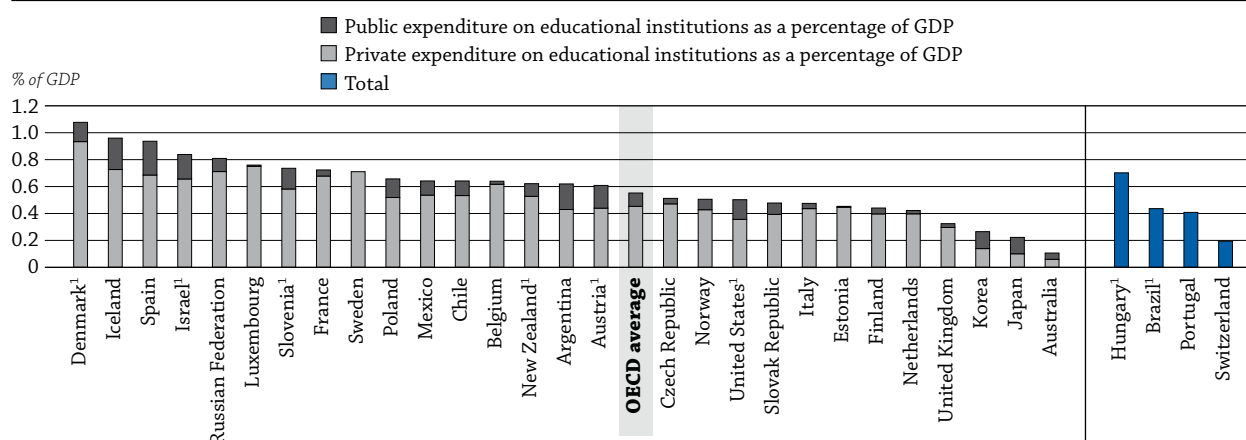
Public expenditure on pre-primary education is mainly used to support public institutions, but in some countries it also funds private institutions to varying degrees. On average across OECD countries, the level of public expenditure on public pre-primary institutions, per pupil, is around twice the level of public expenditure on private pre-primary institutions (USD 6 275 and USD 3 494, 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 6 762 in OECD countries. However, expenditure varies from USD 2 500 or less in Argentina, Brazil, Mexico and Turkey, to more than USD 10 000 in Luxembourg, New Zealand and the United States (Table C2.2, and see Table B3.4 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 and Turkey, 0.8% or more is spent in Denmark, Iceland, Israel, Luxembourg, the Russian Federation and Spain (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, but they are also influenced by the extent to which this indicator covers private early childhood education. In the Netherlands and 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 other countries. Inferences on access to and quality of early childhood education and care should therefore be made with caution (Table C2.2 and Box C2.1).

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 that and for at least two years. Compared to primary, secondary and post-secondary non-tertiary education, pre-primary institutions obtain the largest proportion of funds (18%) from private sources.

However, this proportion varies widely, ranging from 5% or less in Belgium, Estonia, Luxembourg and Sweden, to 25% or more in Argentina, Austria, Australia, Japan, Korea, Spain and the United States (Table C2.2 and *Starting Strong III* [OECD, 2011b]).

Chart C2.3. Expenditure on early childhood educational institutions, as a percentage of GDP (2010)
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. Argentina: UNESCO Institute for Statistics (World Education Indicators Programme). Table C2.2.

See Annex 3 for notes (www.oecd.org/edu/eag.htm).

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The pupil-teacher ratio varies considerably across OECD countries

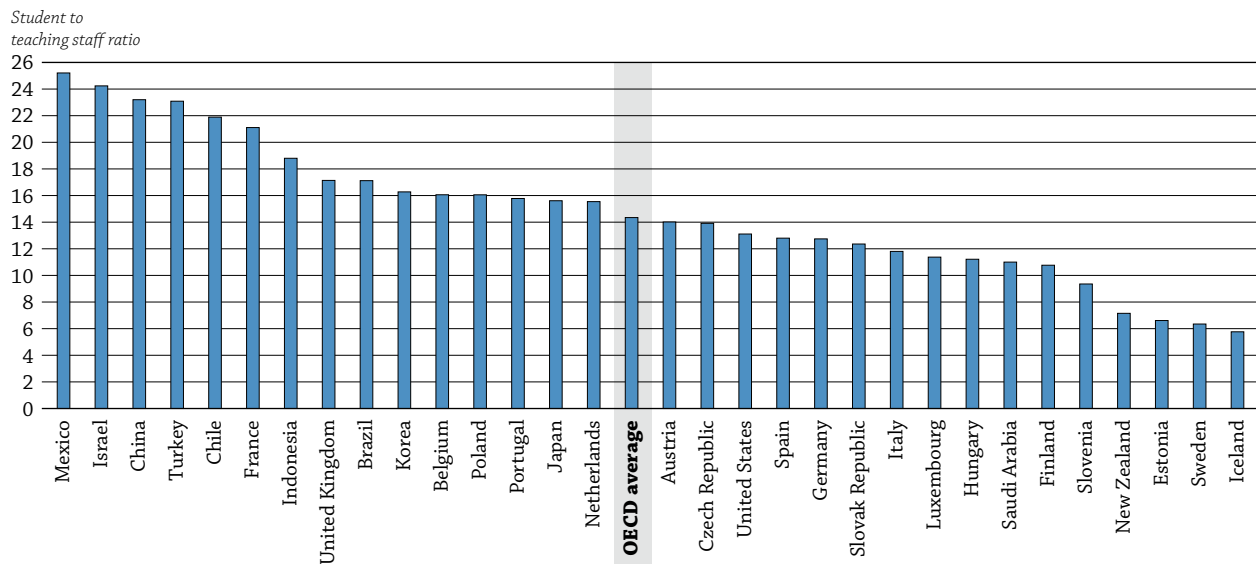
Research demonstrates that enriched, stimulating environments and high-quality pedagogy are fostered by better-qualified practitioners, and that better-quality staff-child interactions facilitate better learning outcomes (Heckman, 2000; Shin et al., 2009). While qualifications are one of the strongest 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).

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 [teacher 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. As a result, the ratios of pupils to contact staff are substantially lower in Austria, Brazil, Chile, China, France, Germany, Israel, the United Kingdom

and the United States. Globally in pre-primary education, there are 14 pupils for every teacher, on average across OECD countries. The pupil-teacher ratio, excluding teachers' aides, ranges from more than 20 pupils per teacher in Chile, China, France, Israel, Mexico and Turkey, to fewer than 10 in Estonia, Iceland, New Zealand, Slovenia and Sweden (Table C2.2 and Chart C2.4).

Chart C2.4. Ratio of students to teaching staff in early childhood education (2011)
Public and private institutions



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. China, Indonesia and Saudi Arabia: UNESCO Institute for Statistics (World Education Indicators Programme). Table C2.2. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

StatLink <http://dx.doi.org/10.1787/888932847450>

Definitions and methodology

How is early childhood education defined?

Early childhood education, or pre-primary education (ISCED 0), is defined as 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.

How is participation in early childhood education classified as full time or part time, and what effect does this have?

There are two methods 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.

What are the differences between education only and integrated programmes?

In some countries, programmes providing early childhood education also provide care. For the purposes of reporting in *Education at a Glance*, these programmes are referred to as integrated programmes i.e. they integrate education and care in the same programme. Education-only programmes 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.

Is expenditure on childcare-related activities in integrated programmes reported in *Education at a Glance*?

The focus of ISCED 0 is on the educational aspects of the programme. Therefore, the childcare component of integrated programmes is excluded from expenditure reporting in *Education at a Glance*. 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).

How are variations at the national level represented?

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.

The statistical data for Israel are supplied by and 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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Indicator C2 Tables




Table C2.1	Enrolment rates in early childhood and primary education, by age (2005, 2011) StatLink  http://dx.doi.org/10.1787/888932850509
Table C2.2	Characteristics of early childhood education programmes (2010, 2011) StatLink  http://dx.doi.org/10.1787/888932850528
Table C2.3	Characteristics of education only and integrated early childhood education programmes (2011) StatLink  http://dx.doi.org/10.1787/888932850547

Table C2.1. Enrolment rates in early childhood and primary education, by age (2011, 2005)

	Enrolment rates (2011)										Enrolment rates (2005)													
	Age 3			Age 4			Age 5			Age 6			Age 3			Age 4			Age 5			Age 6		
	ISCED 0	ISCED 0	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	13	66	1	67	15	83	98	n	100	100	17	51	2	53	18	72	91	n	100	100				
Austria	60	91	n	91	97	n	97	38	58	97	47	82	n	82	93	n	93	39	57	96				
Belgium	98	99	n	99	98	1	99	5	93	99	100	100	n	100	99	1	100	6	94	100				
Canada ¹	1	48	n	48	92	n	92	n	99	99	m	m	m	m	m	m	m	m	m	m				
Chile	42	76	n	77	86	1	87	11	81	91	m	m	m	m	m	m	m	m	m	m				
Czech Republic	60	85	n	85	91	1	91	46	50	96	65	91	n	91	97	n	97	49	51	100				
Denmark ²	90	98	n	98	96	2	98	10	89	99	91	93	n	93	84	n	84	95	3	98				
Estonia	86	90	n	90	90	n	90	77	14	91	81	84	n	84	88	n	88	100	12	100				
Finland	49	57	n	57	67	n	67	98	n	98	38	47	n	47	56	n	56	98	1	99				
France	98	99	n	99	99	1	100	1	99	100	100	100	n	100	99	1	100	2	94	96				
Germany ³	90	96	n	96	97	n	97	35	62	98	82	93	n	93	93	n	93	38	58	96				
Greece	m	m	m	m	m	m	m	m	m	m	a	58	a	58	83	2	84	n	100	100				
Hungary	74	93	n	93	96	n	96	72	22	93	73	91	n	91	97	n	97	74	25	99				
Iceland	95	97	n	97	96	n	96	n	98	98	94	95	n	95	96	n	96	n	98	98				
Ireland	47	56	39	95	n	99	99	n	100	100	m	m	m	m	m	m	m	m	m	m				
Israel	86	94	n	94	97	n	98	17	81	97	67	84	n	84	93	n	94	13	81	95				
Italy	92	96	a	96	89	9	97	2	97	99	97	100	a	100	94	7	100	1	100	100				
Japan	77	93	a	93	97	a	97	a	100	100	69	95	a	95	99	a	99	a	100	100				
Korea	82	83	n	83	85	1	86	1	100	100	m	m	m	m	m	m	m	m	m	m				
Luxembourg	72	95	n	95	91	5	97	4	89	93	62	96	n	96	92	3	95	3	97	100				
Mexico	44	100	n	100	98	31	100	1	100	100	23	70	a	70	88	10	98	1	100	100				
Netherlands	87	100	a	100	100	a	100	a	100	100	a	m	m	m	m	m	m	m	m	m				
New Zealand	85	95	n	95	3	97	100	n	100	100	85	96	n	96	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	50	64	a	64	81	x(9)	81	87	9	96	28	38	a	38	48	m	48	98	1	99				
Portugal	75	88	n	88	93	1	94	5	95	100	61	84	n	84	87	3	90	3	100	100				
Slovak Republic	60	73	n	73	82	n	82	40	51	91	61	74	n	74	85	n	85	40	54	94				
Slovenia	83	89	n	89	91	x(9)	91	6	93	100	67	76	n	76	84	n	84	4	96	100				
Spain	97	100	n	100	99	n	100	1	98	99	95	99	n	99	100	n	100	1	99	100				
Sweden	92	94	n	94	95	n	95	95	1	97	84	89	n	89	90	n	90	96	3	99				
Switzerland	3	40	n	41	94	1	96	55	44	100	8	38	n	39	90	1	91	60	40	100				
Turkey	4	19	n	19	67	n	67	n	97	97	2	5	n	5	23	8	32	n	83	83				
United Kingdom	86	67	30	97	1	99	100	n	99	99	78	60	32	92	n	100	100	n	100	100				
United States	50	78	n	78	77	6	83	14	86	100	35	65	n	65	72	6	78	15	80	95				
OECD average	67	82	2	84	81	13	94	22	77	99	64	77	1	79	77	11	88	29	70	100				
OECD average for countries with 2005 and 2011 data	70	84	1	85	82	12	94	25	73	99	64	78	1	79	77	11	88	30	69	99				
EU21 average	77	86	3	90	83	11	94	31	66	97	73	82	2	84	83	6	89	42	61	100				
Other G20																								
Argentina	37	75	n	75	100	1	100	1	100	100	m	m	m	m	m	m	m	m	m	m				
Brazil	36	57	n	57	79	1	80	49	41	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				
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m				
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m				
Russian Federation	70	76	a	76	76	1	77	72	15	87	m	m	a	m	m	1	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				
G20 average	m	m	3	m	m	17	m	m	86	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 date of reference of ages and the date of data collection may lead to overestimations. Underestimation in enrolment rates may be due to uncounted late entrants. Rates above 100% in the calculation are shown in italics.

1. Year of reference 2010 instead of 2011. Only includes kindergarten and junior kindergarten students in the public school system.

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

3. Year of reference 2006 instead of 2005.

Source: OECD. Argentina and Indonesia: UNESCO Institute for Statistics (World Education Indicators Programme). 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.


StatLink  <http://dx.doi.org/10.1787/888932850509>

Table C2.2. **Characteristics of early childhood education programmes (2010, 2011)**

	Distribution of students in ISCED 0, by type of institution (2011)			Ratio of students to teaching staff (2011)		Expenditure on educational institutions (2010)				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 pupil (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) (in years)	Full-time (FT)/Part-time (PT)
	ISCED 0	ISCED 0	ISCED 0	ISCED 0	ISCED 0	ISCED 0	ISCED 0	ISCED 0	ISCED 0	ISCED 0	ISCED 0	ISCED 0	ISCED 1	ISCED 0	ISCED 0	ISCED 0
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD																
Australia	24.5	75.5	n	m	m	0.1	55.8	44.2	8 899	3	4	1	5	a	a	PT
Austria ¹	71.5	28.5	x(2)	9.7	14.0	0.6	72.2	27.8	8 893	3	3	3	6	5	1	FT
Belgium	47.3	52.7	m	16.1	16.1	0.6	96.4	3.6	6 024	2.5	2.5	3 to 4	6	a	a	FT
Canada ²	93.0	7.0	x(2)	m	m	m	m	m	m	2.5 to 5	4.5 to 5	1	6	a	a	FT/PT
Chile	36.2	57.5	6.3	10.7	21.9	0.6	83.1	16.9	3 544	0.25	4	2	m	a	a	FT/PT
Czech Republic	98.2	1.8	a	13.6	13.9	0.5	92.0	8.0	4 247	3	3	3	6	a	a	FT
Denmark ¹	80.4	19.6	n	m	m	1.1	86.7	13.3	9 454	n	1.0	5.0	6.0	m	m	FT
Estonia	97.1	a	2.9	m	6.6	0.5	98.5	1.5	2 533	n	3	4	7	m	m	FT
Finland	91.3	8.7	a	m	10.8	0.4	90.1	9.9	5 372	n	a	a	7	a	a	FT
France	87.2	12.5	0.4	14.1	21.1	0.7	93.7	6.3	6 362	2	2 to 3	3	6	a	a	FT
Germany	34.9	65.1	x(2)	10.0	12.7	m	m	m	m	3	3	3	6	a	a	FT
Greece	m	m	m	m	m	m	x(6)	x(9)	m	4	4	1 to 2	6	5.0	1.0	FT
Hungary ^{1, 3, 7}	93.6	6.4	a	m	11.2	0.7	m	m	4 773	2.5	3	3	7	5	1	FT
Iceland	87.3	12.7	n	5.8	5.8	1.0	75.7	24.3	8 606	n	2	4	6	a	a	FT/PT
Ireland	2.2	a	97.8	m	m	m	m	m	m	3	3	1	4 to 5	a	a	FT/PT
Israel ^{1, 4}	89.4	a	10.6	11.5	24.2	0.8	78.3	21.7	3 910	3	3	3	6	3	3	FT
Italy ³	69.9	a	30.1	m	11.8	0.5	91.8	8.2	7 177	m	m	m	m	a	a	FT
Japan	29.7	a	70.3	14.8	15.6	0.2	45.2	54.8	5 550	3.0	3.0	3.0	6.0	a	a	FT
Korea	16.8	3.5	79.7	16.3	16.3	0.3	52.5	47.5	6 739	3.0	3 to 5	3.0	6.0	m	m	FT
Luxembourg	91.2	n	8.8	m	11.4	0.8	98.8	1.2	20 958	3	3	3	6	4	2	FT
Mexico	86.1	a	13.9	25.2	25.2	0.6	83.6	16.4	2 280	3	4 to 5	3	6	3	3	FT
Netherlands	69.9	a	30.1	14.3	15.5	0.4	94.2	5.8	7 664	3	3 to 4	2 to 3	6	5	1	FT
New Zealand ¹	1.6	98.4	n	7.2	7.2	0.6	84.8	15.2	11 495	m	3	2	5	a	a	FT/PT
Norway	54.8	45.2	x(2)	m	m	0.5	84.6	15.4	6 610	n	1	5	6	a	a	FT/PT
Poland ³	85.4	1.3	13.3	m	16.1	0.7	79.0	21.0	5 737	2.5	3	4	7	6	1	FT
Portugal ³	52.0	31.0	17.1	m	15.8	0.4	m	m	5 977	3	3	3	6	a	a	FT
Slovak Republic	96.4	3.6	n	12.3	12.4	0.5	82.3	17.7	4 306	2	3	3	6	a	a	FT
Slovenia ¹	97.4	2.5	0.2	9.4	9.4	0.7	79.1	20.9	7 744	3	3	3	6	a	a	FT
Spain	64.4	24.5	11.1	m	12.8	0.9	73.2	26.8	6 685	n	2 to 3	3 to 4	6	a	a	FT
Sweden	83.3	16.7	n	6.3	6.3	0.7	100.0	n	6 582	3	-	4	7	a	a	FT
Switzerland ^{3, 5, 7}	96.1	0.3	3.6	m	m	0.2	m	m	5 186	4	5	2	6	5	1	FT
Turkey ⁷	91.0	a	9.0	m	23.1	n	m	m	2 490	3	5	1 to 3	6	a	a	FT
United Kingdom	71.2	11.1	17.7	12.2	17.1	0.3	91.4	8.6	7 047	3	3	1.5	5	a	a	FT/PT
United States ^{1, 6}	55.2	a	44.8	10.9	13.1	0.5	70.9	29.1	10 020	3	4	1	6	a	a	FT/PT
OECD average	68.1	24.5	19.5	12.2	14.3	0.6	82.1	17.9	6 762							
OECD total	-	-	-	-	-	0.5	-	-	6 569							
EU21 average	74.2	19.1	17.7	11.8	13.1	0.6	88.7	11.3	7 085							
Other G20																
Argentina	67.9	23.3	8.9	m	m	0.6	69.3	30.7	2 427	m	m	m	m	m	m	FT
Brazil ^{1, 7}	71.8	a	28.2	12.6	17.1	0.4	m	m	2 111	n	1	5	6	4	2	FT
China	53.0	47.0	x(2)	20.6	23.2	m	m	m	m	m	m	m	m	m	m	FT
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	17.3	18.8	m	m	m	m	m	m	m	m	m	m	FT
Russian Federation	99.0	a	1.0	m	m	0.8	87.9	12.1	m	m	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	11.0	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

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.

7. Public expenditure only.

Source: OECD. Argentina and Indonesia: UNESCO Institute for Statistics (World Education Indicators Programme).

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.


StatLink  <http://dx.doi.org/10.1787/888932850528>


Table C2.3. Characteristics of education-only and integrated early childhood education programmes (2011)

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 <i>Education at a Glance</i> (%)			
	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	100	m	100
	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	No	a	a	Yes	m	m	a	100	100
	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	30	70	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										
Other G20	Argentina	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
	India	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m

Source: OECD, INES Working Party special data collection on early childhood education programs.

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

StatLink  <http://dx.doi.org/10.1787/888932850547>



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