



Starting Strong IV

Early Childhood Education and Care Data Country Note

JAPAN

This Data Spotlight note on Early Childhood Education and Care (ECEC) provides a summary of ECEC policy inputs, outputs and outcomes in Japan. It uses data available within the OECD Secretariat — Education at a Glance, the Programme for International Student Assessment (PISA) and the OECD Family Database — to make comparisons between Japan’s ECEC system and the systems in other OECD countries (see Box 1 for definition and comparability issues). This note complements the 2015 OECD publication, *Starting Strong IV: Monitoring Quality in Early Childhood Education and Care*.

Key characteristics of ECEC in Japan:

Resources that are put in the ECEC system

- The share of gross domestic product (GDP) devoted to pre-primary education (ISCED 02) is substantially lower than the OECD average (0.2% of GDP and 0.6% of GDP, respectively).
- A significant share of funding of pre-primary education (ISCED 02) coming from private sources (56% compared with 17% on average across the OECD).
- Annual expenditure per child in pre-primary education (ISCED 02) is also below the OECD average (USD 6 247 and USD 8 070, respectively).
- In pre-primary education (ISCED 02), there are about 15 children per teacher in Japan, which is 1 child more per teacher than the OECD average of 14 children per teacher, excluding the non-teaching staff, such as auxiliary staff.
- In Japan, funding responsibilities are shared between the national and local level authorities.

Access and participation

- Participation in early childhood education and care in Japan is supported by extensive legal entitlements to a place in ECEC. In addition selected age groups and population are entitled to free access.
- Participation rates of 0-2 year-olds in formal childcare (ISCED 0 and other registered childcare services) are lower than the OECD average (26% and 33%, respectively).
- By contrast, participation rates of 3-5 year-olds in pre-primary education programmes (ISCED 02) are above the OECD average (e.g. for 3-year-olds rates were 81% in Japan compared with 69% across the OECD).

Teacher’s academic qualification and working conditions

- The length of initial teacher training for pre-primary teachers (e.g. two years of training) is relatively short compared to other OECD countries; but a formal induction programme is mandatory.

Monitoring Quality

- Monitoring of ECEC settings is a common, yet local practice. Especially, self-evaluation is mandatory for ECEC settings in Japan.

Student performance at age 15 by participation in pre-primary education (ISCED 02).

- The percentage of 15-year-olds in Japan who reported not attending pre-primary education (ISCED02) in PISA 2012 was close to nil (0.8% compared with 7.1% on average across the OECD). In Japan, the benefits of pre-primary education (ISCED02) on the mathematics performance of 15-year-olds do not differ much after controlling for socio-economic background, suggesting that family resources have little impact on the positive association of pre-primary education (ISCED02) on subsequent achievement. In Japan, the difference in PISA mathematics scores between 15-year-old students who had attended more than one year of pre-primary education (ISCED02) and those who had not was 34 score points after accounting for socio-economic background – the equivalent of almost one year of formal schooling (close to the OECD average difference of 31 score points).

Introduction

Participation in ECEC can have a positive effect on children's early learning and development, as well as on subsequent outcomes, such as academic success, labour market performance and socio-economic mobility. The benefits of ECEC on child outcomes, however, depend on high quality. Settings and programmes that have a high level of quality are positively associated with children's cognitive, social and behavioural development, with disadvantaged children benefitting significantly from high-quality settings (OECD, 2011; Gambaro et al., 2014). Policy outcomes are associated with both policy inputs and policy outputs.

For simplicity purposes, this note uses the term early childhood education and care (ECEC) to refer to arrangements providing education and care for children under compulsory school age. This term differs from those used by other sources in this note, including the ISCED 2011 classification (see Box 1 for the ISCED 2011 methodological distinction between childcare and pre-primary education). Because of these differences in definitions, caution is needed when comparing data presented here.

The note is structured in three sections:

- **Policy inputs:** This section presents indicators of the resources that are put into a system, such as the level and type of sources that finance ECEC, and the regulations of staff-child ratios to achieve outputs or a result.
- **Policy outputs:** This section covers indicators that are the result of policy inputs put in place, such as enrolment rates by age. Trend data is presented to examine the changes in pre-primary education (ISCED02) in recent years.
- **Policy outcomes:** This section covers indicators on the outcomes of children that are associated with both policy inputs and policy outputs. For example, indicators on student performance at age 15 by participation in pre-primary education (ISCED02) (drawn from PISA 2012 data).

Section 1. Policy inputs

Access to early childhood education and care

The organisation of ECEC services varies greatly from country to country in terms of structure, but also regarding the age of children attending different types of settings or the intensity of child participation in different settings (see Box 1). Japan offers both education-only and integrated ECEC programmes. Early childhood educational development programmes (ISCED 01), as defined in ISCED 2011, do not exist as such in Japan, but programmes for the pre-primary level (ISCED 02) are offered to children aged between 3 and 5. These programmes include kindergartens and day-care centres (OECD, 2016, Tables C2.4 and C2.5).

Participation in ECEC is supported by extensive legal entitlements to a place in ECEC and efforts to ensure free access for selected age and population groups. In Japan, low-income families have free access to 20 hours a week in kindergartens and 55 hours a week in day-care centres (OECD, 2015a, Table 1.1).

Funding of early childhood education and care

The level of governance responsible for ECEC differs according to the area concerned, such as funding of settings, and also across countries. More and more countries have moved away from traditional spilt or two-tier systems towards an integrated ECEC system, which can facilitate the transition from one ECEC service to another, as well as to primary school (OECD, 2015a, Table 1.2).

In Japan, funding responsibilities are shared between the national and local level authorities. Japan operates a split system, with different authorities in charge of different settings at the central level. The Ministry of Health, Labour, and Welfare is in charge of childcare for children aged 0 to 5, while the Ministry of Education, Culture, Sports, Science, and Technology is responsible for pre-primary education settings (ISCED 02) for children aged 3 to 5. Since April 2015, the Cabinet Office has been responsible for a “centre for ECEC” (*Nintei-Kodomo-en* in Japanese), which is an integrated setting for children aged 0 to 5. Two traditional settings for ECEC are also available: 1) a kindergarten for children aged 3 to 5 that provides pre-primary education (ISCED 02), which falls under the responsibility of the Ministry of Education, Culture, Sports, Science, and Technology; and, 2) a day-care centre for children aged 0 to 5 whose parents/guardians are not able to take care of them. As this centre provides childcare it falls under the responsibility of the Ministry of Health, Labour, and Welfare.

**Box 1. Distinction between early childhood educational development and pre-primary education:
The revised ISCED 2011 classification**

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.

The International Standard Classification of Education (ISCED) defines internationally comparable levels of education. In ISCED 2011, level 0 covers early childhood education for all ages, including very young children. As the educational properties of ISCED 0 programmes can be difficult to assess directly, several criteria are used to come up with a technical definition. For a programme to be reported as ISCED level 0 it must have: adequate intentional educational properties; be delivered by qualified staff members; take place in an institutionalised setting; meet a minimum intensity/duration; and be targeted at children from age 0 until entry into ISCED level 1 (OECD, 2016).

Programmes classified at ISCED level 0 may be referred to in many ways nationally, for example: early childhood education and development, play school, reception, pre-primary, pre-school, Kindergarten, *Kita*, *Krippe* or *educación inicial*. For programmes provided in crèches, day-care centres, private homes, nurseries, *Tagespflege* or *guarderías*, it is important to ensure that they meet the ISCED level 0 classification criteria specified in ISCED 2011.

In ISCED 2011, programmes are sub-classified into two categories depending on age and the level of complexity of the educational content: early childhood educational development (ISCED 01) and pre-primary education (ISCED 02). ISCED 01 programmes are generally designed for children younger than 3 (OECD, 2016). This is a new category not covered by ISCED 1997. ISCED 02 is designed for children from age 3 years to the start of primary education. It corresponds exactly to level 0 in ISCED 1997.

The comparability of programmes at ISCED level 0 depends on each country’s ability to report data according to the standard international definition. Early childhood programmes that are offered in some countries do not necessarily meet the criteria or definition of ISCED 01. This is the case of Belgium (except in the Flemish Community), the Czech Republic, France, Ireland, Italy, Japan, Luxembourg, the Netherlands, Poland, Portugal, the Slovak Republic Switzerland and the United States. On the other hand, the coverage of ISCED 02 (pre-primary education) is larger, with 32 countries reporting data on enrolment rates at ages 3 and 4. Because of these differences, caution is needed when comparing available data on ISCED 01 drawn from *Education at a Glance*.

The definition of ECEC in the OECD’s Starting Strong series differs from the ISCED 2011 definition. The OECD definition states that “the term early childhood education and care (ECEC) includes all arrangements providing education and care for children under compulsory school age, regardless of setting, funding, opening hours or programme content” (OECD, 2001). This means that settings considered an integral part of countries’ ECEC systems, but not covered by the ISCED classification, still fall under the terminology of ECEC.

Data reported in *Education at a Glance 2016*, and presented here as ISCED level 0, use the ISCED 2011 classification (Figures 1, 2, 3 and 5). PISA 2012 uses the ISCED 1997 classification (Figure 6). The OECD Family Database definition of “formal” childcare among children aged 0-2 years includes centre-based services, organised day care, pre-school and professional child-minders. That is, it includes ISCED 01 and other registered ECEC services (Figure 4).

Sources: OECD (2016), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2016-en>; OECD (2001), *Starting Strong I: Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264192829-en>.

Below-average expenditure on pre-primary education (ISCED 02) as a percentage of GDP

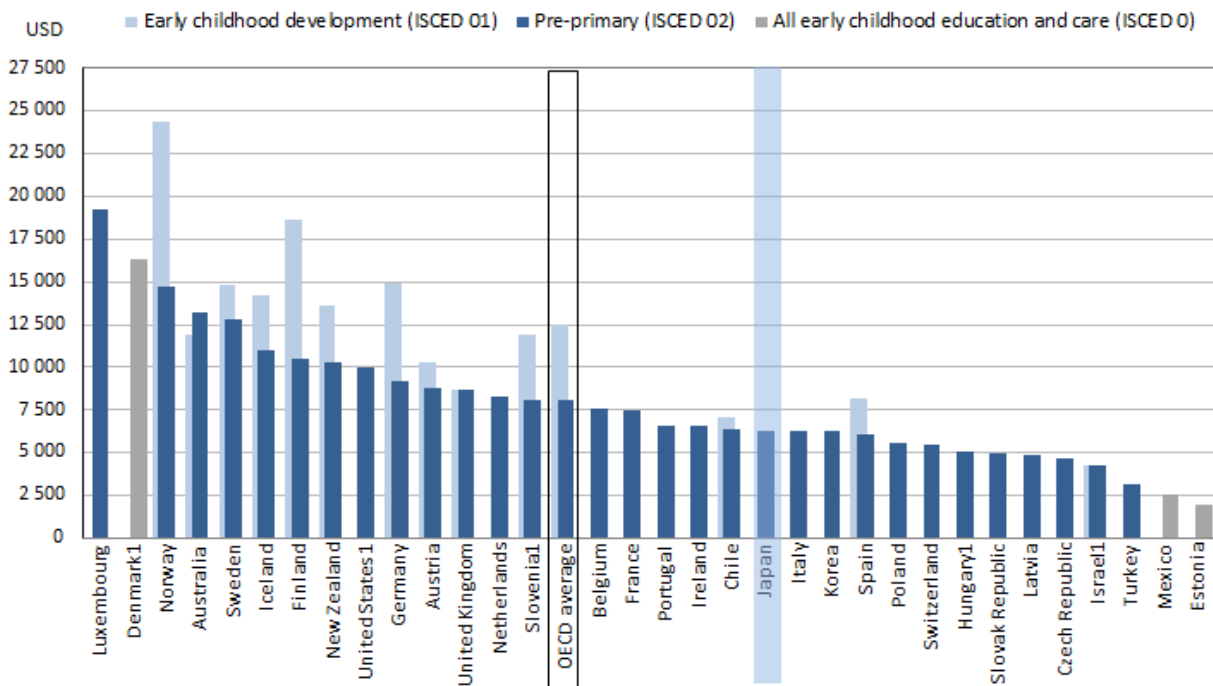
The financial investment in ECEC settings and equipment is a key requirement for the development of good and high quality learning environments, and indicates that political priority is being given to the education and care of young children. Sustainable public funding is essential to recruit competent and qualified staff, ensure the quality of educational programmes and promote their development.

In Japan, public and private expenditure on pre-primary education (ISCED 02) represented 0.2% of GDP in 2013, much lower than the OECD average of 0.6%. Chile, Iceland, Norway and Sweden spent 1.0% or more of their GDP on pre-primary education (OECD, 2016, Table C2.3).

Expenditure per student in pre-primary education (ISCED 02) is below the average of OECD countries

Expenditure per student in pre-primary education (ISCED 02) in Japan was USD 6 247 in 2013, lower than the OECD average of USD 8 070 (see Figure 1). Differences between the share of spending on early childhood education and care (ISCED 0) and expenditure per student at this level explain, at least partly, the differences in enrolment rates in early childhood development programmes (ISCED 01) and pre-primary education (ISCED 02) between countries and in children to teacher ratios between countries. For instance, countries with higher expenditure per student tend to have higher enrolment rates or/and lower children to teaching staff ratio compared to the OECD average.¹ The level of expenditure per student also varies between countries depending on services' fees, the cost of education, the level of wealth of the country, and the coverage by private pre-primary structures.

Figure 1. Annual expenditure per student by educational institutions for all services (2013)



Notes: Countries are ranked in descending order of annual expenditure per student by educational institutions for pre-primary education.

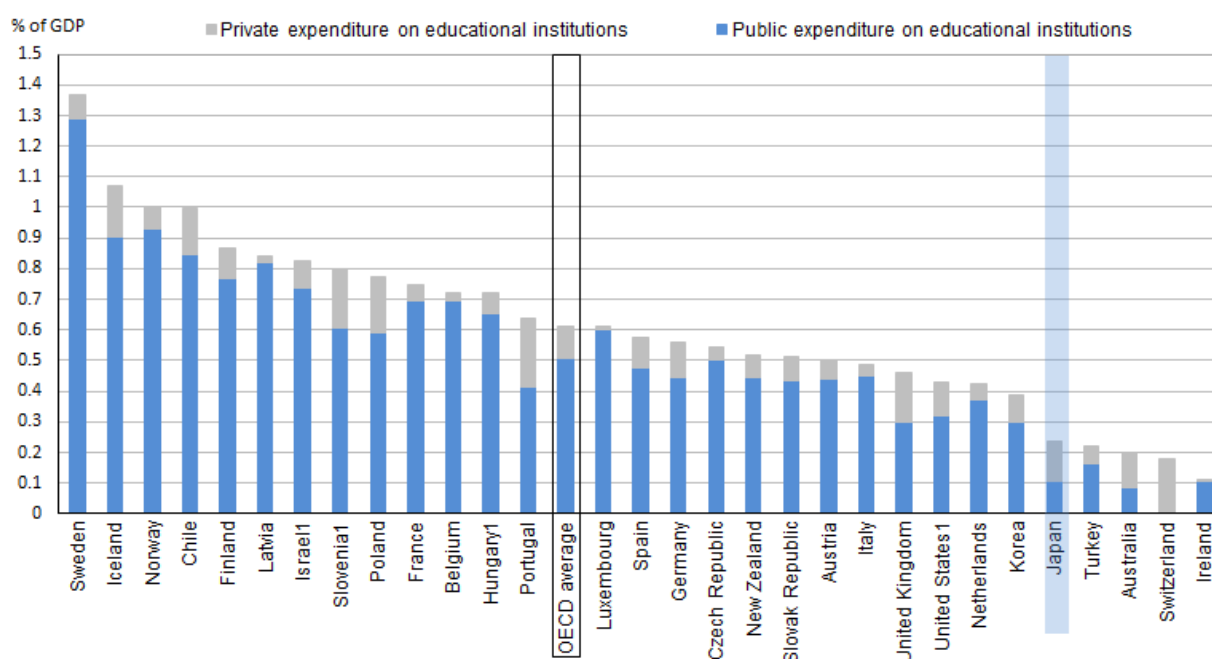
1. Includes some expenditure on childcare.

Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, Table C2.3, <http://dx.doi.org/10.1787/888933398316>.

The share of private funding of pre-primary education (ISCED 02) is very high

Early childhood education and care (ECEC) are also funded by private sources,² mainly through fees paid by parents. Limited comparable data regarding the services for young children in childcare mean that the extent of total private funding in childcare cannot be analysed. In Japan, private funding of pre-primary education (ISCED 02) represented 0.13% of GDP in 2013 (the OECD average was 0.11% of GDP), and 56% of the total funding of pre-primary education (ISCED 02), which is significantly above the average proportion of private funding among OECD countries (17%). No other OECD country with available data, except Australia, has a higher share of private funding of education at the pre-primary level (see Figure 2).

Figure 2. Distribution of public and private expenditure on pre-primary educational institutions (2013)



Notes: Countries are ranked in descending order of public and private expenditure on educational institutions (2012).
1. Includes some expenditure on child care.

Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, Table C2.3, <http://dx.doi.org/10.1787/888933398316>.

Quality of early childhood education and care

Curriculum frameworks can play a pivotal role in ensuring the quality of ECEC services. Japan is one of the few countries that has separate frameworks for pre-primary education (ISCED02) and care. The “Course of Study and Guideline of Day Care for Integrated Centre for Early Childhood Education and Care” covers children aged 0 to 5 in integrated centres for ECEC. The “Course of Study for Kindergarten” covers children aged 3 to 5 in kindergartens. The “National Curriculum of Day Care Centres” covers all young children aged 0 to 5 in day-care centres. These curricula are almost consistent with each other in terms of educational content.

Some countries (including Finland, many German Länder [federal state], Mexico, Sweden, England and Scotland) have integrated curriculum frameworks that cover both ECEC and primary school aged children, which may foster quality of ECEC services across age groups (OECD, 2015a, Table 1.3).

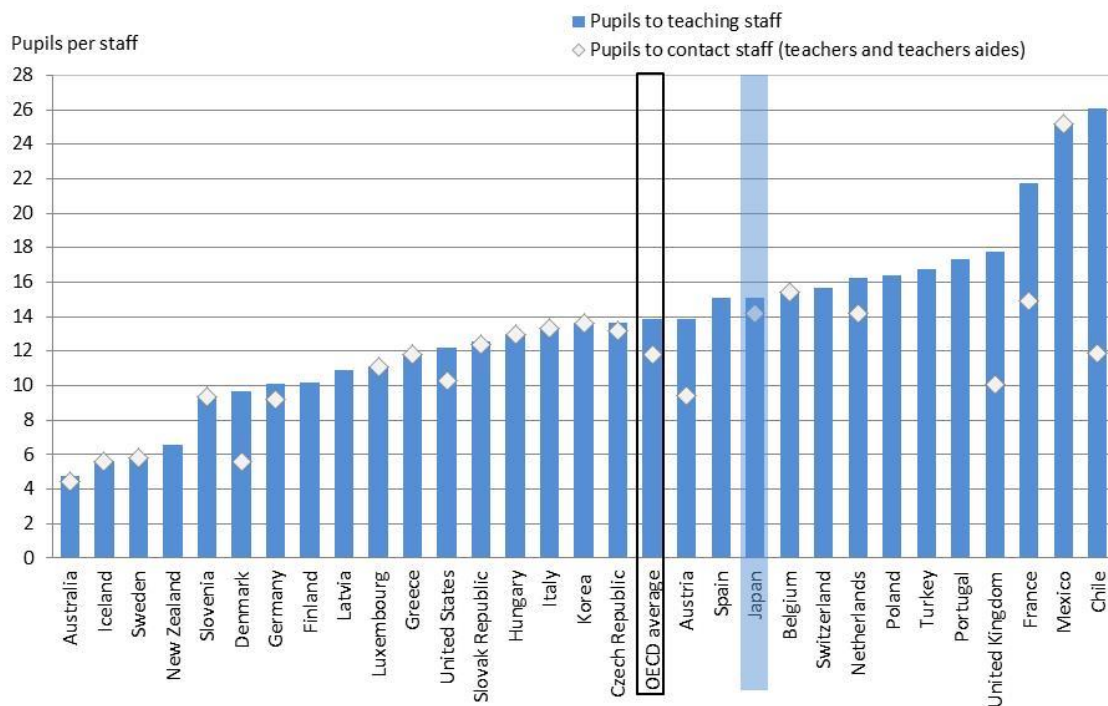
The number of children per staff in pre-primary education (ISCED 02) is above the OECD average

The children-to-staff ratio is an important indicator of the resources invested in pre-primary education and care, and also of the quality of these services. A low ratio of children to staff impacts staff working conditions, alongside other factors such as reasonable hours or workload and salary levels. These affect job satisfaction and staff retention, and through this, contribute to the quality of pre-primary education and care (OECD, 2011).

In some countries, regulations state the maximum number of children per adult in childcare. Japan has different ratios for different age groups: for age 0 the ratio is 3 children to 1 adult; for ages 1-2 the ratio is 6:1; for age 3 the ratio is 20:1; and for age 4 the ratio is 30: 1 (OECD, 2011, figure 1.5).

In Japanese pre-primary education (ISCED 02) there were about 15 children per teacher in 2014, which is 1 child more than the OECD average of 14 children per teacher, excluding the non-teaching staff, such as auxiliary staff (OECD, 2016, Table C2.2) (see Figure 3).

Figure 3. Ratio of children-to-teaching staff in pre-primary education (ISCED 02) (2014)



Notes: Countries are ranked in descending order of the children-to-teaching-staff in pre-primary education. Data on “pupils for contact staff” is missing for Finland, Latvia, New Zealand, Spain, Switzerland, Poland, Portugal and Turkey. Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, Table C2.2, <http://dx.doi.org/10.1787/888933398305>.

At the pre-primary level, auxiliary staff (support staff for teachers) also work directly with children. Across the OECD countries that have available data, eight have reported better ratios for children-to-contact staff (teaching and auxiliary staff) than for teaching staff only: an average of 12 children per contact staff compared to 14 per teaching staff. In pre-primary educational institutions, in Japan there are 14 children per contact staff, but 15 children per teaching staff (see Figure 3).

The duration of initial teacher training for pre-primary teachers is relatively short

In OECD countries, the duration of initial teacher training varies more in pre-primary education (ISCED 02) than at any other level of education. In Japan a basic certification (short cycle tertiary degree - ISCED 5 in ISCED 2011 classification) can be achieved after two years of training, there is also an additional qualification at the ISCED 6 level (Bachelor's or equivalent level in ISCED 2011 classification) after four years of training. In Austria, Chile, France, Iceland and Italy it takes five years for basic certification. Newly trained teachers in public kindergartens or public integrated centres for ECEC have to undergo a formal induction programme in Japan³ (OECD 2014, Table D6.1a).

Monitoring of early childhood education and care settings (ECEC) is a common practice

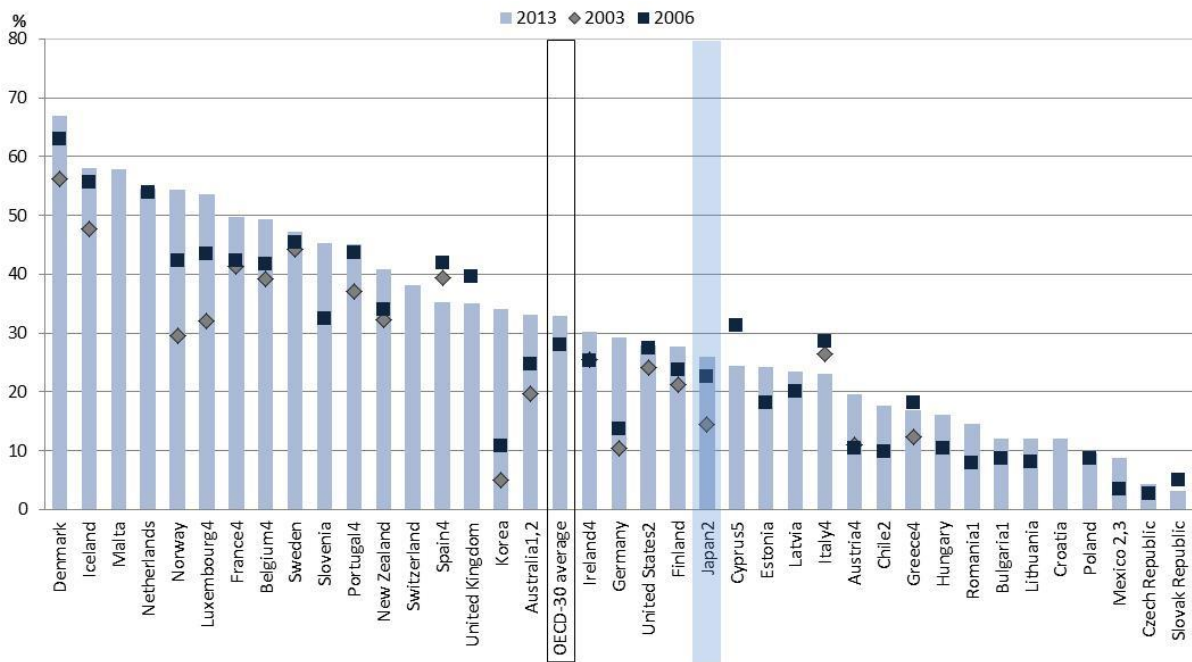
All 24 countries and jurisdictions surveyed for *Starting Strong IV: Monitoring Quality in Early Childhood Education and Care* monitor service and staff quality; and 21, including Japan, monitor child development and outcomes. Monitoring quality is mandatory for ECEC settings in Japan. Methods of monitoring staff quality are not prescribed at the national level, and local authorities or ECEC settings are free to choose which practices they adopt, which means that wide variations are observed between regions and settings (OECD, 2015a).

Section 2. Policy outputs

Participation of 0-2 year-olds in formal childcare is lower than the OECD average

In Japan, participation rates of children under the age of 3 in formal childcare arrangements (ISCED 0 and other registered ECEC services)⁴ are lower than in most OECD countries. On average across OECD countries, 33% of 0-2 year-olds attended some form of formal ECEC in 2013. In Japan, this figure was 26% in 2010.⁵ Although participation significantly increased in Japan between 2003 and 2010 (by more than 11 percentage points), it is well below that of other OECD countries. Denmark, Iceland, Luxembourg, Norway and the Netherlands stand out with participation rates above 50% (see Figure 4).

Figure 4. Participation rates in formal childcare (ISCED 0 and other registered ECEC services) among 0-2 year-olds (2003, 2006, 2013)



Notes: Data reflect children in day-care centres and pre-school (both public and private) and those who are cared for by licensed childminders. It excludes informal services provided by relatives, friends or neighbours regardless of whether or not the service is paid for.

Countries are ranked in descending order of the percentage of children under 3 years of age in formal childcare.

1. 2006 data for Australia refer to 2005, and for Bulgaria and Romania to 2007.

2. 2013 data for Japan refers to 2010, and for Australia, Chile, Mexico, and the United States to 2011.

3. Data do not include services provided by the private sector.

4. 2003 data for Austria, Belgium, Luxembourg, France, Greece, Ireland, Italy; Spain refers to 2004; and for Australia and the United States to 2002.

5. Note by Turkey: The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the “Cyprus issue”.

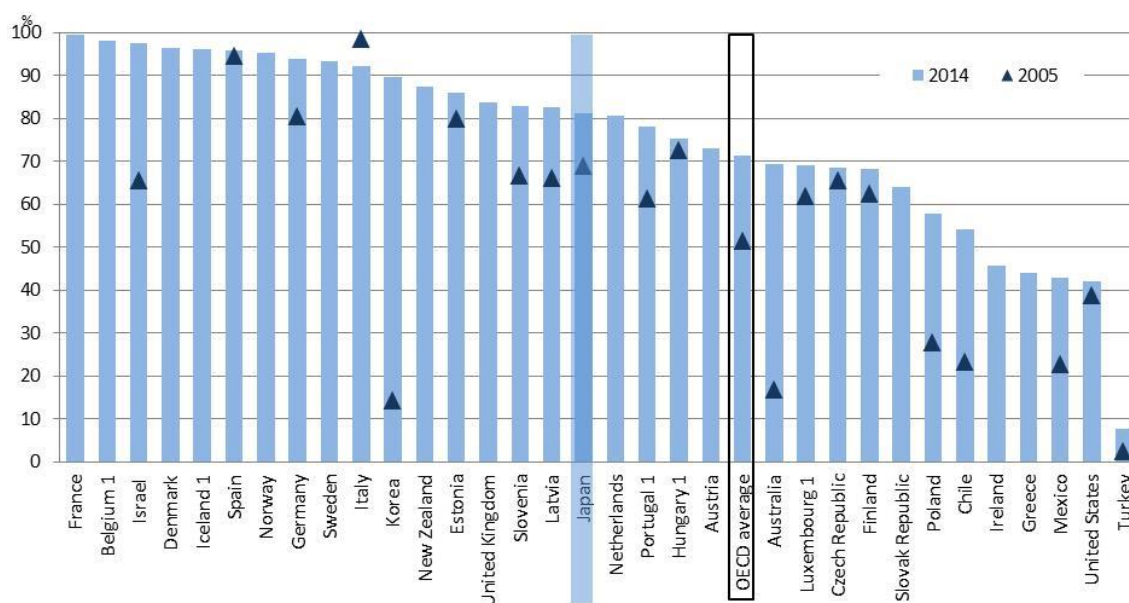
Note by all the European Union Member States of the OECD and the European Commission: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: OECD (2015b), OECD Family Database, Table PF3.2.A, www.oecd.org/social/family/database.

Widespread participation in pre-primary education (ISCED 02)

Early childhood education and care (ISCED 0)⁶ is the first stage of organised instruction for many children and can, as such, play an important role in their development. While enrolment in these programmes is usually not mandatory and children can enter these programmes at different ages, the majority of 3-4 year-olds in OECD countries are enrolled in pre-primary education (ISCED 02). On average across OECD countries, 69% of 3-year-olds and 85% of 4-year-olds attended pre-primary education (ISCED 02) in 2014, although this varies widely among countries. In Japan, 81% of 3-year-olds were enrolled in pre-primary programmes (ISCED 02) in 2014 (see Figure 5). And, the participation rate of 4-year-olds was higher at 96%. In 10 OECD countries (Belgium, Denmark, France, Germany, Israel, Italy, Korea, Norway, Spain and Sweden), at least 90% of 3 and 4-year-olds were enrolled in early childhood programmes (ISCED 0) in 2014 (OECD, 2016, Table C2.1). Most OECD countries achieve full enrolment in ECEC for 5-year-olds. In Japan, enrolment of 5-year-olds is high, with 96% attending pre-primary education (ISCED 02) (OECD, 2016, Table C2.1).

Figure 5. Enrolment rates at age 3 in early childhood education (2005 and 2014)



Notes: Countries are ranked in descending order of the enrolment rates of 3-year-olds in 2013.

2005 data is missing for Austria, Belgium, Denmark, France, Greece, Iceland, Ireland, Latvia, Netherlands, New Zealand, Norway, Slovak Republic, Sweden and United Kingdom.

1. Year of reference 2013 instead of 2014.

Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, Table C2.1, <http://dx.doi.org/10.1787/888933398291>.

Pre-primary education, as well as primary and secondary education, is mostly organised in public institutions in OECD countries and, on average, 68% of pre-primary children (ISCED 02) were enrolled in public institutions in 2014. Only in pre-primary education programmes are there more children enrolled in private institutions (58%) than in public institutions (42% in 2014). In Japan, the majority of pre-primary children (ISCED02) are enrolled in private institutions, only 27% of pre-primary children (ISCED02) attending a public setting. Only Australia, Korea and New Zealand have lower proportions of pre-primary children (ISCED02) in public institutions than Japan (OECD, 2016, Table C2.2).

Section 3. Policy outcomes

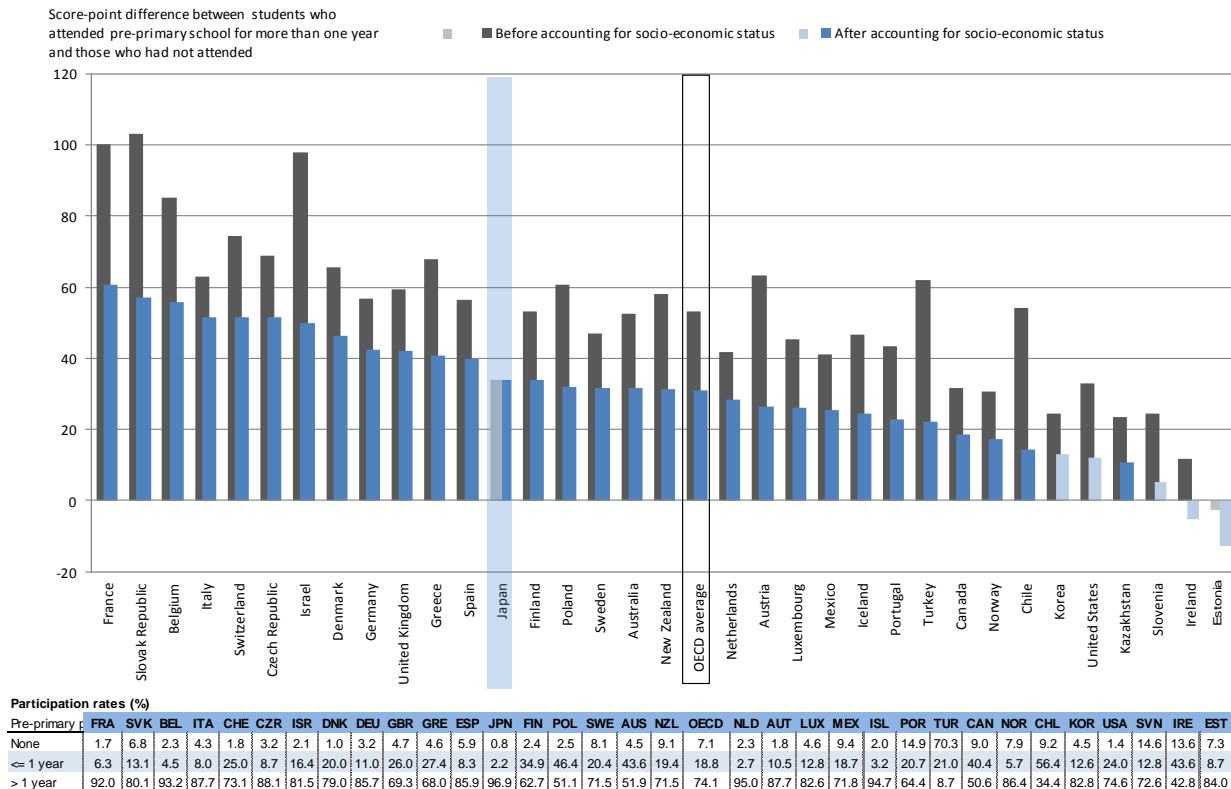
The association between pre-primary education (ISCED 02) attendance and mathematics performance of 15-year-olds is close to the OECD average

Research in neurosciences has shown that the brain sensitivity of highly important developmental areas, such as emotional control, social skills, language and numeracy, peak in the first three years of a child's life (Gambaro et al., 2014). These findings indicate that the first years of children's life are crucial for their later development and learning. High quality ECEC can stimulate the development of these skills, which highlights the importance of early development programmes and their level of quality (OECD, 2006, 2011).

A strong start in education through ECEC is associated with higher performance in adolescence. PISA results show that 15-year-olds who attended a pre-primary education programme (ISCED 02) tended to perform better than students who did not attend pre-primary education (ISCED02). The percentage of 15-year-olds in Japan who reported not attending pre-primary education (ISCED02) in PISA 2012 was practically nil (0.8% compared with 7.1% across the OECD, see Figure 6). In Japan, the difference in PISA mathematics scores between 15-year-old students who attended more than one year of pre-primary education (ISCED02) and those who did not was 34 score points after accounting for socio-economic

background – the equivalent of almost one year of formal schooling⁷ (close to the OECD average difference of 31 score points). Different to what is observed in other countries, in Japan the benefits of pre-primary education (ISCED02) on mathematics performance of 15-year-olds do not differ much after controlling for socio-economic background, suggesting that family resources have little impact on the positive association of pre-primary education (ISCED02) on subsequent achievement.

Figure 6. Difference in mathematics performance, by attendance in a pre-primary education (ISCED 02) programme (2012)



Notes: Score-point differences that are statistically significant are marked in a darker tone. Countries and economies are ranked in descending order of the score-point difference in mathematics performance between students who reported that they had attended pre-primary education (ISCED 02) for more than one year and those who had not attended pre-primary education (ISCED02), after accounting for socio-economic status. Participation rates in pre-primary education (ISCED02) are drawn from reports of 15-year-old students participating in PISA 2012.

Source: OECD (2013), *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Chance to Succeed*. Figure II.4.11, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264201132-en>.

PISA data also shows that the correlation between enrolment in pre-primary education (ISCED 02) and performance at the age of 15 is generally stronger in education systems where participation in pre-primary education (ISCED02) lasts more than one year, and the link is more pronounced in settings where the student-to-teaching-staff ratio and public expenditure per child are higher (OECD, 2013). In other words: input policies, such as the student-to-teaching-staff ratio, may be associated with learning outcomes. Despite increased participation and public investment in ECEC in OECD countries, little comparative data exists to determine under what conditions ECEC are most beneficial for children, and what aspects are the most beneficial to the child. The OECD is developing a study that will provide information on the factors that support quality and equity in the early years (see Box 2).

Box 2. The development of international data on quality in early education and care

The OECD programme of work on ECEC includes a series of projects to develop the extent of available data on ECEC. These include:

The TALIS Starting Strong Survey: is an international survey of ECEC staff and the quality of the learning and well-being environment in different ECEC settings across OECD member and non-member economies. The objective is to collect data on staff characteristics, pre-service and in-service education, pedagogical practices and beliefs, organisation and management, and working conditions to give countries an internationally framed assessment of what actually happens in their ECEC settings, i.e. the quality of the learning and well-being environment children experience (instrument development and pilot study in 2016, field trial in 2017, main study in 2018 and reporting in 2019).

The International Early Learning (for Child Well-being) Study seeks to provide reliable, comparative information on the social, emotional and cognitive development of children to assist countries to improve children's outcomes. It will measure children's early learning outcomes, at approximately five years of age, in the context of their ECEC experiences and home environments. The study will include a child assessment component as well as a parent questionnaire to gather information about the home learning environment. The study will be conducted in 3-6 countries from 2016 to 2019. Results on the study will be released in 2020.

A thematic study on transitions from ECEC to primary school will analyse country policies and practices in stimulating quality transitions from ECEC to primary education. This study will be based on existing literature and country background notes, which will form the basis of a comparative analytical report in 2017.

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For more information on Early Childhood Education and Care, visit www.oecd.org/edu/earlychildhood.

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NOTES

1. For example, in the Netherlands and Switzerland, the actual level of spending and enrolment in pre-primary education is likely to be underestimated in the absence of data on integrated programmes (some caution is required before to draw conclusions about the conditions of access and quality of education and care for young children).
2. Private sources include households and other private entities, such as private businesses and non-profit organisations (e.g., religious organisations, charitable organisations, and business and labour associations).
3. A formal induction programme is stipulated in the Law for Special Regulations Concerning Educational Public Service Personnel. This means that it is a duty for teachers in public schools. However, in some regions and some private schools a formal/informal induction programme takes place.
4. The OECD Family Database definition of “formal” childcare among children aged 0-2 years includes centre-based services, organised day care, pre-school and professional child-minders.
5. Most recent data for Japan refers to 2010.
6. Early childhood education refers to programmes classified as ISCED 01 (early childhood educational development) and ISCED 02 (pre-primary education) depending on the age of the child (see Box 2). In Japan, all children aged 3-5 are registered as attending an ISCED 02 (pre-primary) programme.
7. 39 score points in mathematics correspond to the equivalent of one year of formal schooling (OECD, 2013).

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Table 1. Summary of ECEC indicators, Japan and OECD average

Indicator	Japan	OECD average	Ref. year	Table	Source
Policy inputs					
Expenditure					
Total expenditure on early childhood educational development (ISCED 01) as a percentage of GDP (%)	m	0.2	2013	Table C2.3	OECD (2016)
Total expenditure on pre-primary education (ISCED 02) as a percentage of GDP (%)	0.2	0.6	2013	Table C2.3	OECD (2016)
Total expenditure on all early childhood education (ISCED 0) as a percentage of GDP (%)	m	0.8	2013	Table C2.3	OECD (2016)
Proportion of total expenditure on early childhood educational development (ISCED 01) from public sources (%)	m	68.6	2013	Table C2.3	OECD (2016)
Proportion of total expenditure on pre-primary education (ISCED 02) from public sources (%)	44.5	82.9	2013	Table C2.3	OECD (2016)
Proportion of total expenditure on early childhood education (ISCED 01 & ISCED 02) from public sources (%)	m	81.2	2013	Table C2.3	OECD (2016)
Annual expenditure per student in pre-primary education (ISCED 02) (in USD)	6 247	8 070	2013	Table C2.3	OECD (2016)
Quality of early childhood education and care services					
Ratio of children to teaching staff (in full-time equivalents) (ISCED 02)	15	14	2014	Table C2.2	OECD (2016)
Ratio of children to contact staff (teachers and teachers' aides) (in full-time equivalents) (ISCED 02)	14	12	2014	Table C2.2	OECD (2016)
Teachers' salaries					
Annual starting salary, typical training of pre-primary teachers in public institutions (in USD)	m	29 494	2014	Table D3.1a	OECD (2016)
Annual salary after 10 years of experience, typical training of pre-primary teachers in public institutions (in USD)	m	36 491	2014	Table D3.1a	OECD (2016)
Annual salary after 15 years of experience, typical training of pre-primary teachers in public institutions (in USD)	m	39 245	2014	Table D3.1a	OECD (2016)
Annual salary at top of scale, typical training of pre-primary teachers in public institutions (in USD)	m	47 826	2014	Table D3.1a	OECD (2016)
Pre-primary teachers' salaries relative to earnings for full-time, full-year with tertiary-education workers based on teachers' attainment level (25-64 years-old) (ratio)	m	0.74	2014	Table D3.2a	OECD (2016)
Teachers' characteristics					
Total duration of initial pre-primary teacher education (in years)	5	m	2013	Table D6.1a	OECD (2014)
Annual net teaching time of pre-primary teachers (in hours)	m	1005	2014	Table D4.1	OECD (2016)
Number of annual days of teaching (in days)	m	190	2014	Table D4.1	OECD (2016)
Policy outputs					
Participation in early childhood education and care services					
Participation rate in formal care and pre-school services for children under 3 years (%)	26	33	2013	Chart PF3.2.A	OECD (2015b)
Participation rate in formal care and pre-school services for children under 3 years, full-time equivalent (%)	m	35	2013	Chart PF3.2.B	OECD (2015b)

Table 1. Summary of ECEC indicators, Japan and OECD average (conitnued)

Indicator	Japan	OECD average	Ref. year	Table	Source
Average weekly hours in childcare among children under 3 years of age (in hours per week)	m	30	2013	Chart PF3.2.B	OECD (2015b)
Participation rates for 3 year olds in pre-primary education (ISCED 02) (%)	81	69	2014	Table C2.1	OECD (2016)
Participation rates for 4 year olds in pre-primary education (ISCED 02) (%)	96	85	2014	Table C2.1	OECD (2016)
Policy outcomes					
Average mathematics performance of students with					
No pre-primary education attendance (score points)	506	451	2012	Table II.4.12	OECD (2013)
Pre-primary education attendance for one year or less (score points)	489	475	2012	Table II.4.12	OECD (2013)
Pre-primary education attendance for more than one year (score points)	540	504	2012	Table II.4.12	OECD (2013)
Difference in mathematics performance between students (after accounting for students' economic, social and cultural status)					
Difference between those who reported having attended pre-primary school for one year or less and those who had not attended pre-primary education (score points)	-5	15	2012	Table II.4.12	OECD (2013)
Difference between those who reported having attended pre-primary school for more than one year and those who had not attended pre-primary education (score points)	34	31	2012	Table II.4.12	OECD (2013)

Notes: a - data are not applicable because the category does not apply; m – data are not available.