Quality Matters in Early Childhood Education and Care

JAPAN

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OECD

Quality Matters in Early Childhood Education and Care: Japan 2012

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FOREWORD

This publication is intended to be a quick reference guide for anyone with a role to play in encouraging quality in Japan's early childhood education and care (ECEC) workforce.

There is a growing body of evidence that children starting strong in their learning and well-being will have better outcomes when they grow older. Such evidence has driven policy makers to design an early intervention and re-think their education spending patterns to gain "value for money". At the same time, research emphasises that the benefits from early interventions are conditional on the level of "quality" of ECEC that children experience.

What does "quality" mean? *Starting Strong III: A Quality Toolbox for Early Childhood Education and Care* has identified five policy levers that can encourage quality in ECEC, having positive effects on early child development and learning.

- Policy Lever 1: Setting out quality goals and regulations
- Policy Lever 2: Designing and implementing curriculum and standards
- Policy Lever 3: Improving qualifications, training and working conditions
- Policy Lever 4: Engaging families and communities
- Policy Lever 5: Advancing data collection, research and monitoring

Of the five policy levers, Japan has selected **Policy Lever 3: Improving qualifications, training and working conditions** for its current policy focus.

This policy profile for Japan would not have been possible without the support of the national authority and the stakeholders involved. The OECD Secretariat would like to thank the national co-ordinators, Dr. Kiyomi Akita from Tokyo University, Dr. Riyo Kadota-Korogi from Seinan University, Mr. Hiroki Hamaya, Mr. Yoshiyuki Ebina, Ms. Maria Ojimi and Mr. Fumiaki Nakayasu from the Ministry of Education, Culture, Sports, Science and Technology, Mr. Yasuhiro Hashimoto, Mr. Kouji Kitayama from the Ministry of Health, Labour and Welfare, and Mr. Jugo Imaizumi from the Permanent Delegation of Japan to the OECD for their work in providing information. Additionally, thank you to all those who gave their time to respond to our many questions, provide comments on preliminary drafts and validate the information for accuracy. We would also like to thank consultants Janice Heejin Kim and Matias Egeland who worked on sections of the preliminary drafts as part of the OECD team on ECEC.

Additionally, it is important to point out that laws for a major reform of the ECEC system in Japan were passed by Congress in the summer of 2012. This reform includes a large increase of public expenditure on ECEC, in order to improve the quality of the ECEC system, to increase the capacity of ECEC, based on the increase of the consumption tax, and to promote the integration of kindergartens and day care centres. Data and information for this policy profile were collected before the above mentioned laws passed, and therefore information in this profile does not reflect or represent any of the changes implemented after the reform.

The online version of the quality toolbox can be found at: **www.oecd.org/edu/earlychildhood/toolbox**. The online toolbox has additional information, such as a country materials page where actual documents from OECD countries are presented, including curricula, regulatory frameworks and data systems information. All information related to the OECD Network on ECEC is available at: **www.oecd.org/edu/earlychildhood**.

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EXECUTIVE SUMMARY

The level of quality of the ECEC workforce is one of the determining factors that can have positive effects on child development.

ECEC is a topic of increased policy interest in Japan where improving quality in the ECEC sector is a subject of growing importance. The OECD has identified five effective policy levers to encourage quality in the sector: 1) quality goals and regulations; 2) curriculum and guidelines; 3) workforce; 4) family and community engagement; and 5) data, research and monitoring. Of the five aspects, Japan considers improving quality in the workforce as a priority; it considers well-educated, well-trained professionals the key factor in providing high-quality ECEC with the most favourable cognitive and social outcomes for children.

It is, however, not the qualification *per se* that has an impact on child outcomes but the *ability* of the staff to create a high-quality pedagogical environment that makes the difference. Research suggests that pedagogical quality includes: good understanding of child development; the ability to develop children's perspectives, praise, comfort, question, be responsive and elicit children's ideas; skills for leadership, problem solving and development of lessons plans; and good vocabulary.

Well-educated/trained staff is better able to create more effective work environments and increase the efficiency of other ECEC staff members; while ongoing professional training maintains the benefits from initial education and allows staff to stay updated on professional developments and best practices, contributing to improved pedagogical and professional quality and stimulating early child development. Additionally, the ability of staff to provide high-quality care and education is influenced by their working conditions, such as salary and non-financial benefits.

Students in Japan perform well on PISA assessments, and ECEC enrolment rates of three- and five-year-olds are high. However, maternal employment rates, gender equality in earnings, fertility rates and enrolment in ECEC of children under three could be improved.

Japan performs above average in several of the ECEC outcome indicators. On outcomes in infant survival and student performance, Japan performs very well; and enrolment rates in ECEC of three- and five-year-olds are above the OECD average. Possible policy areas for reflection within an international comparative perspective include: improving fertility rates and enrolment in ECEC of children below the age of three, and increasing maternal employment rates and gender equality in earnings for women.

Japan has highly educated ECEC staff and favourable staff-child ratios for zero-to-three-year-olds; while public spending on ECEC is low, maternity leave is below average, and staff-child ratios for three-to-six-year-olds are among the most unfavourable of the OECD.

On policy input indicators, Japan performs well on the regulated minimum ISCED level of education for ECEC staff and staff-child ratios of zero-to-three-year-olds. Japan also has a

larger-than-average share of male staff in ECEC. However, public spending on ECEC can be increased, as it is low in comparison to OECD countries; maternity leave entitlements can be improved; staff-child ratios of three-to-six-year-olds can be more favourable; and remuneration of kindergarten teachers can be improved to attract and retain staff.

Japan could share its good initiatives to raise workforce quality with peer countries, such as highly educated staff, making professional development mandatory for staff, co-financing training programmes, setting favourable staff-child ratios and monitoring staff performance.

Japan has a well-established practice regarding the provision and encouragement of professional development in particular and a highly educated workforce. There is, among others, a broad provision of initial education with full-time and part-time programmes provided publically and privately; professional development is mandatory with training costs shared between the government, employer and individual; staff performance is being monitored; and favourable staff-child ratios are in place in day care centres.

International comparative data suggests areas of reflection for Japan, such as strengthening staff competences, recognising prior learning for entry into the sector, reflecting on incentives for uptake of professional development for day care centre staff, and improving working conditions, such as space per child and remuneration.

Capitalising upon the strengths, Japan could further enhance the quality of its ECEC workforce. Other country practices would suggest such options as: 1) defining and strengthening competences of staff, including communication, leadership and ICT competences; 2) encouraging alignment between initial education of kindergarten and primary school teachers and reflecting on education for family day care staff; 3) attracting staff through diversifying the workforce, reflecting on the license renewal process and recognising prior learning; 4) improving incentives for the uptake of professional development by day care centre staff; 5) monitoring working conditions and the family day care sector; and 6) improving structural standards and working conditions.

Common challenges countries face in enhancing the quality of the ECEC workforce include: 1) improving staff qualifications, education and competences; 2) recruitment; 3) professional development; 4) staff evaluation and monitoring; and 5) working conditions and retention.

INTRODUCTION

Aim of the policy profile

Early childhood education and care (ECEC) has become a policy priority in many countries. A growing body of research recognises that it generates a wide range of benefits, including social and economic benefits, better child well-being and learning outcomes as a foundation for lifelong learning, more equitable outcomes and reduction of poverty, and increased intergenerational social mobility. But these positive benefits are directly related to the "quality" of ECEC.

Definitions of quality differ across countries and across different stakeholder groups depending on beliefs, values, a country's (or region's) socio-economic context, and the needs of the community of users. While definitions should be interpreted with caution and sensitivity when comparing cross-country practices, the OECD has taken a two-tier approach to define "quality" to proceed policy discussions. Therefore, this policy profile considers quality as in "structural quality"[1] and "process quality"[2], and sets out "child development" or "child outcome" as quality targets.

Based on international literature reviews findings, the OECD has identified five levers as key policies to encourage quality in ECEC:

1) Setting out quality goals and regulations
2) Designing and implementing curriculum and standards
3) Improving qualifications, training and working conditions
4) Engaging families and communities
5) Advancing data collection, research and monitoring

Of the five levers, Japan has selected "improving workforce qualifications, training and working conditions" to be the theme of its policy profile. As reference countries in focus for international comparison, Japan has selected New Zealand, Sweden and the United Kingdom.

Structure of the report

This report consists of four chapters:

Chapter 1: Where does Japan stand regarding policy outcomes and inputs?

The first chapter presents two spider webs, which give a quick overview of: 1) policy outcomes over the lifecycle of a child, such as participation rates in ECEC, PISA performance scores and labour market outcomes; and 2) policy inputs, which indicates the policies you have in place that can influence ECEC and workforce development, such as working conditions (staff-child ratio), maternal leave policies and public spending on ECEC.

The spider webs can show you where you stand compared to the OECD average and can draw attention to areas (outcomes and inputs) which might require more policy attention.

Chapter 2: What does research say?

This chapter aims to help you brief political leaders, stakeholders and the media about the latest research and explain why workforce quality and working conditions matter for better child development. It includes an overview of research findings on why qualifications and training and development matter, what the effects of workforce-related aspects are on child development and the quality of ECEC provision, which aspects matter for workforce development and working conditions, policy implications from research and knowledge gaps in current research. It consists of two research briefs: one dedicated to workforce qualifications and professional development and one dedicated to working conditions.

Chapter 3: Where does Japan stand compared to other countries?

Chapter three provides an international comparative overview of where the country stands regarding the education and training of staff as well as working conditions. It identifies strengths and areas for reflection for Japan in comparison with the selected reference countries. This chapter can provide insight into which aspects of workforce development Japan might consider taking policy action on, and it can raise awareness about policy issues.

Chapter 4: What are the challenges and strategies?

Chapter four presents the challenges countries have faced in improving workforce development and working conditions and gives alternative approaches to overcome these challenges. It provides a quick overview of what New Zealand, Sweden and the United Kingdom have done in tackling challenges to improve the quality of the workforce.

NOTES

1 Structural quality consists of “inputs to process-characteristics which create the framework for the processes that children experience”. These characteristics are not only part of the ECEC location in which children participate, but they are part of the environment that surrounds the ECEC setting, *e.g.*, the community. They are often aspects of ECEC that can be regulated, though they may contain variables which cannot be regulated (Litjens and Taguma, 2010).

2 Process quality consists of what children actually experience in their programmes – that which happens within a setting. These experiences are thought to have an influence on children’s well-being and development (Litjens and Taguma, 2010).

CHAPTER 1

WHERE DOES JAPAN STAND REGARDING POLICY OUTCOMES AND INPUTS?

Japan performs above average on several of the ECEC outcome indicators. On outcomes in infant survival and student performance, Japan performs very well, and enrolment rates in ECEC of three- and five-year-olds are above the OECD average. Possible policy areas for reflection within an international comparative perspective include: improving fertility rates, enrolment in ECEC of children below the age of three, and increasing maternal employment rates and gender equality in earnings for women.

On policy input indicators, Japan performs well on the regulated minimum ISCED level of education for ECEC staff and staff-child ratios in day care centres. Japan also has a larger-than-average share of male staff in ECEC. However, public spending on ECEC can be increased, as it is low in comparison to OECD countries; maternity leave entitlements can be improved; staff-child ratios in kindergartens can be more favourable; and remuneration of kindergarten teachers can be improved to attract and retain staff.

In recent years, the underpinning principles for a policy intervention are shifting from a current-income, social-welfare model to a life-cycle, human capital development model. In the life-cycle model, ECEC is considered to play a critical role.

A growing body of research suggests that ECEC generates a higher rate of return on public intervention than later stages of education, and even more so for disadvantaged children. It argues that ECEC lays the foundation for subsequent stages in life, such as better student performance, less poverty, more equitable outcomes, less dropouts and greater labour market success.

From a labour market perspective, it is argued that access to affordable, high-quality ECEC permits mothers to take an equal place in the workforce, boosting household income and giving some families vital help out of poverty. It is also argued that this will improve female workforce participation, increasing the tax base for the society in general.

The first spider web chart aims to spotlight the **policy outcomes** of your country with a life-cycle approach. This will be presented in comparison with the OECD average and the highest scored country (at the maximum value of 100) and the lowest scored country (at the minimum value of 0). *First*, the tool could help you to see where you stand against the international standards. *Second*, it can imply which outcomes might require more policy attention in the international comparison perspective, independent of the domestic policy discussions. *Third*, it can set the scene for you to reflect upon how your selected quality focus could help improve the target outcomes.

The second spider web chart aims to spotlight the **policy inputs** from ECEC policy. This tool can help you compare how your positioning on the outcomes in the international landscape relates or does not relate to that on the input side. It can also help you understand that your selected quality focus is part of the policy package, which can, if planned well – in combination with other policy interventions – avoid cancelling out effects.

In the annexes, Japan is compared with other OECD countries and, in particular, with the reference countries selected by Japan wherever the comparative data are available. The selected countries are New Zealand, Sweden and the United Kingdom.

Spider web chart on policy outcomes

On the selected policy outcome indicators across different sectors, Japan performs above or close to the OECD average regarding infant survival, enrolment rates at ages three and five, PISA performance and people aged 15-19 who are in education or work. Japan performs below average regarding fertility rates, children under 18 who live above the poverty line, enrolment in formal early child care for under-three-year-old children, maternal employment, and gender equality in median earnings of full-time employees (Figure 1.1). A more detailed comparison and additional information can be found in Annex B.

On fertility rates

- Fertility rates in Japan are among the lowest in OECD countries and have dropped continuously since 1970 to below the replacement rate of 2.1 children per woman.

On participation in ECEC

- Enrolment rates in ECEC for three- and five-year-olds are above the OECD average in Japan. However, the enrolment rate of under-three-year-olds in Japan is below average.

On outcomes in child well-being and learning

- Infant survival: Japan performs above the OECD average on infant survival but has a below-average share of 0-to-18-year-olds living above the poverty line.

- Schooling outcomes: Japan is among the top performers regarding children's academic achievements at age 15 across all PISA subjects, including reading, mathematics and science.

On youth participation in education or employment

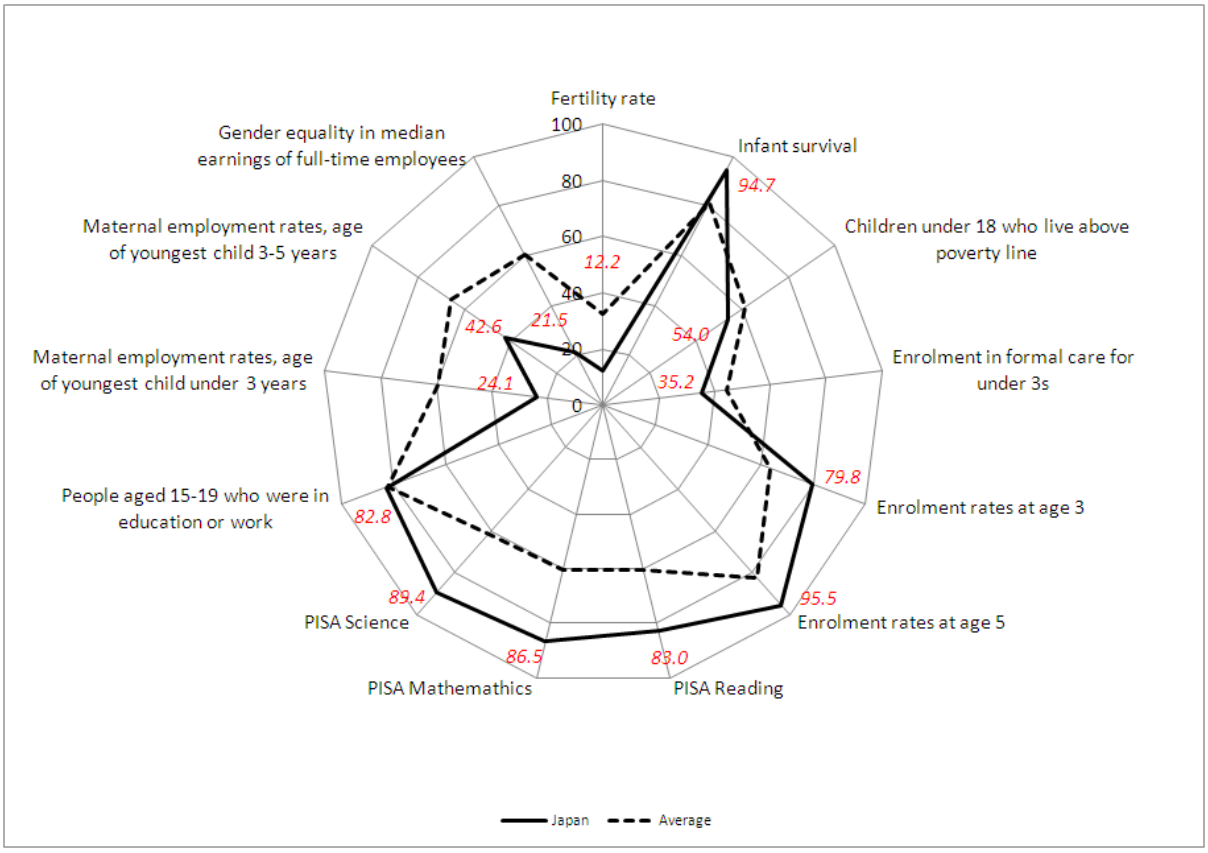
- Japan scores close to the OECD average regarding the proportion of 15-to-19-year-olds who are either studying or are in employment.

On labour market outcomes

- Maternal employment rate: Employment rates of Japanese mothers with a child under the age of three are far below the OECD average. Even when children grow older, maternal employment rates remain below average: mothers with three-to-five-year-old children are often not in employment in Japan.

- Equality in earnings: Japan has one of the lowest gender equality in median earnings of full-time employees: women tend to earn less than their male equivalents in Japan.

Figure 1.1. An overview of policy outcomes for across sectors



Notes: For each indicator, the absolute performance is standardised (normalised) using a normative score ranging from 0 to 100, where 100 was set at the maximum value and 0 was set at the minimum value, taking into account all OECD countries with available data in each case. The average is calculated by taking into account all OECD countries with available data. The individual values indicated in the spider web for each indicator, are the country values (scores) for Japan. See Table 1.1 for maximum and minimum value countries.

Source: See Annex B for sources.

Table 1.1. Maximum value and minimum value for the spider web chart on policy outcomes

Indicator on child outcomes	Minimum value	Maximum value
Fertility rate	Korea (1.15)	Israel (2.96)
Infant survival (per 1000 live births)	Turkey (983)	Luxembourg (998.2)
Children under 18 above poverty line (%)	Israel (73.4)	Denmark (96.3)
Enrolment in formal care for the under 3s (%)	Czech Republic (2.2)	Denmark (65.7)
Enrolment rates at age 3 (%)	Netherlands (0.05)	France (100)
Enrolment rates at age 5 (%)	Turkey (50.9)	Australia; France; Ireland; Mexico; New Zealand (100)
PISA (Programme for International Student Assessment) Reading (Score)	Mexico (425)	Korea (539)
PISA Mathematics (Score)	Mexico (418)	Korea (546)
PISA Science (Score)	Mexico (415)	Finland (554)
People aged 15-19 who were in education or work (%)	Turkey (2.1)	Netherlands (33.1)
Maternal employment rates, age of youngest child under 3 years	Hungary (15.5)	Slovenia (74.6)
Maternal employment rates, age of youngest child 3-5 years	Turkey (21.4)	Iceland (83.6)
Gender equality in median earnings of full-time employees	Korea (61.2)	Italy (98.7)

Spider web chart on policy inputs

On the selected child policy indicators, Japan performs below the OECD average on indicators related to public spending on ECEC, length of paid maternity leave, and remuneration for teaching staff in preschool or kindergarten. Japan scores well regarding the minimum qualification levels for ECEC staff, staff-child ratio in child care, and the proportion of male staff members at kindergartens or preschools (Figure 1.2). A more detailed comparison and additional information can be found in Annex C.

On public spending on young children

- Japan has different public expenditure portfolios for different age groups and for different services:
  - The level of public expenditure on **child care and education at age three and age five**, as a percentage of median working-age household income, is close to the minimum value in Japan. This indicates low public spending levels on ECEC for three- and five-year-old children in Japan compared to other OECD countries.
  - Regarding public expenditure on **family cash benefits and tax credits**, as a percentage of GDP in 2007, Japan has a lower-than-average expenditure level. In the total public spending portfolio – including child care, preschool education, cash and tax credits for children between zero and six years – Japan spends much less than its selected reference countries, *i.e.*, Sweden, New Zealand and the United Kingdom.

On maternal leave

- Japan scores below the OECD average regarding paid maternity leave entitlements. Mothers in Japan have an entitlement to unpaid maternity leave almost equal to the OECD average.

On staff qualifications

- Japan's minimum ISCED level for ECEC staff is above the international average: staff in Japan working in the care sector, as well as teaching staff in ECEC, need a minimum qualification equal to ISCED level 5.

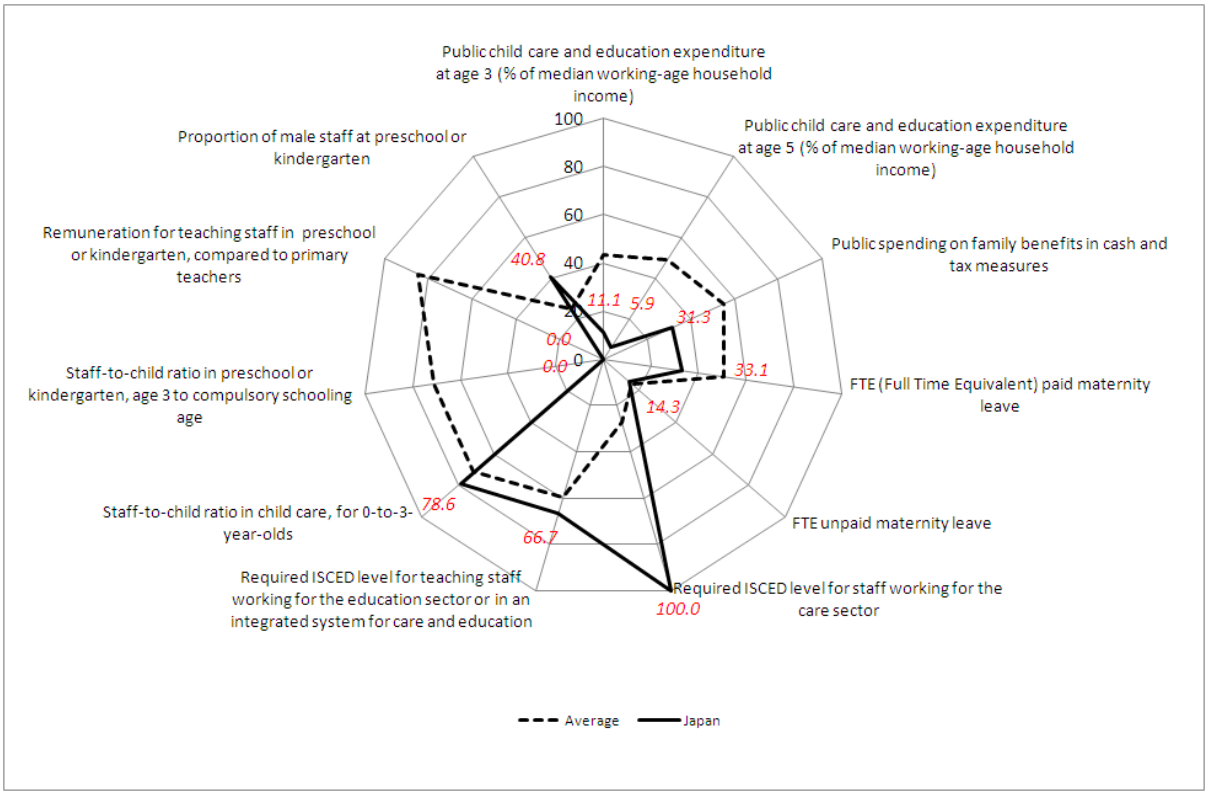
On working conditions and outcomes

- Staff-child ratio: Japan has a favourable staff-child ratio in formal child care for children aged zero to three years with a lower-than-average number of children per caretaker. On the contrary, Japan has the highest number of children per staff member among OECD countries in preschool or kindergarten for children aged three to compulsory schooling age.

- Remuneration: Japan has a low remuneration level for teaching staff in preschool or kindergarten compared to primary teachers.

- Share of male workforce: Japan has an above-average proportion of men working in the ECEC sector, although the majority of ECEC workers is female – both in Japan and other OECD countries.

Figure 1.2. An overview of policy inputs



Notes: For each indicator, the absolute performance is standardised (normalised) using a normative score ranging from 0 to 100, where 100 was set at the maximum value and 0 was set at the minimum value, taking into account all OECD countries with available data in each case. The average is calculated by taking into account all OECD countries with available data. For staff-child ratio, all jurisdictions and regions are included in calculation of the total average. Individual values indicated in the spider web for each indicator, are the country values (scores) for Japan. See Table 1.2 for maximum and minimum value countries.

Source: See Annex C for sources.

Table 1.2. Maximum value and minimum value of the spider web chart on policy inputs

Indicator on policy inputs	Minimum value	Maximum value
Public child care and education expenditure at age 3 (% of median working-age household income)	Switzerland (2.3)	Sweden (43.4)
Public child care and education expenditure at age 5 (% of median working-age household income)	Slovenia (5.9)	Hungary (46.9)
Public spending on family benefits in cash and tax measures (% of GDP)	Korea (0.2)	Luxembourg (2.6)
FTE (Full Time Equivalent) paid maternity leave (weeks)	Australia; United States (0)	Greece (25.4)
FTE unpaid maternity leave (weeks)	Austria; Chile; Estonia; France; Germany; Korea; Luxembourg; Mexico; Netherlands; Poland; Portugal; Slovenia; Spain (0)	United Kingdom (39.2)
Required ISCED level (Staff working for the care sector)	Belgium; Czech Republic; Finland; Germany; Hungary; Korea; Mexico; Netherlands; New Zealand; Norway; Poland; Slovak Republic; Slovenia; Sweden (3)	Israel; Italy; Japan; Spain; United Kingdom (5)
Required ISCED level (Teaching staff working for the education sector or in an integrated system for care and education)	Czech Republic; Slovak Republic (3)	Italy (6)
Staff-child ratio in child care for 0-to-3-year-olds	Georgia (USA) (1:17)	Finland (1:3)
Staff-child ratio in preschool or kindergarten for age 3 to compulsory schooling age	Japan (1:35)	Finland (1:7)
Remuneration for teaching staff in kindergarten/preschool, compared to primary teachers (%)	Japan (61)	Belgium, Canada, Estonia, Greece, Hungary, Ireland, Israel, New Zealand, Poland, Portugal, Slovak Republic, Spain, Turkey (100)
Proportion of male staff at kindergarten/preschool (%)	Slovak Republic (0.1)	Mexico (17)

CHAPTER 2

WHAT DOES RESEARCH SAY?

Staff qualifications, initial education and professional development contribute to enhancing pedagogical quality, which is – ultimately – highly associated with better child outcomes. It is not the qualification per se that has an impact on child outcomes but the ability of better qualified staff members to create a high-quality pedagogic environment. Key elements of high staff quality are the ways in which staff involve children, stimulate interaction with and between children, and use diverse scaffolding strategies.

Research has shown that working conditions can also improve the quality of ECEC services: better conditions will improve staff job satisfaction and retention. This will influence staff behaviour, encouraging more stable, sensitive and stimulating interactions with children and thus lead to better child development. Research has pointed to certain conditions that can impact the quality of ECEC services: i) high staff-child ratio and low group size; ii) competitive wages and other benefits; iii) reasonable schedule/workload; iv) low staff turnover; v) a good physical environment; and vi) a competent and supportive centre manager.

This chapter contains two research briefs:

- Why do workforce qualifications, education and training matter for better child development?
- Why do working conditions matter for better child development?

WHY DO WORKFORCE QUALIFICATIONS, EDUCATION AND TRAINING MATTER FOR BETTER CHILD DEVELOPMENT?

What are "qualifications, education and professional development" in ECEC?

ECEC qualifications indicate the recognised level and types of knowledge, skills and competences that ECEC staff have received.[1] Formal education in ECEC refers to the level and type of education that ECEC staff pursue to acquire such knowledge, skills and competences to work in the sector. Professional development provides opportunities for staff who are already working in the sector to update or enhance their practices; it is often referred to as "in-service training", "continuous education" or "professional training".

What is at stake?

Recent social changes have challenged traditional views of childhood and child rearing: 1) the changing socio-economic role of women, 2) growing ethnic diversity of developed countries, and 3) changing views on (early) education and the purpose of (early) education. The last two changes have important consequences for what is expected of those who work with young children.

As pointed out by the OECD teachers' review (OECD, 2005), education systems need to invest in intensive teacher education and training if teachers are to deliver high-quality outcomes. This also refers to the ECEC sector (OECD, 2006). Specific knowledge, skills and competences are expected of ECEC practitioners. There is a general consensus, supported by research, that well-educated, well-trained professionals are the key factor in providing high-quality ECEC with the most favourable cognitive and social outcomes for children. Research shows that the behaviour of those who work in ECEC matters and that this is related to their education and training. The qualifications, education and training of ECEC staff are therefore an important policy issue (OECD, 2006).

In spite of the consensus on the importance of well-trained staff, governments often fear the funding consequences of raising staff qualifications. Higher qualifications can be followed by increased wage demands, which, in turn, contribute significantly to the costs of services. Although the evidence is strong that improved training and qualification levels raise the quality of interaction and pedagogy in ECEC services – and similar evidence exists in favour of staff qualifications – governments often choose not to invest in raising qualifications or funding staff training (OECD, 2006). This might seriously affect ECEC quality and, with this, child development outcomes, as staff are not being optimally trained or educated to stimulate early learning and development.

Although research emphasises the high relevance of adequate staff initial education and continuous professional development opportunities, large differences occur between countries in terms of which qualifications are being asked of ECEC practitioners.

Opportunities to participate in professional development and in-service training also vary greatly across countries and between education and child care in split systems. The qualification requirements vary from no formal education at all to a specialised bachelor's or even master's degree, and professional development and training ranges from being compulsory to being based on voluntary will in combination with no additional funding for training (OECD, 2006).

Often there is a difference between the qualifications required to work with very young children (up to ages three or four) and the qualifications needed to be a teacher for children aged four to primary school age. This is especially the case in countries with a so-called split system: children aged zero to three or four attend different ECEC institutions (often day care services) than those aged three or four to primary schooling age, who more regularly attend pre-primary services. In countries with an integrated system where all young children (aged zero to primary school age) attend the same centres, all practitioners usually have to meet the same requirements in terms of education and training (Eurydice, 2009; OECD, 2006). The latter encourages continuous child development throughout the ECEC years and ensures greater professionalism of staff working with both younger and older children (Shonkoff and Philips, 2000).

Why do qualifications, education and professional development matter?

Staff qualifications/education/professional development → pedagogical quality → child outcomes

The main importance of staff lies in their effect on the process and content quality of ECEC[2] (Sheridan, 2009; Pramling and Pramling Samuelsson, in press 2011). The training and education of ECEC staff affects the quality of services and outcomes primarily through the knowledge, skills and competences that are transmitted and encouraged by practitioners. It is also considered important that staff believe in their ability to organise and execute the courses of action necessary to bring about desired results (Fives, 2003). Qualifications can matter in terms of which skill sets and what knowledge are recognised as important for working with young children. The skills and staff traits that research identifies as important in facilitating high-quality services and outcomes are:

- Good understanding of child development and learning;
- Ability to develop children's perspectives;
- Ability to praise, comfort, question and be responsive to children;
- Leadership skills, problem solving and development of targeted lesson plans; and
- Good vocabulary and ability to elicit children's ideas.

However, it is not the qualification *per se* that has an impact on child outcomes but the ability of better qualified staff members to create a high-quality pedagogic environment that makes the difference (Elliott, 2006; Sheridan *et al*., 2009).There is strong evidence that enriched stimulating environments and high-quality pedagogy are fostered by better qualified staff; and better quality pedagogy leads to better learning outcomes (Litjens and Taguma, 2010). Key elements of high staff quality are the way staff involve children and stimulate interaction with and between children as well as staff's scaffolding strategies, such as guiding, modelling and questioning.

More specialised staff education and training on ECEC are strongly associated with stable, sensitive and stimulating interactions (Shonkoff and Philips, 2000). Other elements of high

staff quality include staff's content (curriculum) knowledge and their ability to create a multi-disciplinary learning environment (Pramling and Pramling Samuelsson, in press 2011).

What matters most?

Level of education and/or pedagogical practices

Studies that have addressed the question of whether higher staff qualifications lead to better pedagogical practice have yielded mixed results. There are various studies showing that, generally, a higher level of education is associated with higher pedagogic quality in ECEC settings. One study found that preschool teachers with bachelor's degrees were the most effective practitioners. Their effectiveness was measured within the classroom and based on stimulation, responsiveness and engagement of the children in learning activities (Howes *et al*., 2003). The results of the Effective Provision of Pre-school Education (EPPE) study from England (United Kingdom) have also shown that key explanatory factors for high-quality ECEC were related to "staff with higher qualifications, staff with leadership skills and long-serving staff; trained staff working alongside and supporting less qualified staff; staff with a good understanding of child development and learning" (Siraj-Blatchford, 2010). Higher proportions of staff with low-level qualifications were related with less favourable child outcomes in the socio-emotional domain (social relationships with their peers and co-operation).

However, the general conclusion that higher education of ECEC staff leads to higher pedagogical quality and therefore to better child outcomes is not supported by all studies. Early *et al*. (2007) emphasise that teacher quality is a very complex issue. There is no simple relationship between the level of education of staff and classroom quality or learning outcomes. They studied the relationship between child outcomes and staff qualifications and found no, or contradictory, associations between the two. They argue that increasing staff education will not suffice for improving classroom quality or maximising children's academic gains. Instead, raising the effectiveness of early childhood education will likely require a broad range of professional development activities and support for staff's interactions with children. An area that can improve pedagogical practices of ECEC staff includes supporting staff's competence to communicate and interact with children in a shared and sustainable manner (Sheridan *et al*., 2009).

Research also points out that it is not necessary that all staff have high general levels of education. Highly qualified staff can have a positive influence on those who work with them and who do not have the same high qualifications. The EPPE study finds that the observed behaviour of lower-qualified staff turned out to be positively influenced by working alongside highly trained staff (Sammons, 2010).

Specialised education and training

Not only the level of education but also the content of the staff's educational or training curriculum is important for the level of quality in ECEC. Specialised education is associated with better child outcomes and improved staff competences to provide suitable pedagogical learning opportunities. Specialisation can refer to "any education or training focusing on early childhood education, child development or similar, above and beyond general educational attainments" (Litjens and Taguma, 2010).

Initial education and training in areas such as early child development and early education increase the likelihood that practitioners are effective in promoting the educational, socio-emotional and healthy development of children.

The practitioners' ability to create rich, stimulating environments in ECEC is jeopardised when staff have inadequate, insufficient or incorrect content and pedagogical knowledge. When trained on matters related to early development and care, staff can better develop a child's perspective (Sommer *et al*., 2010); are better able to integrate playing and learning into practice (Pramling Samuelsson and Asplund Carlsson, 2008; Johansson and Pramling Samuelsson, 2009); have increased ability to solve problems and develop targeted lesson plans; and have an improved vocabulary, which stimulates early literacy development (NIEER, 2004). Additionally, staff with higher education *and* specialised training engage in more positive teacher-child interactions including praising, comforting, questioning and being responsive to children (Howes *et al*., 2003).

However, specialised education and training does not *guarantee* greater effectiveness (Hyson *et al*., 2009). The quality of the education or training programme may be a more critical factor in staff's ability to stimulate children's development and learning. There is a strong need for good initial staff preparation; and there is a call for greater consistency across initial professional preparation programmes to enhance quality (Elliot, 2006).

Ongoing education and training are also important. Research shows that in order for staff to maintain their professional quality, they need to engage in ongoing professional development.[3] A well-trained practitioner does not only have a good initial level of education but makes sure that the effects of initial education do not fade out (Fukkink and Lont, 2007; Mitchell and Cubey, 2003). Ongoing professional development has the potential to fill in the knowledge and skills that staff may be lacking or require updating due to changes in particular knowledge fields. This is especially crucial in ECEC where new programmes are being developed continuously. The body of research on what works is growing, the discussions on quality in ECEC are ongoing, and the focus has changed to a developmental perspective.

In-service (ongoing) education and training can be conducted "on the job" or can be provided by an external source, such as training institutes or colleges. It can be provided through, for instance, staff meetings, workshops, conferences, subject training, field-based consultation training, supervised practices and mentoring. The key to effective professional development is identifying the right training strategies to help ECEC practitioners stay updated on scientifically based methods and curriculum subject knowledge so as to be able to apply this knowledge in their work (Litjens and Taguma, 2010). It also pointed out that it should continue over a longer period of time: staff should have long-term or regular opportunities for training (Sheridan, 2001). Only when learning experiences are targeted to the needs of staff and are true learning experiences with development opportunities can professional development have favourable outcomes (Mitchell and Cubey, 2003).

An effective way of improving knowledge and skills is found to be subject training. Field-based consultation can also be very effective, as it provides ECEC staff with the possibility to receive feedback on their practices. Furthermore, practitioners who do not have a degree, but who attend ECEC-relevant professional workshops are found to provide higher quality care than colleagues who do not attend (Burchinal *et al*., 2002). However, in general, there is little clarity about what forms of professional development are *most* effective. One of the reasons is that staff have different needs: practitioners have very different backgrounds, and effective training methods should suit these differences (Elliott, 2006).

Leadership of managerial staff

Managers play an important role in supporting professional development. Managers matter for the extent to which the centre supports, stimulates and subsidises professional development (Ackerman, 2006). Staff quality is maintained by leadership that motivates and

encourages working as a team, information sharing and professional staff development (OECD, 2006). The quality of leaders and managers of ECEC services is also strongly related to their level of education and professional development, as found in the Effective Provision of Pre-school Education study (Sylva *et al*., 2010).

Differences between education and training for educating different age groups

The United States National Institute of Child Health and Development (NICHD) points out that, although staff education and training has an impact on infants and toddlers, staff's formal education is a stronger predictor for children of preschool age than for younger children (NICHD, 2000). For younger children (toddlers and infants), specialised and practical training seems to be more strongly associated with pedagogic quality and cognitive and social outcomes.

Social equality and professional development

ECEC is often seen as a vehicle to give children from socially disadvantaged backgrounds a "head start" when commencing compulsory education. Early childhood educators come across increasingly complex social environments and encounter a multiplicity of family backgrounds and experiences. These factors create imperatives to adopt new pedagogies and organisational practices to accommodate this pluralism (Elliott, 2006). In various countries, this has led to knowledge and skills requirements for staff.

In line with the issues of integration and prevention of social inequality highlighted by politicians and professionals, current and emerging content for continuing professional development include: intercultural approaches, approaches to second languages, working with children with special needs, working with children at risk and special focus on language acquisition (Eurydice, 2009). However, little is known yet about the effectiveness of these approaches.

What are the policy implications?

Raising qualifications of ECEC practitioners

Highly qualified practitioners often provide better quality ECEC. This can yield better child outcomes, both socially and academically, not only in the short term but also in the long term. It is not necessary that all staff working in ECEC have high levels of education, which may also be impossible to realise and not desirable. However, those with lower levels of general education should work alongside those who are highly qualified.

Providing ongoing professional development to ECEC staff

Ongoing professional development can lead to higher quality ECEC services and outcomes. Attending a workshop may be an easy way to realise means of professional development; however, high-quality subject training, field-based consultation training or supervised practices may be more effective. Ongoing professional development should not only be available, but it should be a requirement to stay and grow in the profession. Furthermore, professional development should be tailored to staff's needs.

Providing specialised training courses for those working with young children

In-service training that provides possibilities for ECEC specialisation is considered beneficial: educating young children requires specialised skills and content knowledge, including a variety of subject and development areas.

What is still unknown?

Concept of quality in ECEC

Researchers are still debating the concept of "quality" in ECEC. Judgement of quality involves values. The effect of the education and training of teachers on the quality of ECEC depends on the definition of quality and the instrument that is used to measure this quality. Children's developmental outcomes are often used as the most important dependent variable in assessing high-quality ECEC, but this leaves room for debate on *which* developmental outcomes should be studied.

Content of training and education of ECEC staff

The debate around the concept of "quality" in ECEC also means that the content of the training and education of ECEC staff remains a point of discussion. Some early childhood specialists voice concerns about the suitability for young children of the emphasis on 1) standards and testing (performance rather than meaning making), 2) the teaching of predefined knowledge rather than play, discovery, personal choice and the responsibility of the child – the traditional tools of early childhood learning, and 3) the neglect in ECEC curricula of developmental readiness (see "Research Brief: Curriculum Matters" in OECD, 2012).

Effectiveness of the level of education and different in-service training strategies

Even though correlations have been found between the level of education and pedagogical quality, the exact relationship between the two is still unclear. Also, little is known about the effectiveness of different training strategies to help ECEC practitioners stay updated. More research is needed on how to engage staff in learning about and implementing evidence-based practices (Diamond and Powell, 2011).

Knowledge, leadership and competences of managerial staff

Focus has been on the individual qualifications of staff. Knowledge, leadership and competences of the manager have also been found to be important. Research is needed that shows how important this is and why; what kind of qualifications and training would be most relevant for managers; what would be the most effective delivery of such training; etc.

Ethnic diversity in training and education

The effectiveness of teacher training (both initial and in-service) in which special attention is devoted to social and ethnic diversity has hardly been evaluated. This is a growing issue of importance because of the greater ethnic diversity of the population many countries are facing.

WHY DO WORKING CONDITIONS MATTER FOR BETTER CHILD DEVELOPMENT?

What are "working conditions"?

Working conditions in ECEC settings are often referred to as structural quality indicators (*e.g.*, wages, staff-child ratio, maximum group size, working hours, etc.) and other characteristics (*e.g.*, non-financial benefits, team-work, manager's leadership, workload, etc.) that can influence the ability of professionals to do their work well and their satisfaction with the workplace, work tasks and nature of the job.

What is at stake?

Attracting, training and retaining suitably qualified ECEC staff is a challenge. Good working conditions are strong incentives for qualified staff to enter the profession. Structural quality indicators have received ample attention because they can usually be regulated or guided at the national level. For staff quality, it is also crucial that practitioners are motivated and supported in applying what they have learned.

The European Commission's Early Matters symposium (European Commission, 2009) concluded that many research findings indicate that, in addition to the training and education of staff, staff working conditions are important in providing safe, healthy and good learning environments for children. In spite of these findings, the ECEC sector is usually associated with relatively poor working conditions and poor compensation leading to high turnover rates. ECEC centres often experience turnover rates exceeding 40% annually, undermining the quality of care (Moon and Burbank, 2004).

Why do working conditions in ECEC matter?

Research points out that the ability of staff to attend to the needs of children is influenced not only by their level of education and training but also by external factors, such as their work environment, salary and work benefits (Shonkoff and Philips, 2000). Working conditions can have an impact on staff job satisfaction and their ability to carry out their tasks; and their possibilities to positively interact with children, give them enough attention and stimulate their development.

Strongly associated with stable, sensitive and stimulating interactions with children are the context and conditions in which a staff member works. One study found that low wages: i) effect the ways in which staff interact with children, and ii) are related to high turnover rates (Huntsman, 2008). High turnover rates can have a negative effect on ECEC quality since staff provision is less stable, which, in turn, can impact child development. When staff members regularly change within a group of children, staff and children are less able to develop stable relationships; and nurturing, stimulating interactions take place less often (CCI, 2006).

The body of research on the effects of working conditions on child development is not very extensive, and findings do not always point in the same direction. This is mainly because there is a complex inter-relationship between staff-child ratios, staff qualifications, quality and type of provision that makes it difficult to single out the effect of a particular characteristic of working conditions (Sammons, 2010).

What matters most?

First, it is important to point out that more research is needed in this area. Available research findings focus on the effects on staff satisfaction rather than on child development. Many aspects of working conditions are found to be related to the quality of ECEC services, while a few aspects have been found to be related to child development. Table 2.1 presents an overview of research findings, pointing to characteristics of working conditions that matter.

Table 2.1. Which staff working conditions improve ECEC?

Optimal staff working conditions	Areas of improvement	
	ECEC services	Child outcomes
1. High staff-child ratio and low group size	X	X
2. Competitive wages and benefits	X	unclear
3. Reasonable schedule/workload	X	unclear
4. Low staff turnover	X	X
5. Stimulating and playful physical environment	X	unclear
6. Competent and supportive centre manager	X	unclear

Note: Areas of improvement that remain "unclear" present important opportunities for future ECEC research.

Source: Ackerman, 2006; Burchinal *et al*., 2002; De Schipper *et al*., 2004; De Schipper *et al*., 2006; De Schipper *et al*., 2007; Diamond and Powell, 2011; Huntsman, 2008; Litjens and Taguma, 2010; Loeb *et al*., 2004; Moon and Burbank, 2004; Sheridan and Shuster, 2001; Sheridan *et al*., 2009; Torquati *et al*., 2007.

Staff-child ratio

Higher staff-child ratios, referring to a smaller number of children per staff, are usually found to enhance ECEC quality and facilitate better developmental outcomes for children (Burchinal *et al*., 2002, De Schipper *et al*., 2006; Huntsman, 2008; Torquati *et al*., 2007). While there have been some older studies with contradictory results, the weight of evidence favours the conclusion that staff-child ratio in an ECEC setting is significantly associated with quality (Huntsman, 2008). Findings on "quality" can be summarised as follows.

Better staff-child interactions and less stress for staff

Larger staff-child ratios are associated with better working conditions and less stress. Staff are found to be more supportive when they are responsible for a smaller group of children (De Schipper *et al*., 2006). A higher staff-child ratio improves working conditions within ECEC settings, as staff can give sufficient attention to different developmental domains and create more caring and meaningful interactions with children. As the number of children per staff member increases, staff spend more time in restrictive and routine communication with children and less in positive verbal interactions (Litjens and Taguma, 2010; Rao *et al*., 2003).

Better child development

Children become more co-operative in activities and interactions with larger staff-child ratios. They also tend to perform better in cognitive and linguistic assessments when staff-child ratios are higher. Furthermore, academic development seems to be enhanced by higher staff-child ratios, although there are not many (recent) studies that have investigated this topic (Huntsman, 2008; Sylva *et al*., 2004). A limitation of the research mentioned above is

that most findings are almost exclusively correlational, and there have been very few experimental studies (Huntsman, 2008). An experimental study carried out by Chetty *et al*. (2011) found that even though smaller staff-child ratios of three-to-four-year-olds improved outcomes, there were no long-lasting effects on adult earnings. However, the *overall* quality of the ECEC setting did have an effect on adult earnings.

High staff-child ratios are considered particularly important for younger children; there is evidence indicating that infants and toddlers especially benefit from high staff-child ratios (De Schipper, 2006). In many countries staff-child ratios have been regulated with higher staff-child ratios for the very young and lower ratios for older children (NICHD, 2002). Research is lacking, however, on exactly which ratio is most favourable to enhance teacher job satisfaction, ECEC quality and child outcomes. Nevertheless, many early childhood educators believe that anything less than a 1:3 or 1:4 ratio for children up to two years old is insufficient to allow staff to interact effectively with each child (Litjens and Taguma, 2010).

Group size

Increased process quality, although the direct effect remains unclear

Group sizes are often regulated, prescribing the number of children to be arranged and supervised as a group. Not all studies find effects of group size on the quality of ECEC: effect sizes are usually small, and the "size" factor is often difficult to single out when staff-child ratios are included in the same analyses. Another research limitation on group size is that it rarely takes into account the age mixing of children, which may be an important factor (with homogeneous age groups being easier to handle). The overall research conclusion, however, is that group size has an effect on process quality (*e.g.*, staff-child relationship, staff-parent communication). If staff experience their working conditions as more pleasant, this will result in more caring and stimulating behaviour (Huntsman, 2008; Burchinal *et al.*, 2002; Clarke-Stewart *et al*., 2002).

Classroom quality and staff job satisfaction

Research suggests that it is not only the staff-child ratio but also the number of adults in a classroom that impacts quality and job satisfaction. The quality of the classroom environment is found to improve with every additional adult in the room. When practitioners work together in a classroom, this provides opportunities for supervision, consultation and discussing work challenges (Goelman *et al*., 2006). Clear roles and expectations must be defined to optimise teamwork in ECEC settings. Under current practice, the hiring of assistants has generally failed to compensate for larger groups and less contact with teachers (Chartier and Geneix, 2006; Finn and Pannozzo, 2004).

Remunerations: wages and other benefits

Higher wages and better working conditions affect people's job satisfaction, work motivation and, indirectly, the quality of their teaching, caring and interactions with children (Huntsman, 2008; Moon and Burbank, 2004).

Low wages leading to less process quality for child development

Research has indicated that where there are very low wages in ECEC, it "impacts quality primarily by preventing qualified and committed individuals from considering working in child care or early education in the first place" (Manlove and Guzell, 1997). Low wages are, as mentioned above, related to high staff turnover rates (Moon and Burbank, 2004), which influence children's language and socio-emotional development as well as the relationships they form with practitioners (Whitebook 2002; Torquati 2007). Low wages are also correlated

with the perception that working in the ECEC sector is not a high-status profession (Ackerman, 2006).

Although pay in ECEC-related professions in most OECD countries is not very high (OECD, 2006), this is not the case in all OECD countries. In Scandinavian countries, for instance, where a bachelor's degree is needed to work as an ECEC teacher, staff receive better pay, and their job has a higher status than in countries with lower pay. Countries with split systems often have lower education requirements and lower wages for practitioners working with very young children (up to three or four years of age) and higher educational requirements and better pay (and better status) for those working with children aged three or four to primary school age.

Non-financial incentives leading to better job satisfaction and better process quality

The number of vacation days and the compensation that ECEC practitioners receive for additional work hours are also found to have a positive effect on job satisfaction. This, in turn, is related to the quality of teacher-child interactions (Doherty *et al*., 2000).

Social status and professional identity

Even when preschool teachers experience higher status within the sector, they do not necessarily experience improved recognition from the outside world, something seen in Denmark and Sweden (Berntsson, 2006). In order to raise the value attributed to the profession and counter gender stereotypes, it is suggested that the "professional identity" of the ECEC workforce must change (OECD, 2006).

Turnover rate

Stability in care has been found to be strongly and consistently positively related to child outcomes (Loeb *et al*., 2004). High staff turnover is pronounced across studies of child care in various countries, somewhere between 30% and 50% annually (Huntsman, 2008; Moon and Burbank, 2004).

High staff turnover is associated with lower quality service and poorer child outcomes. Centres with low staff turnover rates have staff that engage in more appropriate and attentive interactions with children. High turnover rates disrupt the continuity of care. Moon and Burbank (2004) argue that when turnover rates are high, children spend less time being engaged in meaningful activities.

Workload

Heavy workloads are associated with stressed staff. Workload refers to the number of working hours, indicating the extent to which staff's schedules are compatible with family life and the physical demands of the job. Large group sizes, low staff-child ratios and a heavy workload are potential stressors for ECEC practitioners. In general, stressed staff perform less well. Some research findings show the effects of workload on ECEC quality, indicating that practitioners with a heavy workload perform less well than colleagues with lighter schedules (De Schipper *et al*., 2007).

Physical aspects of the setting

A rich playing and learning environment is found to be of importance. More space is considered beneficial for child development, although the full impact or effects of physical aspects remain unclear. The United States National Institute of Child Health and Human Development (NICHD, 2002) found a significant link between positive care giving behaviour

and the physical characteristics of their environment, *e.g.*, the space requirements in more general terms and the instruments and materials available within the setting. Children were found to be less easily distracted in settings where they had more space available to them. Also, in these circumstances, staff provided more age-appropriate practices and behaviour.

Cross-cultural studies of ECEC quality highlight the fact that differences in physical space and staff-child ratio create different opportunities for staff. With more space, staff are better able to organise children into smaller groups, which, in turn, creates better learning conditions and opportunities for children to play, relax and learn in a variety of ways (Sheridan and Shuster, 2001; Sheridan *et al*., 2009). Research appears to provide little or no guidance regarding the appropriateness of space requirement regulations (Huntsman, 2008), and further research on the importance of space for child development is needed.

Role of the manager in supporting professional development

Managers are important in facilitating conducive working conditions and supporting professional development. Although part of working conditions is subject to regulation, another part is centre-specific. ECEC providers who provide better working conditions are observed to provide better care and education (Litjens and Taguma, 2010; Diamond and Powell, 2011). The role of managers of ECEC centres is important in this, as they are the key factor in providing favourable working conditions for their staff.

Evidence shows that ECEC practitioners who experience little professional support from the centre's management have lower job satisfaction and perform their teaching and care-giving tasks less well than those that are professionally supported (Ackerman, 2006). Professional support usually means that the centre supports, stimulates and subsidises professional development, there are regular staff meetings with the management of the centre, and there is encouragement and consultation by colleagues (Ackerman, 2006). The importance of ongoing professional development in making sure that practitioners stay up-to-date with evidence-based practices (staff meetings, conferences and workshops, supervised practices, etc.) has been found in various studies (Litjens and Taguma, 2010; see also "Research Brief: Qualifications, Education and Training Matter" in OECD, 2012).

What are the policy implications?

Investing in ECEC to improve working conditions

Research findings indicate that staff who are happy in their job provide better care and are better practitioners. Group size and staff-child ratio are important quality factors in facilitating good working conditions as well as staff having enough time and attention to spend on the children under their supervision. Smaller groups and higher staff-child ratios can facilitate this. Time for staff to plan, document, analyse and reflect – individually and collectively – on their work with children is seen to improve quality. However, increasing staff-child ratios and reducing group size is expensive. For example, reducing the average class size from 15 to 10 requires a 50% increase in the number of teachers and, thus, total teacher salaries paid. Plus there is little clarity on exactly which group sizes or staff-child ratios are most favourable or optimal (Chetty *et al*., 2011).

In order to enhance the status and quality of early childhood work, governments may wish to consider introducing equal working conditions (salaries, benefits and professional development opportunities) for equivalent qualifications across the early childhood and primary education fields. Care should be taken that in-service training is linked to career progression and to obtaining further qualification (OECD, 2006).

Giving financial and non-financial incentives to keep well-trained staff

Compensation is one important factor in facilitating good working conditions. Increased salaries will most likely reduce staff turnover rates and attract better qualified staff. Additionally, it increases job satisfaction. Providing non-financial support and incentives for practitioners is also likely to improve staff well-being and encourage ongoing professional development.

Turnover should only be welcomed if the lowest-quality ECEC staff are leaving the profession; this practice opens the door to more high-quality staff. New research suggests that the "forcing out" of low-quality ECEC staff may dramatically improve student outcomes (Hanushek, 2010).

Raising awareness of ECEC centre managers

Going beyond the regulations, centre managers can be seen to play an important role in providing good working conditions for their staff, facilitating professional development and further training of staff. Raising awareness among managers on the importance of ensuring favourable working conditions and how they can actually facilitate these are important in raising ECEC quality (OECD, 2006).

What is still unknown?

Relationship between working conditions and child development

The research evidence for the impact of working conditions on child outcomes is not yet very strong. Working conditions have not often been at the heart of studies. Researchers have linked certain workplace characteristics (staff-child ratios and staff compensation) to differences in programme quality and/or to staff turnover and less often to measures of child development (Whitebook, 2009). Research on how working conditions affect ECEC quality and child outcomes could shed new light on the importance of working conditions.

More research on which aspects of working conditions matter most for which children

Staff-child ratios are found to be important for all young children, but there is evidence that infants and toddlers especially benefit from high staff-child ratios (De Schipper, 2006). The exact role of space in facilitating better working environments and enhancing child development also remains largely unknown, and the role of multiple adults in ECEC settings is not sufficiently defined to maximise the impact on child outcomes. Additionally, no studies have specifically investigated whether working conditions (and which aspects of working conditions) have different effects on different groups of children, *e.g.*, migrant children or children at risk.

NOTES

1 In the literature, “staff” is the term that is usually used to refer to those who work directly with children in the ECEC field. They are also referred to as “professionals”, “teachers”, “caregivers” or “practitioners”.

2 “Process quality” refers to what children actually experience in their programmes: that which happens within a setting. “Content quality” specifically refers to the substance of what is being learned (*e.g.*, curriculum).

3 “Ongoing professional development” refers to in-service education and training. Litjens and Taguma (2010) give a clear definition of in-service education. This “includes all planned programmes of learning opportunities for staff members of ECEC providers for the purpose of improving the performance of individuals in already assigned positions”.

REFERENCES

Ackerman, D. (2006), "The costs of being a child care teacher: Revisiting the problem of low wages", *Educational Policy*, Vol. 20, No. 1, pp. 85-112.

Berntsson, P. (2006), *Lärarförbundet, förskollärare och statushöjande strategier: Ett könsperspektiv på professionalisering*, Göteborg: Department of Sociology, Göteborg University.

Burchinal, M., D. Cryer, and R. Clifford (2002), "Caregiver training and classroom quality in child care centres", *Applied Developmental Science*, Vol. 6, No. 1, pp. 2-11.

Canadian Council on Learning (CCL) (2006), "Why is High-Quality Child Care Essential? The link between Quality Child Care and Early Learning", *Lessons in Learning*, CCL, Ottawa.

Chartier, A.-M. and N. Geneix (2006), "Pedagogical Approaches to Early Childhood Education", paper commissioned for the EFA Global Monitoring Report 2007, Strong Foundations: Early Childhood Care and Education, Paris.

Chetty, R., J. N. Friedman, N. Hilger, E. Saez, D. Schanzenbach and D. Yagan (2011), "How does your kindergarten classroom affect your earnings? Evidence from project STAR", *Quarterly Journal of Economics* (forthcoming).

Clarke-Stewart, K. A., D. Lowe Vandell, M. Burchinal, M. O'Brien and K. McCartney (2002), "Do regulable features of child-care homes affect children's development?", *Early Childhood Research Quarterly*, Vol. 17, pp. 52-86.

De Schipper, E., M. Van IJzendoorn and L. Tavecchio (2004), "Stability in Center Day Care: Relations with children's well-being and problem behaviour in day care", *Social Development*, Vol. 13, No. 4, pp. 531-550.

De Schipper, E. J., M. J. Riksen-Walraven and S. A. Geurts (2007), "Multiple determinants of caregiver behaviour in child care centres", *Early Childhood Research Quarterly*, Vol. 22, pp, 312-326.

De Schipper, E. J., M. J. Riksen-Walraven and S. A. Geurts (2006), "Effects of Child–Caregiver Ratio on the Interactions between Caregivers and Children in Child-Care Centres: An Experimental Study", *Child Development*, Vol. 77, pp. 861-874.

Diamond, K. E. and D. R. Powell (2011), "An Iterative Approach to the Development of a Professional Development Intervention for Head Start Teachers", *Journal of Early Intervention*, Vol. 33, No. 1, pp. 75-93.

Doherty, G., D. S. Lero, Donna S., H. Goelman, A. LaGrange and J. Tougas (2000), *You bet I care!: A Canada-wide study on wages, working conditions, and practices in child care centres*, University of Guelph; Centre for Families, Work and Well-Being Canada, Ontario.

Early, D. *et al*. (2007), "Teachers' Education, Classroom Quality, and Young Children's Academic Skills: Results from Seven Studies of Preschool Programs", *Child Development*, Vol. 78, No. 2, pp. 558-580.

Elliott, A. (2006), "Early Childhood Education: Pathways to quality and equity for all children", *Australian Education Review*, Vol. 50, Australian Council for Educational Research.

European Commission (2009), *Early Childhood Education and Care – key lessons from research for policy makers*, NESSE Report to the European Commission, European Commission, Brussels, Belgium.

Eurydice (2009), *Early Childhood Education and Care in Europe: Tackling Social and Cultural Inequalities*, Eurydice, Brussels.

Finn, J. and G. Pannozzo (2004), "Classroom Organization and Student Behaviour in Kindergarten", *The Journal of Education Research*, Heldref Publications.

Fives, H. (2003), "What is Teacher Efficacy and How does it Relate to Teachers' Knowledge? A Theoretical Review", paper presented at the American Educational Research Association Annual Conference, Chicago.

Fukkink, R. G. and A. Lont (2007), "Does training matter? A meta-analysis and review of caregiver training studies", *Early Childhood Research Quarterly*, Vol. 22, pp. 294-311.

Goelman, H., B. Forer, G. Doherty, D. S. Lero and A. LaGrange (2006), "Towards a predictive model of quality in Canadian child care centres", *Early Childhood Research Quarterly*, Vo. 21, No. 3, pp. 280-295.

Hanushek, E. (2010), "The Economic Value of Higher Teacher Quality", NBER Working Paper, No. 16606.

Howes, C., J. James and S. Ritchie (2003), "Pathways to effective teaching", *Early Childhood Research Quarterly*, Vol. 18, pp. 104-120.

Huntsman, L. (2008), *Determinants of quality in child care: A review of the research evidence,* Centre for Parenting and Research, NSW Department of Community Services.

Hyson, M., H. B. Tomlinson and C. A. S. Morris (2009), "Quality improvement in Early Childhood Teacher Education: Faculty perspectives and recommendations for the future", *Early Childhood Research and Practice*, Vol. 11, No. 1.

Johansson, E., and I. Pramling Samuelsson (2009), "To weave together: Play and learning in early childhood education", *Journal of Australian Research in Early Childhood Education*, Vol. 16, No. 1, pp. 33-48.

Litjens, I. and M. Taguma (2010), "Literature overview for the 7th meeting of the OECD Network on Early Childhood Education and Care", OECD, Paris.

Loeb, S., B. Fuller, S. L. Kagan and B. Carroll (2004), "Child Care in Poor Communities: Early Learning Effects of Type, Quality, and Stability", *Child Development*, Vol. 75, No. 1, pp.47-65.

Manlove, E. E., and J. R. Guzell (1997), "Intention to leave, anticipated reasons for leaving, and 12 Month turnover of child care centre staff", *Early Childhood Research Quarterly*, Vol. 12, No. 2, pp. 145-167.

Mitchell, L. and P. Cubey (2003), "Characteristics of professional development linked to enhanced pedagogy and children's learning in early childhood settings", report for the New Zealand Ministry of Education. Wellington: NCER.

Moon, J. and J. Burbank (2004), "The early childhood education and wage ladder; a model for improving quality in early learning and care programs", *Policy Brief*, Economic opportunity Institute, Seattle WA.

NIEER (2004), "Better Teachers, Better Preschools: Student Achievement Linked to Teacher Qualifications", *Policy Brief*, NIEER, New Jersey.

NICHD Early Child Care Research Network (2000), "Characteristics and quality of child care for toddlers and preschoolers", *Applied Developmental Science*, Vol. 4, No. 3, pp. 116-135.

NICHD Early Child Care Research Network (2002), "Child Care Structure>Process>Outcome: Direct and indirect effects of care giving quality on young children's development", *Psychological Science*, Vol. 13, pp. 199-206.

OECD (2005), *Teachers Matter. Attracting, Developing and Retaining Effective Teachers*, OECD, Paris.

OECD (2006), *Starting Strong II: Early Childhood Education and Care*, OECD, Paris.

OECD (2012), *Staring Strong III: A Quality Toolbox for Early Childhood Education and Care*, OECD, Paris.

Pramling Samuelsson, I. and M. Asplund Carlsson (2008), "The playing learning child: Towards a pedagogy of early childhood", *Scandinavian Journal of Educational Research*, Vol. 52, No. 6, pp. 623-641.

Pramling, N. and I. Pramling Samuelsson (in press 2011), *Educational encounters: Nordic studies in early childhood didactics.* Dordrecht, the Netherlands: Springer.

Rao, N., J. McHale and E. Pearson (2003), "Links between socialization goals and child rearing practices in Chinese and Indian mothers", *Infant and Child development*, Vol. 12, No. 5, pp. 475-492.

Sammons, P. (2010) "The EPPE Research Design: an educational effectiveness focus", in Sylva *et al*. (eds.), *Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education project,* Routledge, London/New York.

Sheridan, S. (2001), "Quality Evaluation and Quality Enhancement in Preschool - A Model of Competence Development", *Early Child Development and Care*, Vol. 166, pp. 7-27, (B).

Sheridan, S. and K.-M. Schuster (2001), "Evaluations of Pedagogical Quality in Early Childhood Education - A cross-national perspective", Department of Education, University of Gothenburg, Sweden, *Journal of Research in Childhood Education, Fall/Winter 2001*, Vol. 16, No. 1, pp, 109-124.

Sheridan, S. (2009), "Discerning pedagogical quality in preschool", *Scandinavian Journal of Educational Research*, Vol. 53, No. 3, pp. 245-261.

Sheridan, S., I. Pramling Samuelsson and E. Johansson (eds.) (2009), *Barns tidiga lärande. En tvärsnittsstudie av förskolan som miljö för barns lärande* [Children's early learning: A cross-sectional study of preschool as an environment for children's learning], *Göteborg Studies in Educational Sciences*, Vol. 284, Göteborg, Sweden: Acta Universitatis Gothoburgensis.

Sheridan, S., J. Giota, Y. M. Han and J. Y. Kwon (2009), "A cross-cultural study of preschool quality in South Korea and Sweden: ECERS evaluations", *The Early Childhood Research Quarterly*, Vol. 24, pp. 142-156.

Shonkoff, J. P. and D. A. Phillips (2000), *From Neurons to Neighborhoods: The Science of Early Childhood Development,* National Academy Press, Washington DC.

Siraj-Blatchford, I. (2010), in Sylva *et al*. (eds.), *Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education project*, Routledge, London/New York.

Sommer, D., I. Pramling Samuelsson and K. Hundeide (2010), *Child perspectives and children's perspectives in theory and practice*, New York: Springer.

Sylva, K. *et al*. (2004), *The Effective Provision of Pre-School Education (EPPE) Project: Final Report*, London: DfES and Institute of Education, University of London.

Sylva, K. *et al*. (2010), *Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education project*, Routledge, London/New York.

Torquati, J., H. Raikes and C. Huddleston-Casas (2007), "Teacher education, motivation, compensation, workplace support, and links to quality of centre-based child care and teachers' intention to stay in the early childhood profession", *Early Childhood Research Quarterly*, Vol. 22, No. 2, pp. 261-275.

Whitebook, M. (2002), *Working for worthy wages: The child care compensation movement 1970-2001*, Center for the Study of Childcare Employment, Institute for Research on Labour and Employment, UC Berkeley.

Whitebook, M., D. S. Gomby, D. Bellm, L. Sakai and F. Kipnis (2009), *Effective teacher preparation in early care and education: Toward a comprehensive research agenda*, Center for the Study of Child Care Employment, Berkeley, CA.

CHAPTER 3

WHERE DOES JAPAN STAND COMPARED TO OTHER COUNTRIES?[1]

Japan has a well-established practice regarding the provision and encouragement of professional development in particular and a highly educated workforce. There is, among others, a broad provision of initial education with full- and part-time programmes provided publically and privately; professional development is mandatory with training costs shared between the government, employer and individual; staff performance is being monitored; and favourable staff-child ratios are in place in day care centres.

Capitalising upon the strengths, Japan could further enhance the quality of its ECEC workforce. Other country practices would suggest such options as: 1) defining and strengthening competences of staff, including communication, leadership and ICT competences; 2) encouraging alignment between initial education of kindergarten and primary school teachers, and reflecting on education for family day care staff; 3) attracting staff through diversifying the workforce, reflecting on the license renewal process, and recognising prior learning; 4) improving incentives for the uptake of professional development by day care centre staff; 5) monitoring working conditions and the family day care sector; and 6) improving structural standards and working conditions.

Japan has a dual ECEC system in which care and early education are offered in parallel. The system is separated into day care centres covering children from birth to age six and kindergartens educating children aged three to six. Kindergartens are the responsibility of the Ministry of Education, Culture, Sports, Science and Technology; while the child care sector, under which day care centres are grouped, is the responsibility of the Ministry of Health, Labour and Welfare. In contrast, England, New Zealand, Scotland and Sweden have an integrated system of ECEC: responsibility for care and education across the entire age range are under one lead ministry. In Japan and New Zealand, compulsory school commences at age six, whereas it starts at seven Sweden and five in England and Scotland.

Overall, Japan has a well-established practice regarding the provision and encouragement of professional development in particular and a highly educated workforce. Potential areas for consideration are mostly related to reflecting changing needs in staff training and maintaining a high-quality workforce.

What is a high-quality ECEC system and workforce?

The CoRe report of the European Commission (2011) states that the quality of ECEC depends on the competence of an ECEC system and not merely on the competence of the people working with young children. A "competent system" takes into account not only practitioners but also teams, institutions and the wider socio-political context and relationships between these actors.

A key feature of a competent *system* is its policies for the support of practitioners in ECEC in realising and enhancing their capabilities in developing practices and experiences that respond to children's and families' needs: a competent system has possibilities for all ECEC staff to engage in learning and reflection and stimulates engagement in learning and development of staff through different measures (European Commission, 2011). At the individual level, being a "competent professional" is a continuous process, which comprises the capability and ability to have and use professional knowledge, practices and values (European Commission, 2011).

Critical factors for success in developing a competent ECEC workforce and increasing the competences of ECEC practitioners are, among others:

- Coherent initial education requirements and competences for recruitment;
- Continuing professional development policies, encouraging continuous development and opportunities for staff to participate in professional development programmes;
- Time for reflection for practitioners (evaluation and assessment of practices and performance); and
- Good structural and working conditions (European Commission, 2011).

For each of the subjects (initial staff education, qualifications and competences; recruitment; professional development; staff evaluation and monitoring; and working conditions and possibilities for promotion) Japan's policies and practices will be analysed, resulting in "strengths" and "areas for reflection" (when applicable). Within these subjects, Japan is being compared to its reference countries New Zealand, Sweden and the United Kingdom where data and policy information are available.

The strengths and areas for reflection are identified as a result of desk-based international comparison without stakeholder's views, such as through a country visit, due to the constraints of the working methods involved.

Improving staff qualifications, education and competences

Policymakers can ensure the quality of teacher education by setting minimum qualification requirements or raising accreditation requirements for teacher education programmes. The existence of minimum qualification requirements for ECEC practitioners at the national level has the advantage of creating consistency between initial training institutions and, possibly, initial education curricula. Accreditation is a means to ensure that diverse teacher education programmes meet the standards set by the teaching field at large and includes preparation for key skills, such as teaching methodologies, classroom management and student evaluation.

Five job types are commonly used for staff working in the ECEC sector across OECD countries (Table 3.1).

Table 3.1. Job types for ECEC workers

Child care workers	The qualifications of child care workers differ greatly from country to country and from service to service. In most countries, child care workers have a vocational-level diploma, generally at a children's nurse level (upper secondary, vocational level); although many countries will also have specialist staff trained to secondary-level graduation, plus a one-to-two-year tertiary-level vocational diploma.
Pre-primary teacher (or kindergarten/ preschool teachers)	Pre-primary teachers are generally trained at the same level and in the same training institutions as primary school teachers. This profile is found in Australia, Canada, France, Ireland, the Netherlands, the United Kingdom and the United States. In some of these countries, *e.g.*, the Netherlands, the pre-primary teacher is trained both for the preschool and primary sectors. In federal countries, variation exists across different states or provinces, but the predominant type of training is in primary school-oriented pedagogy (readiness-for-school is a primary aim of early education).
Family and domestic care workers	Family and domestic care workers are caregivers working in a family day care provision or home-based care setting. These are traditionally provided in a home setting. This can be at the childminder's home or at the child's own home where a qualified or registered childminder looks after the child. This type of care is most common for children prior to preschool, *i.e.*, those up to three years old.
Pedagogues	In Nordic and central European countries, many pedagogues have been trained (upper-secondary or tertiary education) with a focus on early childhood services rather than primary teaching. Pedagogues may also have received training in other settings, *e.g.*, youth work or elderly care. In some countries, pedagogues are the main staff members responsible for the care and education of children.
Auxiliary staff	There are many types of auxiliary staff working in centres that have been trained at different levels. On one end of the scale is auxiliary staff that does not need a formal qualification in the area, while auxiliaries in the preschool service sector in Nordic countries have often gone through a couple years of upper secondary vocational training.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011; OECD Family Database, 2010.

Strengths

High qualifications for ECEC staff

Across OECD countries, a wide range of qualifications are given to staff working in ECEC (by ISCED levels) [2] (Figure 3.1). In countries with a "split" ECEC system where responsibilities for care and education are divided over different ministries, the majority of countries indicated that staff in teaching positions require an ISCED level 5 qualification, while a minimum of ISCED level 3 is required for staff in caring positions.

Japan has parallel staff qualifications differentiating between day care staff working in day care centres and kindergarten teachers. Day care staff are responsible for children from birth up until the age of six, whereas kindergarten teachers only cover children aged three to five.

This is similar to Scotland where child care practitioners cover children across the ECEC years, while preschool is only provided for older children in the ECEC age range. New Zealand and Sweden also have parallel qualifications in place, although – due to their integrated ECEC systems – staff with caring responsibilities work alongside staff with teaching responsibilities. They work together to educate and care for children, in the same setting and often in the same play- or classroom but have different job descriptions.

Japan, New Zealand and Sweden require ISCED level 5 for preschool or kindergarten teachers. However, where New Zealand and Sweden only require a diploma equal to ISCED level 3 for child carers or child minders, staff with caring responsibilities in Japan and Scotland need to have a university or polytechnic level degree (ISCED level 5). In comparison to most other OECD countries, Japan is thus seen to have highly qualified ECEC staff – especially with regard to nursery workers (Figure 3.1).

Full-time and part-time initial education provision

A majority of countries reported that they provide full-time, as well as part-time, provision of initial education for kindergarten or preschool staff; fewer countries reported such programmes for child care and family or domestic care staff (Table 3.2). Offering not only full-time initial education but also part-time education might make the education trajectory more attractive for people who have a job but wish to switch professions, people who wish to work in addition to their studies or people with family responsibilities.

Japan has a wide provision of initial education arrangements, similar to its reference countries. Japan, New Zealand, Scotland and Sweden offer both full- and part-time initial education for kindergarten staff (which covers staff in caring positions in Sweden) and for child care staff. Sweden is the only country of these four providing full-time education for family day care staff as well.

Public provision of initial education in addition to private provision

Initial education is more commonly provided by public institutions than private institutions; this is especially the case for kindergarten or preschool staff (Table 3.3). Private institutions might offer initial education programmes for a higher price, whereas public institutions often charge lower fees. However, this is not always the case: private institutions can receive public funding.

In Japan, there is both public and private provision of initial education for day care staff, and kindergarten teacher. In New Zealand, initial education for kindergarten staff is available from public and private providers, while there is no public provision for child care staff. In Sweden, all initial education programmes are publically provided, and private provision of initial education for ECEC staff is non-existent. Scotland, on the other hand, offers public and private provision of initial education for both kindergarten and child care staff.

Figure 3.1. Required ISCED levels for different types of ECEC staff

Staff titles with minimum required ISCED level in brackets

	Staff working for the care sector
	Teaching staff working for the education sector or in an integrated system for care and education
	Compulsory schooling

	Age							
Country	0	1	2	3	4	5	6	7
Australia	Child care Worker (4) / Child care Manager (5)							
	Preschool/Kindergarten Teacher (5A)							
Austria	Kindergarten Pedagogue (4A)							
Belgium (Flemish Community)	Child care Worker in the care sector (3)							
			2.5y	Child care Worker in the education sector (3)				
			2.5y	Kindergarten teacher / Pedagogue (5B)				
Belgium (French Community)	Child care Worker (3)							
			2.5y	Pre-Primary Teacher (5)				
Canada (British Columbia)	Early childhood educator (3)							
						Kindergarten teacher (5A)		
Canada (Manitoba)	Early Childhood Educator (5B)							
						Kindergarten teacher (5)		
Canada (Prince Edward Island)	Family Day Carer (3) / Child carer in centre-based care (4)							
					Kindergarten teacher (4)			
Czech Republic	Child care Worker (3)				Pedagogue (3)			
Denmark	Pedagogue (5)							
Estonia		1.5y	Preschool pedagogue (5)					
Finland	Child care worker in kindergarten (2/3 of staff should have at least level 3)							
	Kindergarten Teacher (5B)						Pre-primary Teacher (5B)	
Germany	Child care worker (3)							
	Pedagogue (4A)							
	Pedagogue for childhood or social pedagogue (5)							
Hungary	Child care Worker (3)			Pedagogue (5)				
Ireland				Pre-primary Teacher (5)				
Israel	Child care Teacher (5)							
				Pre-Premary Teacher (5)				
Italy	Educator (child care centres) (5B)			Pre-primary teacher (6)				
Japan	Nursery Teacher (5B)							
				Kindergarten Teacher (5B)				
Korea	Child care Worker (3)							
				Pre-Primary Teacher (5)				
Luxembourg				Pre-Primary Teacher (Instituteur) / Educator (5B)				
Mexico	Indigenous ECEC Teacher (3)			Indigenous preschool Teacher (3)				
	ECE/Preschool Teacher (5)							
Netherlands	Child carer (centred child care) / Official Childminder (3)							
			Playgroup Leader (3)		Kindergarten/ primary school teacher(4)			until 12 y
New Zealand	Playcentre Leader (3)							
	Qualified Education and Care Teacher / Kindergarten Teacher (5B)							
	Teacher for pacific/indiginous children (Kaiako) (5B)							
Norway	Child/Youth Worker (3)							
	Pedagogical Leader (Kindergarten & Family Kindergarten) / Head Teacher (5A)							
Poland	Child care Worker (3)			Kindergarten teacher (5)				
Portugal	Preschool Teacher (5A)							
Slovak Republic	Nursery School Worker (3B)			Kindergarten Teacher (3)				
Slovenia	Family Day Carer (3)							
	Preschool teacher (5B)							
Spain	Early education teacher (5B)			Preschool teacher (5A)				
Sweden		Child minder (3)						
		Preschool teacher (5A)						
Turkey				Pre-Primary Teacher (5A)				
United Kingdom (Scotland)	Child care practitioners (5)							
				Preschool Teacher (5)				
United States (Georgia, Massachusetts, North Carolina, Oklahoma)				Preschool Teacher (5)				

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011

Table 3.2. Provision of initial education across different types of staff

	Kindergarten or preschool staff	Child care staff	Family day care staff
Full time	Australia, Austria, British Columbia (CAN), Czech republic, Denmark, Estonia, Finland, Flemish Community (BEL), French Community (BEL), Germany, Hungary, Italy Japan, Korea, Luxembourg, Manitoba (CAN), Netherlands, New Zealand, Norway, Poland, Prince Edward Island (CAN), Scotland (UKM), Slovenia, South Australia (AUS), Spain, Sweden, Turkey	Australia, British Columbia (CAN), Denmark, Flemish Community (BEL), Finland, French Community (BEL), Germany, Hungary, Italy, Japan, Korea, Manitoba (CAN), Netherlands, New Zealand, Poland, Prince Edward Island (CAN), Scotland (UKM), Spain	Australia, Finland, Germany, Manitoba(CAN), Netherlands, Poland, Portugal, Prince Edward Island (CAN), Sweden
Part time	Australia, Austria, Czech Republic, Denmark, Estonia, Finland, Flemish Community (BEL), Germany, Italy, Japan, Korea, Manitoba (CAN), New Zealand, Norway, Poland, Prince Edward Island (CAN), Scotland (UKM), Slovenia, Spain, Sweden	Australia, British Columbia (CAN), Denmark, Finland, Flemish Community (BEL), French Community (BEL), Germany, Italy, Japan, Korea, Manitoba (CAN), Netherlands, New Zealand, Poland, Prince Edward Island (CAN), Scotland (UKM), Spain	Australia, Denmark, Finland, Germany, Manitoba (CAN), Netherlands, Poland, Portugal, Prince Edward Island (CAN)

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Table 3.3. Public and private provision of initial education

	Kindergarten or preschool staff	Child care staff	Family day care staff
Public	Australia, Austria, British Columbia (CAN), Denmark, Estonia, Finland, Flemish Community (BEL), French Community (BEL), Georgia (USA), Germany, Hungary, Ireland, Italy, Japan, Korea, Luxembourg, Manitoba (CAN), Massachusetts (USA), Mexico, Netherlands, New Zealand, North Carolina (USA), Norway, Oklahoma (USA), Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovak Republic, Slovenia, Spain, Sweden, Turkey	Australia, British Columbia (CAN), Denmark, Finland, Flemish Community (BEL), French Community (BEL), Germany, Hungary, Japan, Italy, Korea, Manitoba (CAN), Mexico, Netherlands, Norway, Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Spain, Sweden	Australia, Austria, Denmark, Finland, Germany, Manitoba (CAN), Poland, Portugal, Prince Edward Island (CAN)
Private	Austria, British Columbia (CAN), Estonia, Finland, Flemish Community (BEL), Georgia (USA), Germany, Italy, Japan, Korea, Massachusetts (USA), New Zealand*, North Carolina (USA), Norway, Oklahoma (USA), Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovak Republic, Spain	Australia, British Columbia (CAN), Finland, French Community (BEL), Germany, Italy, Japan, Korea, New Zealand*, Norway, Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Spain	Australia, Austria, Finland, Germany, Italy, Manitoba (CAN), Netherlands, Poland, Portugal, Prince Edward Island (CAN)

Notes: * For New Zealand, regarding kindergarten/preschool – private provision: data refers only to initial education provision for *kaiako* (teacher for indigenous/pacific children) and not for kindergarten teachers. Regarding child care – private provision: data refers only to the initial education provision for playgroup leaders.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Areas for reflection

Strengthening staff communication competences

ECEC staff require strong skills for communicating with colleagues about issues arising on the job as well as with parents to discuss their child's development.

However, most countries (including Sweden and New Zealand) do not have a particular focus on communication in the professional training of either child care or preschool staff.

ECEC professionals in Japan often receive some form of training in communication; but among OECD countries, there is an increasing need for more structural training on this, as communication with parents can improve staff's skills to implement curriculum and improve their playroom or classroom practices and skills.

Additionally, parents who are well-informed of their child's or centre's curriculum are more likely to use aspects of the curriculum in the home. Oftentimes, parents are dependent on ECEC staff to hear about the centre's activities, routines in the playroom/classroom, and the curriculum. Little information might be available on this elsewhere, or they might not know where to find it. Developing staff members' communication skills can encourage meaningful interactions between staff, and between staff and parents, with possible beneficial outcomes for both children's and staff's development.

Strengthening leadership competences

Although there is an increasing need for the development of leadership skills in many OECD countries, leadership has received only intermittent attention by early childhood theorists and researchers. There might be a lack of awareness among ECEC staff and managers about the importance of leadership and management skills. However, leadership is of great relevance in ensuring high-quality ECEC provision and curriculum implementation, as leadership strengthens staff performance.

Building leadership capacity is a crucial precondition for ensuring strong theory and practice in ECEC centres (European Commission, 2011). Effective leadership is seen as a "major factor in shaping the overall teaching and learning environment, raising aspirations and providing support for children, parents and staff" (Council of the European Union, 2009). The increasingly complex task of ECEC institutions requires giving the same level of attention to and investment in leadership capacities as is currently given to preparation, planning, quality of learning, pedagogies and staff performance.

While ECEC staff in Japan are trained on management and planning during their initial education (and there are possibilities for professional training on this as well) staff often need more, or continuous, guidance and support on playroom/classroom leadership and management. Japan could consider addressing these relevant competences more in depth in their curriculum framework so as to guide professionals in this.

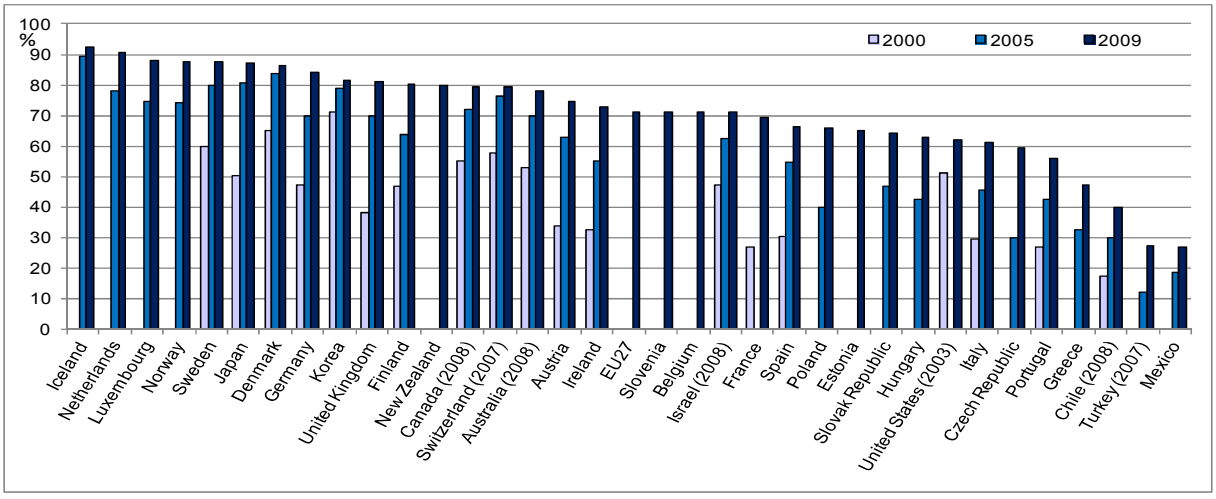
Reflection on competence requirements for ECEC staff due to societal changes: ICT

Information and communication technology (ICT) has developed rapidly over the past 40 years. ICT has now become part of our everyday lives. Access to computers at home grew rapidly in OECD countries from 2000-09, although discrepancies can be observed across countries. In Japan, almost 90% of households had access to a computer at home in 2009, this increased from circa 50% in 2000. In New Zealand and the United Kingdom, around 80% of households had access to a computer in 2009, whereas in Sweden, the figure is closer to 90% (Figure 3.2).

ICT can foster many benefits, including helping children visualise abstract issues or learn how to read. Additionally, it fosters children's technological skills. As computers are increasingly used in households and schools and becoming a more important part of people's everyday lives, and as children are expected to have a minimum of ICT skills when entering the labour market, staff in ECEC and education are increasingly expected to integrate the use of ICT into their professional practice and keep up to date with ICT developments and applications. ICT might therefore become an emerging subject for the initial, and possibly professional, development for ECEC staff, as children learn about ICT from a very young age onwards, and this can benefit children's development.

Figure 3.2. The use of ICT in the home environment (including PC, portable and handhelds)

Households with access to computer at home as percentage of all households



Notes: Generally, data from the EU Community Survey on household use of ICT, which covers EU countries plus Iceland, Norway and Turkey, relate to the first quarter of the reference year. For the Czech Republic, data relate to the fourth quarter of the reference year. *Statlink*: http://dx.doi.org/10.1787/888932321530.

Source: OECD, ICT database and Eurostat, Community Survey on ICT usage in households and by individuals, July 2010.

Defining a clear set of competences for the ECEC system and its staff

According to the European Commission's CoRe Report (2011), competences required for staff should be made clear for the workforce as well as all actors involved in creating a strong workforce. According to the European Commission, a competent ECEC system unfolds in the dimensions of knowledge, practice and values. They emphasise that all dimensions are relevant to all layers of the system, and therefore competences should be defined at the individual level, institutional level, inter-institutional and inter-agency level, and governance level.

By analysing the competence requirements across European countries, the European commission developed a set of relevant competences for each of the four levels, contributing to a competent ECEC system. Individual competences refer to the practices, values and knowledge each professional should have and includes knowledge of learning strategies, knowledge of communication with children and knowledge of team-working. Institutional competences are laid down in competences for ECEC services and training institutes and include, *e.g.*, pedagogical knowledge of early childhood and diversity (for ECEC services) and knowledge of adult learning (for training institutes). Inter-institutional competences refer to knowledge of co-operation, community development and cross-disciplinary knowledge. At the governance level, competences such as children's and families' rights and knowledge of the local, regional and national contexts are important (European Commission, 2011).

For each competence, example practices are described as exemplary actions to promote the development of the competence. The expected underlying values of these competences are described. Such a description of expected competences at different levels for a wide range of actors involved in ECEC can contribute to clearer expectations and identify needs for development and training (European Commission, 2011). Defining a clear set of competences for the whole ECEC sector, at different levels, can contribute to a better understanding of how to support competence and workforce development from a systematic perspective. Japan might consider developing such a competence framework for itself in consultation with different stakeholders, possibly based on the competence framework of European countries as developed by the European Commission.

Enhancing alignment between kindergarten and primary school teacher's education

In a few countries, initial education and training for kindergarten teachers is integrated with the initial education for primary school teachers (Table 3.4). This means that both follow the same initial education and are either trained to work in both kindergarten and primary school or choose a specialisation in either preschool education or primary school education. As an example, future teachers in the Netherlands are trained to work with children aged four to twelve, which includes children in preschool and primary education. In Japan, on the other hand, the training and education for kindergarten and primary school staff are split.

Integrated initial education for both kindergarten and primary school can contribute to a more continuous child development process, as kindergarten teachers can make links with the primary school curriculum and prepare children better for primary schooling. It can stimulate job mobility, as teachers have more job opportunities, and increase the status of kindergarten teachers. With initial education for kindergarten and primary teaching staff currently split in Japan, there are possibilities to enhance alignment between programmes by integrating the initial education programmes or aligning their curricula.

Table 3.4. Provision of initial education for pre-primary and primary teaching staff

Integrated	Split
Australia, Austria, British Columbia (CAN), Denmark, England (UKM), France, Ireland, Netherlands, Poland	Flemish Community (BEL), Japan, Korea, Norway, Sweden

Notes: Integrated: initial education for pre-primary and primary teaching staff is integrated; students follow the same education, *i.e.*, students are educated for teaching in pre-primary and primary schooling (although a further specialisation for either pre-primary or primary might exist within the programme). Split: initial education for pre-primary and primary teaching staff is split: they do not follow the same education and are trained separately. For Australia, students follow the same education programme, but a specialisation in either child care or pre-primary education is added to the initial education programme.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011 and www.inca.org.uk.

Reflection on education and training for family day care staff

Few OECD countries provide initial education or training for people starting a family day care service (home-based care service) or starting to work in such a service. This might lead to large differences in quality between centre-based day care and home-based services, as staff in family day care might have little professional knowledge on ECEC and little professional practical training.

In Japan, there are currently no formal initial education or training requirements for family day care staff (Tables 3.2 and 3.3). Few countries, including Australia, Denmark and Finland, provide some sort initial education to family day care staff. Often, these education or training programmes are less intensive than the education programmes for centre-based professionals and mostly last no longer than a few weeks. Offering initial education or training to home-based care staff can ensure a more even level of quality among care services as well as a minimum level of quality among the workforce in family day care, and it can benefit the development of children attending these services.

Recruitment

Strengths

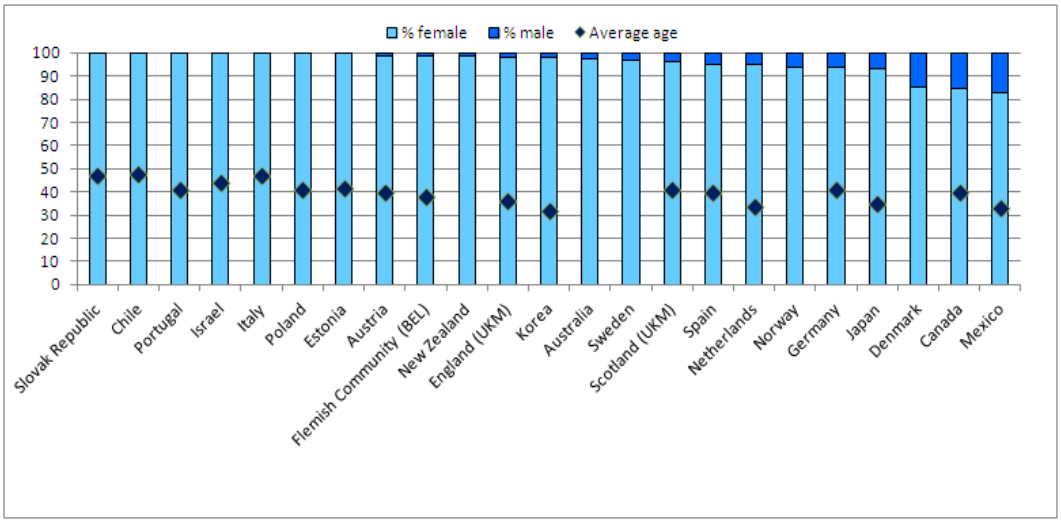
Relatively young workforce population

An ageing ECEC workforce might be related to the unattractiveness of working in the sector, where pay is often low and development opportunities are not always available. It might also indicate a high staff turnover rate, where young people work for a short period of time in the ECEC sector and quickly move on to work elsewhere.

The average age of preschool/kindergarten (pre-primary education) staff is 35 years; it is 36 in England and 41 in Scotland (Figure 3.3). Young staff might attract new students to the training programme and profession. However, it also indicates caution: the relatively young age of ECEC staff in Japan can be related to staff turnover rates in the sector, where over 10% of staff leave the job and sector. It also indicates that there is a relatively smaller share of the workforce with long and extensive experience working in ECEC.

Figure 3.3. Teacher (or pedagogue) staff profiles

Pre-primary education



Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Areas for reflection

Licensing of professionals

ECEC practitioners most often need a licence to work in the ECEC sector. Licensing can be obtained by demonstrating the abilities to practice the profession or duties of ECEC. A licence renewal might provide opportunities to identify development or training needs and can contribute to ensuring a high-quality workforce supply.

Whether the licence requires renewal after a certain period of time differs greatly among respondents (Table 3.5). More countries require licence renewal for kindergarten teachers/teaching staff and less for child care workers/staff with child caring responsibilities or family day care staff.

In Japan, kindergarten teachers need to renew their licence every ten years, while nursery workers do not need to renew their licence. Japan initiated teacher licence renewal in 2009.

On the other hand, in New Zealand, both kindergarten teachers and play centre leaders need to renew their licence every three years. ECEC staff in New Zealand must provide evidence of meeting the requirements for full registration during the appraisal process every three years. This includes a vetting process conducted by the Licensing & Vetting Service Centre[3] "to minimise the likelihood of the more vulnerable members of society (children, older people and those with special needs) being put at risk by individuals who may have displayed behaviour that could be detrimental to others' safety and wellbeing". Through this measure, the quality of the workforce is being monitored.

Table 3.5. Renewal of licences of practitioners in ECEC by staff type

	Kindergarten or preschool teacher	Child care staff	Family or domestic child carer
More than every 5 years	Flemish Community (BEL), Japan		
Every 5 years	British Columbia (CAN), Georgia (USA), Massachusetts (USA), North Carolina (USA), Oklahoma (USA)	British Columbia (CAN), Scotland (UKM)	Germany
Every 3 years	New Zealand	New Zealand	Prince Edward Island (CAN)
Every year			Manitoba (CAN)
No renewal required	Finland, Germany, Italy, Korea, Manitoba (CAN), Mexico, Norway, Poland, Slovenia	Finland, Germany, Italy, Japan, Korea, Manitoba (CAN), Mexico, Poland	Finland, Italy, Poland

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Highly gender-characterised sector

Many countries are concerned that the proportion of males in teaching is significantly low. In most countries, the median proportion for female pre-primary (kindergarten/preschool) and pedagogical staff is 95% or higher. In Japan, 94% of kindergarten teaching or pedagogical staff is female. Sweden has a very high proportion of women in preschool (97%). The proportion of women working in kindergartens is 98% in England and 96% in Scotland (Figure 3.3).

Although the proportion of women working in ECEC teaching or pedagogue positions is below average in Japan, the sector remains highly gender-characterised in Japan.

Recognising prior learning

Recognition of prior learning (RPL) is used by a number of countries as a tool to recognise professional development or any skills and knowledge acquired through informal and non-formal learning (Table 3.6). Countries using RPL see it as a tool to up-skill the workforce, recruit and qualify the unqualified. In child care, qualifying the unqualified is more common than in preschool/kindergarten. RPL is also used in the family day care sector, though only in a few countries.

In Japan, no formal recognition of prior learning exists but could be considered as a measure to attract staff. New Zealand, for example, recognises prior learning to recruit new staff; while in England and Scotland, unqualified workers can be qualified based on prior knowledge and skills.

Table 3.6. Incentives for RPL (recognition of prior learning)

	Upskill			Recruitment			Qualify the unqualified		
	Child care	Pre-school	Family day care	Child care	Pre-school	Family day care	Child care	Pre-school	Family day care
Australia	X		X				X		X
British Columbia (CAN)				X	X				
Denmark								X	
England (UKM)							X		
Finland									X
Flemish Community (BEL)	X	X					X		
Germany	X	X	X						
Israel				X	X				
Italy	X	X	X						
Korea	X	X							X
Manitoba (CAN)	X	X	X	X	X				
Massachusetts (USA)							X		
Netherlands							X		X
New Zealand				X	X				
Scotland (UKM)							X		
Slovenia							X		
Spain							X		
Turkey		X			X			X	

Note: For the Flemish Community (BEL), data refers only to subsidised child care provisions.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Professional development

Strengths

Mandatory professional development

Mandatory professional development can ensure that staff remains up-to-date on their knowledge of ECEC and child development and can ensure a stable level of quality. Professional development is more frequently mandatory for kindergarten/teaching staff than for care centre staff or staff in child caring positions (Figure 3.4, Panels A and B).

In Japan, uptake of professional development is mandatory for kindergarten staff but not for staff in caring positions (nurseries). England, New Zealand, Scotland and Sweden do not oblige staff to take up training when working in ECEC.

Sharing of costs of professional development

Sharing of costs of professional development makes participation less expensive for the individual and might also increase uptake. The costs of in-service training in Japan and Sweden are shared between the government, the employer and the employee. In New Zealand, the cost is shared between the government and employer, while the employee does not incur any of the cost. The latter might make it more attractive for staff to take up training, especially since this is not mandatory in New Zealand. For child care staff, the cost of emerging training is covered entirely by the government in England, while it is shared between the employer, government and individual in Scotland (Figure 3.4).

Figure 3.4. Mandatory nature and funding of professional development

Panel A. For preschool/kindergarten staff

	Government	Employer	Individual
Australia	X	X	X
Austria*	X	X	X
Belgium (Flemish and French)	X		
Czech Republic**	X	X	X
England (UKM)	X		
Estonia*	X	X	X
Finland*	X	X	X
Georgia* (USA)	X	X	
Hungary*	X		X
Ireland	X		
Israel			X
Italy	X	X	X
Japan*	X	X	X
Korea	X	X	X
Manitoba (CAN)*	X	X	X
Massachusetts (USA)	X	X	
Mexico*	X		
Netherlands	X	X	X
New Zealand	X	X	
North Carolina* (USA)	X	X	X
Norway	X	X	
Oklahoma* (USA)	X		
Poland	X	X	X
Portugal	X	X	X
Prince Edward Island (CAN)*	X	X	X
Slovak Republic*	X	X	X
Slovenia*	X	X	X
Spain*	X	X	X
Sweden	X	X	X
Turkey	X		X

Panel B. For child care staff

	Government	Employer	Individual
Australia	X	X	X
Austria*	X	X	X
Belgium (Flemish and French)	X		
British Columbia* (CAN)	X	X	X
Czech Republic		X	
England (UKM)	X		
Finland*	X	X	X
Hungary*	X		
Ireland			X
Israel			X
Italy		X	X
Japan	X	X	X
Korea*	X	X	X
Manitoba (CAN)	X	X	X
Mexico*	X		
Netherlands	X	X	X
New Zealand	X	X	
Norway**	X	X	
Poland	X	X	X
Prince Edward Island (CAN)*	X	X	X
Scotland (UKM)	X	X	X
Spain*	X	X	X
Sweden**	X	X	X

Notes: * Uptake of professional development is compulsory at the individual level. In countries without *, uptake is voluntary. ** For Czech Republic, training is only mandatory for directors of preschools/kindergartens. For Norway, data regarding child care refers to child/youth workers. For Sweden, data regarding child care refers to childminders.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Broad professional development provision

Choice of providers can allow staff, centres and kindergartens, as well as authorities, to choose between different provisions and provides different options regarding cost effectiveness and purpose of training.

Many countries have a wide range of providers of professional development, including government, employers, universities or colleges and non-governmental institutions. For kindergarten or teaching staff, professional development is most often provided by universities or colleges; while for child care staff or staff in child caring positions, professional development is mostly offered by non-government-related providers (Figure 3.5).

In Japan, professional development opportunities are offered by a variety of providers. For kindergarten and child care staff, professional development is offered by the government, employer, university/colleges and non-government providers.

Having integrated ECEC systems, the providers of professional development do not differ between teaching staff and staff in child caring positions in New Zealand and Sweden. In both countries, professional development is offered in universities or colleges and non-governmental providers. In Sweden, the employer also provides professional training. In Scotland, professional development is offered by all four categories for child care staff, but the government does not provide training for preschool teachers. In England, training is provided for both child care and preschool staff by the government, universities or colleges and non-government providers but not by employers.

Figure 3.5. Providers of professional development

Panel A. For kindergarten or preschool staff

	Govern-ment	Employer	University / college	Non-govern-ment
Australia		X		X
Austria	X	X	X	X
British Columbia (CAN)	X	X	X	X
Czech Republic	X	X	X	X
Denmark			X	
England (UKM)	X		X	X
Estonia	X	X	X	X
Finland	X		X	X
Flemish Community (BEL)		X	X	X
French Community (BEL)		X		
Georgia (USA)	X	X		
Hungary	X		X	
Ireland	X			
Israel	X		X	
Italy	X	X	X	X
Japan	X	X	X	X
Korea	X	X	X	X
Manitoba (CAN)	X	X	X	X
Massachusetts	X	X	X	X
Mexico	X			
Netherlands		X	X	X
New Zealand			X	X
North Carolina (USA)	X	X		
Norway	X	X	X	X
Oklahoma (USA)	X	X		
Poland	X	X	X	X
Portugal	X	X	X	X
Prince Edward Island (CAN)	X	X	X	X
Scotland (UKM)		X	X	X
Slovak Republic	X	X	X	X
Slovenia	X	X	X	X
Spain	X	X	X	X
Sweden		X	X	X
Turkey	X		X	X

Panel B. For child care staff

	Govern-ment	Employer	University / college	Non-govern-ment
Australia		X		X
Austria	X	X	X	X
British Columbia (CAN)	X	X	X	X
Czech Republic		X		
Denmark	X			
England (UKM)	X		X	X
Finland	X		X	X
Flemish Community (BEL)			X	X
French Community BEL)				X
Georgia (USA)	X		X	X
Hungary	X		X	
Israel	X		X	X
Italy	X			X
Japan	X	X	X	X
Korea	X	X	X	X
Massachusetts (USA)		X	X	X
Manitoba (CAN)	X	X	X	X
Mexico	X	X		X
Netherlands		X	X	X
New Zealand			X	X
Norway*	X	X	X	X
Poland		X	X	X
Prince Edward Island (CAN)	X	X	X	X
Scotland (UKM)	X	X	X	X
Spain	X	X	X	X
Sweden*		X	X	X

* For Norway, data regarding child care refers to child/youth workers. For Sweden, data regarding child care refers to childminders.

Note: "Non-government" refers to professional training institutions, churches, community organisations, etc.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Provision of professional development in different formats

By providing different formats of professional development opportunities, more staff might be able to take up training. Online training, for example, might attract more participants, as staff can participate from home; and seminars and workshops are attractive, as they require short-term input.

Different formats can have different purposes, and depending on what the training is about and on the needs of staff, one format might be more suitable than another and/or more effective. On-site mentoring can be costly but highly effective, as it is based on one-on-one learning. The different formats are not mutually exclusive but can complement each other. Most countries use a face-to-face approach: seminars and workshops, as well as formal training courses, are popular in the ECEC sector. Online training is less frequently offered.

Japan offers seminars or workshops, onsite mentoring, formal training courses and – as one of few countries – online training for kindergarten teachers. For nursery workers (child care staff), there are possibilities for seminars and workshops as well as on-site mentoring. Sweden only offers formal training courses to ECEC staff, whereas staff in Scotland can participate in all forms of training listed in Table 3.7, except online courses. New Zealand provides diverse forms of professional development opportunities, although formal training is not common.

Table 3.7. Forms and structures of professional development opportunities

Training programme form and structure	Staff type: Kindergarten or preschool staff	Staff type: Child care staff
Seminar or workshop	Australia, Austria, Czech Republic, Denmark, Estonia, Finland, Flemish Community (BEL), French Community (BEL), Israel, Italy, Japan, Korea, Massachusetts (USA), Manitoba (CAN), Mexico, Netherlands, New Zealand, North Carolina (USA), Norway, Oklahoma (USA), Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovak Republic, Slovenia, Spain and Turkey	Australia, Austria, British Columbia (CAN), Czech Republic, Finland, Flemish Community (BEL), French Community (BEL), Israel, Italy, Japan, Korea, Manitoba (CAN), Massachusetts (USA), Mexico, Netherlands, New Zealand, Norway*, Oklahoma (USA), Poland, Prince Edward Island (CAN), Scotland (UKM) and Spain
Onsite mentoring	Australia, Austria, Czech Republic, Denmark, Estonia, Finland, Flemish Community (BEL), Georgia (USA), Ireland, Israel, Italy, Japan, Korea, Manitoba (CAN), Massachusetts (USA), Netherlands, New Zealand, North Carolina (USA), Norway, Oklahoma (USA), Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovak Republic, Slovenia and Spain	Australia, Austria, British Columbia (CAN), Czech Republic, Denmark, Finland, Flemish Community (BEL), Georgia (USA), Israel, Italy, Japan, Manitoba (CAN), Massachusetts (USA), Netherlands, New Zealand, Norway*, Oklahoma (USA), Poland, Prince Edward Island (CAN), Scotland (UKM) and Spain
Online training	Australia, Czech Republic, Denmark, Estonia, Georgia (USA), Ireland, Israel, Italy, Japan, Korea, Manitoba (CAN), Massachusetts (USA), Netherlands, New Zealand, North Carolina (USA), Norway, Poland, Portugal, Prince Edward Island (CAN), Slovak Republic and Spain	Australia, British Columbia (CAN), Czech Republic, Georgia (USA), Israel, Italy, Korea, Manitoba (CAN), Massachusetts (USA), Netherlands, New Zealand, Norway*, Oklahoma (USA), Poland, Prince Edward Island (CAN), Scotland (UKM) and Spain
Formal training course	Australia, Austria, Czech Republic, Denmark, England (UKM), Estonia, Finland, Flemish Community (BEL), French Community (BEL), Georgia (USA), Israel, Italy, Japan, Korea, Manitoba (CAN), Massachusetts (USA), Mexico, Netherlands, North Carolina (USA), Norway, Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovenia and Sweden	Australia, Austria, British Columbia (CAN), Czech Republic, England (UKM), Finland, Flemish Community (BEL), Georgia (USA), Israel, Italy, Manitoba (CAN), Massachusetts (USA), Mexico, Netherlands, Norway*, Oklahoma (USA), Poland, Prince Edward Island (CAN), Scotland (UKM) and Sweden*

Notes: * For Norway, data regarding child care refers to child/youth workers. For Sweden, data regarding child care refers to childminders.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Professional development covering a broad range of topics

Professional development can be offered on different subjects or topics (Figure 3.6). Within OECD countries, the focus or content of professional development is on "new or revised curriculum" in early education, while it is on "methods and practice" in child care-related jobs. Planning and management is a popular subject in training as are monitoring, assessment and evaluation. Development in management, planning and leadership are important for the quality of ECEC. The absence of a cohesive leadership strategy or good management can be a significant risk to improving quality in ECEC.

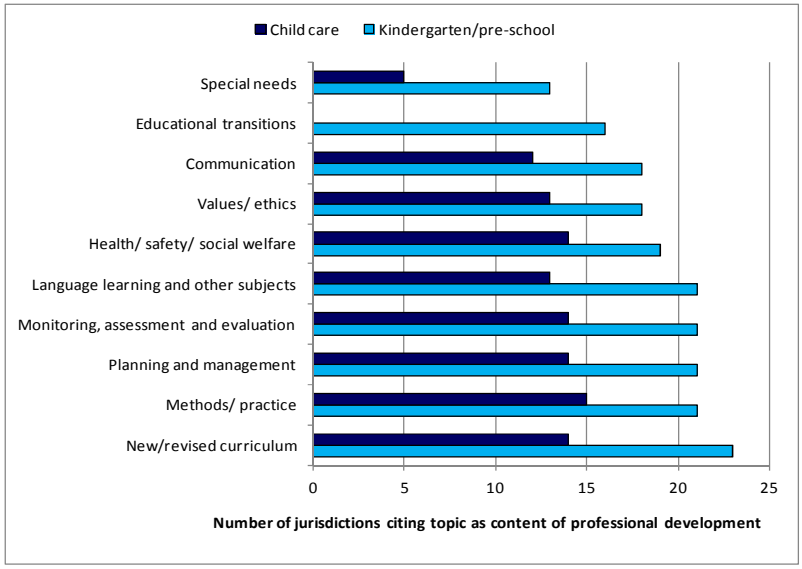
Special needs are the least frequently cited topic of professional development. Training on educational transitions is offered to staff that work with older children who are closer to the primary schooling age, mostly teaching staff/kindergarten teachers. Training in this ensures a smooth transition from ECEC to primary schooling.

In Japan, professional training for child care (nursery) workers focuses on curriculum; methods and practice; values and ethics; planning and management; communication; monitoring, assessment and evaluation; and health, safety and social welfare. Professional development for kindergarten or preschool staff in Japan focuses on all the subjects listed in Figure 3.6, except for language learning.

Unlike Japan, professional development in New Zealand does not have a strong focus on communication, health and safety, or methods and practice. Sweden focuses largely on

curriculum and curriculum subjects in professional development but also on monitoring and assessment. Scotland offers all subjects listed in Figure 3.6 for both child care and preschool staff, with the exception of educational transitions, which is only offered to preschool staff; and there is no particular focus of professional development on the special needs of children.

Figure 3.6. Content of professional development[4]



Notes: Countries were given a range of topics to select from, including the possibility to list topics not mentioned in the selection. Answers indicating "other" without specifying the topic are not included in this figure. For countries with an integrated ECEC system indicating that the subjects of professional development were similar for the whole ECEC sector/ECEC age range: responses have been included in both "child care" and "kindergarten/preschool", as the content of professional development refers to the entire ECEC age range, including ECEC workers with younger children (herein referred to as "child care").

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Incentives for kindergarten (preschool) staff to uptake professional development

Staff participation in professional development is affected by the incentives to undertake these activities, such as support on cost coverage, financial support in covering loss of partial salary when pursuing training, the possibility to obtain a higher qualification, support in the form of time off for participation in training, or receiving an increase in salary or other form of promotion after participation.

The most commonly used incentives to encourage participation in professional development in ECEC include financial support to cover training costs, followed by pathways to obtain a higher qualification, and granting study leave to workers participating in professional development. More incentives are in place for teaching/kindergarten staff than for child care or family day care staff (Table 3.8).

In Japan, subsidised associations of day care centres develop and set the programmes for professional development training for day care staff. For kindergarten staff, a wide range of incentives to take up professional development are in place such as the possibility to take up study leave, receiving financial support to cover partial training costs, and using professional development as a path to obtain higher qualifications.

In Sweden, financial support covering training costs, partial loss of salary and attainment of higher qualifications, and study leave are employed as incentives for all ECEC staff (both staff in teaching and caring positions) to take up professional development. New Zealand and England offer financial support to cover training costs and obtain higher qualifications. Scotland's only incentive is a pathway to higher qualification for child care staff.

Areas for reflection

Reflection on incentives for uptake of professional development for day care centre staff

Although there are multiple incentives for kindergarten teachers in Japan to take up training, there are very few for nursery workers – as is in many other OECD countries (Table 3.8). As participation in professional development for day care centre workers is not mandatory in Japan, providing them with incentives for uptake might stimulate them in furthering their knowledge, skills and competences and encourage quality in ECEC.

Table 3.8. Incentives for ECEC workers to take up professional development

By type of provision

	Financial support for training costs		Financial support to cover partial salary		Path to higher qualification		Study leave		Higher salary/ promotion	
	Child care	Pre-school	Child care	Pre-school	Child care	Pre-school	Child care	Pre-school	Child care	Pre-school
Australia	X	X								
Austria	X	X					X	X		
British Columbia (CAN)	X	X	X				X	X	X	X
Czech Republic	X	X				X		X		
Denmark						X		X		X
England (UKM)	X	X			X	X				
Estonia		X						X		X
Finland	X	X	X	X	X	X	X	X		
Flemish Community (BEL)		X				X		X		
French Community (BEL)	X	X		X	X			X		
Georgia (USA)		X			X					
Germany							X	X	X	X
Hungary	X	X								
Italy							X	X		
Japan	X	X		X		X		X		
Korea	X	X								X
Manitoba (CAN)	X	X	X		X	X	X		X	X
Massachusetts (USA)		X					X			
Mexico	X	X								X
Netherlands	X	X	X	X	X	X	X	X	X	X
New Zealand	X	X			X	X				
North Carolina (USA)		X								
Norway	X	X			X	X				
Oklahoma (USA)										
Poland	X	X			X	X	X	X	X	X
Portugal		X		X		X		X		X
Prince Edward Island (CAN)		X				X				X
Scotland (UKM)					X					
Slovak Republic				X		X				X
Slovenia	X	X	X	X	X	X	X	X	X	X
Spain	X	X			X	X	X	X	X	X
Sweden	X	X	X	X	X	X	X	X		
Turkey						X				X

Notes: "Path to higher qualification" refers to the availability of higher qualification through professional development. In some countries, higher qualifications are not available for the ECEC workforce; whereas in other countries, higher qualification is available and may be obtained through professional development. "Study leave" includes permitted time off from work to pursue professional development and replacement of an employee with a substitute. For British Columbia (CAN), incentives for uptake can differ per employer. For Norway, data regarding child care refers to child/youth workers. For Prince Edward Island (CAN), data refers to entry-level ECEC staff. For Sweden, data regarding child care refers to childminders.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Staff evaluation and monitoring

Strengths

Monitoring practices of staff performance in place, including self-assessment practices

Staff performance, *i.e.*, how staff is performing in the classroom or nursery room in his/her everyday practice, is monitored in both child care centres and kindergartens in several OECD countries. By monitoring staff performance, areas for professional development and needs for knowledge can be identified to improve the level of staff quality and, through this, child outcomes. Most countries use a mix of external and internal monitoring methods, such as inspections by an external authority and self-assessments conducted by ECEC staff.

In Japan, staff performance in kindergartens is monitored by local stakeholders and parents through the external exchange of opinions, while ECEC staff members and management self-assess their performance. In day care centres in Japan, only self-assessment practices are conducted to evaluate staff performance. The self-assessment practices in day care centres and kindergartens take place at least once per year.

In Sweden, staff performance is monitored more regularly: ECEC staff, management and parents fill in surveys one to two times per year. In England, inspections take place at least once per year.

Table 3.9. Monitoring practices for staff performance

Panel A. Kindergarten

Type of evaluation	Monitoring method	Administrator / Evaluator	Frequency	Country
External evaluation	Inspections	National, regional and local authorities	min. one time	England (UKM)
		High inspectorate and Educational inspectorate	depends on communities	Spain
	Rating scales / checklist	External education inspectors	missing	Netherlands
	Survey	Parents	missing	Slovak Republic
	Self-assessment	ECEC staff and/or management	every year	Portugal
			missing	Netherlands
	Self-assessment and rating scales	ECEC staff (self-assessment) and management (rating scales)	every year	Finland
Mixed use of external and internal evaluation	External exchange of opinions and internal self-assessment	Parents and local stakeholders (external exchange of opinions); ECEC staff and/or management (self-assessment)	not regulated (external evaluation); every year (self-assessment)	Japan
	Observation	Regional and local authorities, ECEC staff	every 3 months/ every year	Mexico
	Observation and self-assessment	State/territory authority and ECEC staff and management	missing	Australia
		External body (observation) and ECEC staff (self-assessment)	every 1-2 years for preschools and every 4-8 years for infant classes (external observations), depends on provisions (self-assessment)	Ireland
	Survey	ECEC staff and management and parents	1 to 2 times per year	Sweden
	missing	National authorities, ECEC staff and management and parents	missing	Slovenia
	Inspection, survey, observation, rating scale	Regional, superintendents' office (inspection, survey, observation, rating scale), ECEC staff and management (observation, chosen methods of internal evaluation)	every year (internal); depends on institution (external)	Poland

Panel B. Child care centre

Type of evaluation	Monitoring method	Administrator / Evaluator	Frequency	Country
External evaluation	Inspections	External body	every 1 to 3 years	Japan
		National, regional and local authorities	min. one time	England (UKM)
		High inspectorate and Educational inspectorate	depends on communities	Spain
		Care Commission	missing	Scotland (UKM)
	Survey	National authority	every year	New Zealand
	missing	National, regional and local authorities	every 1 to 2 years	Ireland
Internal evaluation	Self-assessment	ECEC staff and/or management	every year	Japan
	Self-assessment and rating scales	ECEC staff (self-assessment) and management (rating scales)	every year	Finland
Mixed use of external and internal evaluation	Rating scales / checklist, self-assessment	External education inspectors (external evaluation); ECEC staff and/or management (self-assessment)	missing	Netherlands
	Observation and self-assessment	Regional and local authorities and ECEC staff	every 3 months/ every year	Mexico
		National authority and ECEC staff and management	missing	Australia
	Survey	ECEC staff and management and parents	1 to 2 times per year	Sweden
	missing	Parents, ECEC staff and management	ongoing	Norway
		National authorities, ECEC staff and management and parents	missing	Slovenia

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Monitoring of curriculum implementation

Since most OECD countries have some form of a framework or curriculum in place for the entire ECEC sector, or for kindergartens at least, monitoring how the curriculum is implemented can contribute greatly to the effectiveness of a framework. It can identify which aspects of the curriculum need to be strengthened or revised, or in what areas training is needed for staff or management.

A mixed use of internal and external monitoring methods is most popular when evaluating the implementation of a curriculum. No internal evaluation methods have been reported in child care centres. In Japan, curriculum implementation in kindergarten is monitored by staff and management through self-assessment practices every one to three years. In addition, parents and local stakeholders externally exchange opinions on curriculum implementation.

In day care centres, external inspections to monitor curriculum implementation take place every one to three years, and yearly self-assessments by day care centre staff and managers are conducted. None of the comparison countries indicated any monitoring practices for curriculum implementation, although England has carried out a review of their Early Years Foundation Stage (EYFS) in 2011.

Table 3.10. Monitoring practices for curriculum implementation

Types of provisions	Type of evaluation	Monitoring method	Administrator / Evaluator	Frequency	Country
Kindergarten	External evaluation	Inspection	National, regional and/or local authorities	missing	French Comm. (BEL)
			High inspectorate and Educational inspectorate	depends on communities	Spain
	Internal evaluation	Self-assessment	ECEC staff and Management	every 3 years	Estonia
	Mixed use of external and internal evaluation	Inspection and self-assessment	National, regional and/or local authorities (inspection); ECEC staff and Management (self-assessment)	every 3 years (inspection); ongoing (self-assessment)	Korea
		External observations and rating scales, internal rating scales and portfolio	m (external evaluation); ECEC staff (internal rating scale and portfolio)	missing (external evaluation); every 5 month (internal rating scale); every year (internal portfolio)	Turkey
		Observations	National authorities, parents, ECEC staff	ongoing	Slovak Republic
			ECEC staff and parents	every year	Norway
		External exchange of opinions and self-assessment	local stakeholders and parents (external exchange of opinions); ECEC staff and management (self-assessment)	m (external evaluation); every 1 to 3 years (self-assessment)	Japan
		Inspection, survey, observation, rating scale	Regional, superintendents' office (inspection, survey, observation, rating scale), ECEC staff and management (observation, chosen methods of internal evaluation)	every year (internal); depends on institution (external)	Poland
		missing	ECEC staff and parents	ongoing	Finland
Child care centres	External evaluation	Inspections	High inspectorate and Educational inspectorate	depends on communities	Spain
	Mixed use of external and internal evaluation	Inspection and self-assessment	External body (inspection); ECEC staff and management (self-assessment)	every 1-3 years (inspection); every year (self-assessment)	Japan
			National, regional and local authorities (inspection) and ECEC staff and management (self-assessment)	every 3 years for inspection, and ongoing for self-assessment	Korea
		Observations	ECEC staff and parents	every year	Norway
			ECEC staff and parents	ongoing	Finland

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Areas for reflection

Reflection on monitoring working conditions and workforce supply

Monitoring working conditions and the workforce supply (the number of people entering, leaving and continuing to work in the sector) provides insight into the shortage of workers, the specific ECEC providers experiencing a need for extra workforce, and the conditions experienced by those working in ECEC. Working conditions can be related to workforce shortages, turnover rates or the (un)attractiveness of a sector, thus giving information on whether these can or should be improved to make the sector more appealing and increase the supply of workers.

New Zealand conducts yearly surveys to gather information on the working conditions and workforce supply in ECEC. In Nordic countries, such as Denmark, Finland and Norway, records are kept on this. Implementing monitoring practices in ECEC in Japan might provide better insights into the different working conditions among day care centres and kindergartens across regions and could contribute to gathering knowledge on the workforce. Currently, no such monitoring practices are in place in Japan.

Table 3.11. Monitoring practices for workforce supply/workforce conditions

Types of provisions	Type of evaluation	Monitoring method	Administrator / Evaluator	Frequency	Country
Kindergarten	External evaluation	Evaluation reports	National, regional and local authorities	ongoing	Finland
		Survey	National authority	every year	New Zealand
		Administrative records	Statistics Norway	every year	Norway
	Internal evaluation	Self-assessment	ECEC employers and managers	every 3 years	Denmark
	External and internal evaluation	Inspections, survey, checklist	National and regional authorities (inspections and survey) and ECEC management (check list)	ongoing for checklist	Slovak Republic
		Self-assessment, administrative records	Educational Information System managed by national authority (administrative records), ECEC management (self-assessment)	every year	Poland
Child care centres	External evaluation	Evaluation reports	National, regional and local authorities	ongoing	Finland
		Survey	National authority	every year	New Zealand
		Administrative records	Statistics Norway	every year	Norway
	Internal evaluation	Self-assessment	ECEC employers and managers	every 3 years	Denmark

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Monitoring family day care services

Very few OECD countries monitor family day care services. Since family day care services have no curriculum framework, or are not obliged to implement the curriculum framework for ECEC or child care, no monitoring practices for curriculum implementation in child care centres are conducted in OECD countries.

However, it can be useful for countries to monitor working conditions and the performance of staff in family day care centres, as these can affect children's experiences and the overall provision of quality. The results of our survey indicate that working conditions in family day care services are not being monitored, while only a few countries monitor the performance of family day care staff. In England, for example, family day care services are subject to external inspections during which staff performance is evaluated.

In Japan, no information on monitoring family day care services is available. However, ministerial ordinance states that the local government (commune) is obliged to support family day care services through consultation, advice and/or direction. In addition to this, communes are obliged to provide information of family day care services on the internet, through bulletins or other appropriate information-sharing means.

Table 3.12. Monitoring practices of staff performance in family day care

Type of evaluation	Monitoring method	Administrator / Evaluator	Frequency	Country
External evaluation	Inspections	National, regional and local authorities	min. one time	England (UKM)
	Rating scales, observation	Regional authorities	ongoing	Mexico
	Self-assessment and rating scales	Family day care staff (self-assessment) and management (rating scales)	every year	Finland
Mixed use of external and internal evaluation	Observation and self-assessment	National authority and family day care staff/management	missing	Australia
	missing	Parents, family day care staff and management	ongoing	Sweden

Notes: For Australia, the frequency of monitoring practices depends on previous monitoring results. For England (UKM), at least once within the first three or four years of the implementation of the Early Years Foundation Stage. For Portugal, only non-profitable organisations conduct evaluation every year; for private organizations, every three years.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Monitoring staff performance through licensing renewal

ECEC practitioners most often need a licence to work in the sector. Licensing can be obtained by demonstrating the abilities to practice the profession or duties in ECEC. A renewal of license might provide opportunities to identify development or training needs and can be used as a method to monitor staff performance over time. Therefore, it can contribute to ensuring a high-quality workforce supply.

Whether licence renewal is required after a certain period of time differs greatly among countries (Table 3.5). More countries require renewal for kindergarten teachers/teaching staff than for child care workers/staff with child caring responsibilities or family day care staff.

In Japan, kindergarten teachers need to renew their licence every ten years, while nursery workers do not need to renew their license. On the other hand, in New Zealand both kindergarten teachers and play centre leaders need to renew their licence every three years. ECEC staff must provide evidence of meeting the requirements for full registration during the appraisal process every three years. This includes a vetting process conducted by the Licensing & Vetting Service Centre "to minimise the likelihood of the more vulnerable members of society (children, older people and those with special needs) being put at risk by individuals who may have displayed behaviour that could be detrimental to others' safety and wellbeing". By this measure, workforce quality is monitored.

Working conditions and retention

Working conditions can impact staff's ability to do their job well. Furthermore, favourable working conditions can make the ECEC sector more attractive and encourage skilled and qualified personnel to not only work in the sector but to stay in the sector.

Strengths

Favourable staff-child ratios in child care (day care centres)

Staff-child ratio plays an important role in determining an optimal working environment for ECEC staff. Countries set different minimum standards for staff-child ratios for staff working with younger children and staff working with older children. When the number of children per staff member is low, more intensive care and interaction between young children and staff is possible.

Children in kindergarten and preschool (or children in the older age bracket[5]) tend to have less staff per child than those in care centres (or children aged zero to three[6]) (Figure 3.7). This goes well with the research finding that closer supervision and care matter more for younger children than older ones.

Among 16 OECD countries, on average, one day carer is allowed to take care of seven children. The regulated staff-child ratio in Japan in day care centres is better than average: the ratio is set at 1:6, leaving more space for individual attention and caring. In Scotland, the ratio is even more favourable at 1:5. In New Zealand, it is slightly above the average at 1:8. Sweden does not have regulated ratios in place in ECEC, although their actual ratio in ECEC centres remains low.

Areas for reflection

Space for children

In general, indoor space requirements are larger for child care centres than for kindergarten/preschool (Figure 3.8). The OECD average for regulated indoor space per child is 2.9m² per child for kindergarten/preschool and 3.6m² for care centres. The OECD average outdoor space requirement per child is 7m² for kindergarten and 8.9m² for child care. A wider range can be found across countries for outdoor than indoor requirements for both kindergarten and child care centres.

Japan has a relatively small indoor space requirement in child care: toddlers have at least 1.65m² per individual, and infants have 1.98m². Additionally, regulated space requirements are in place for ECEC providers which depend on the provider's number of classrooms: when having only one classroom, the minimum space is set at 180m², and 100m² has to be added to the total space for each additional classroom. However, the minimum space per child in Japan is much smaller than in Scotland, where children in care have almost 4m² per child, and in New Zealand, where the minimum space requirement is 2.5m² per child.

Japan's outdoor requirements depend on the number of classes: there is more space required when there are more classes, although the space in m² per child decreases when there are more classes in a preschool. New Zealand has a minimum requirement of 5m² of outdoor space per child in both care and education.

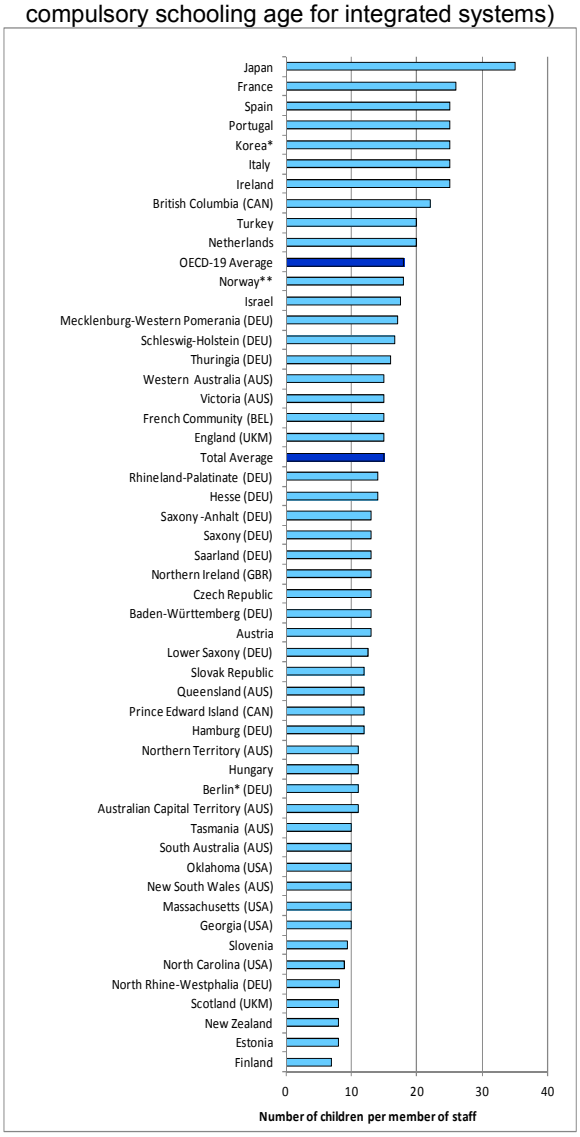
Staff-child ratios for kindergarten

Across 19 OECD countries[7], on average, it is regulated that a kindergarten or preschool staff member can have, at most, 18 children. Japan has a regulated staff-child ratio of 1:35 in kindergartens, far above the average. High staff-child ratios might contribute to challenges in providing high-quality teaching and can influence a professional's work experience and motivation to stay in the sector.

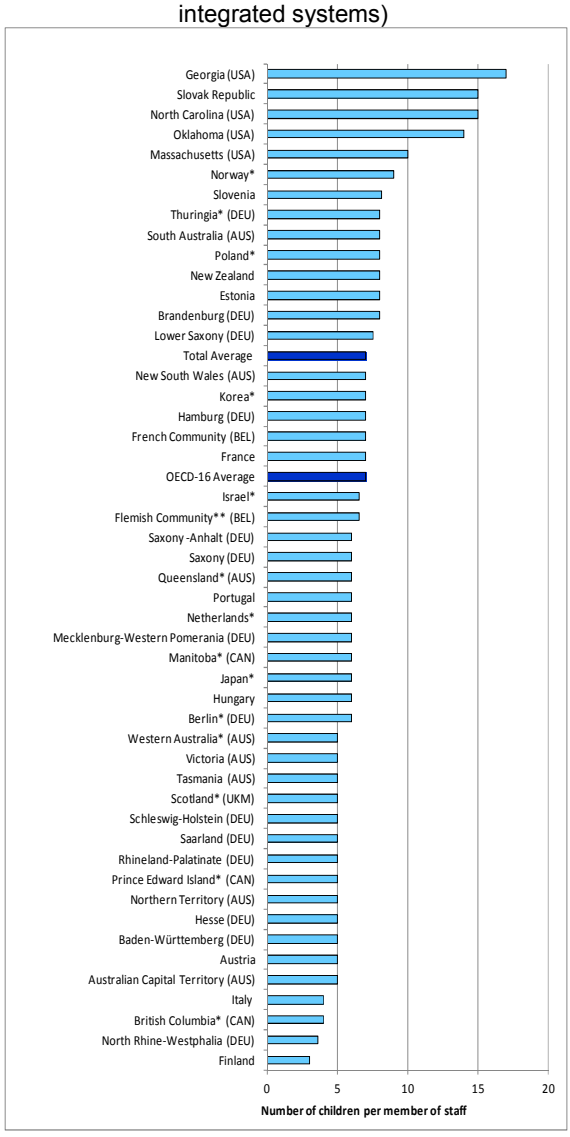
Staff-child ratios are much lower in other countries: New Zealand has a regulated staff-child ratio of 1:8 for both kindergartens and child care centres; whereas in England, the staff-child ratio in preschools is 1:15 and 1:8 in Scotland. Sweden is one the few countries where there is no staff-child ratio regulation, although the actual staff-child ratio remains low (Figure 3.7).

Figure 3.7. Regulated maximum number of children per staff member in ECEC

Panel A. In kindergarten or preschool (three years to compulsory schooling age for integrated systems)



Panel B. In child care (zero-to-three-year-olds for integrated systems)



* Jurisdictions with separate regulations for staff-child ratio for different age groups, the data given is based on: 3-6-yearolds attending 5-7 hours per day regarding Berlin; and 4-year-olds regarding Korea.

** The figure for Norway applies only to qualified kindergarten teachers, whereas regulation stipulates that if other staff will also be present in the kindergarten setting, the number of children per member of staff is effectively lower. The figure for Norway is based on regulation for 3-6-year-olds.

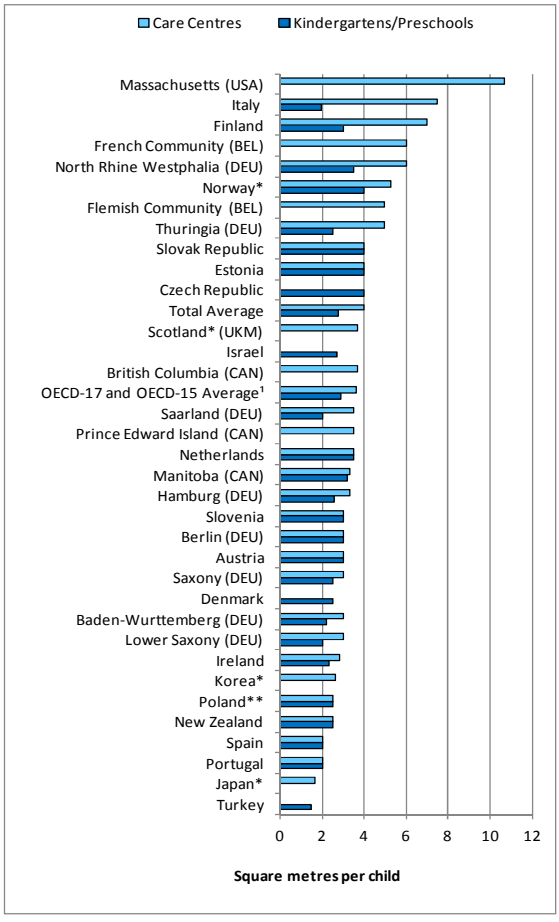
* Jurisdictions with separate regulations for different age groups, the data given is based on: Berlin (DEU), 2-3-year-olds (attending 5-7 hours per day); British Columbia (CAN), 0-3-year-olds; Israel, 2-3-year-olds; Japan, 1-2-year-olds (while the country has different ratios in place for different ages: the ratio for age 0 is 1:3; age 1-2, 1:6; age 3, 1:20; and age 4, 1:30 – only data regarding 1-2-year-olds is included in the figure); Korea, 2-year-olds; Manitoba (CAN), 2-3-year-olds; Netherlands, 2-3-year-olds; Norway, 0-3-year-olds; Prince Edward Island (CAN), 2-3-year-olds; Queensland (AUS) 2-3-year-olds; Scotland (UKM), 2-3-year-olds; Thuringia (DEU), 2-3-year-olds; Western Australia (AUS), 2-3-year-olds. For Poland, when there is a disabled child in the playroom, the ratio is set at 1:5.
**Subsidised facilities only

Notes: Countries who reported averages for staff-child ratio instead of a minimum requirement in the Survey have not been included in the graphs, as averages do not constitute a regulated minimum requirement. When regulated ratios were indicated as maximum number of children per multiple staff members (*e.g.*, 2:15), the number included in the figure has been calculated based on the maximum number of children for one member of staff (*e.g.*, 2:15 has been re-calculated into 1:7.5). For Panel A, OECD-19 Average is based on data reported for OECD countries, excluding regions and territories, and is calculated based on data from: Austria, Czech Republic, Estonia, Finland, France, Hungary, Ireland, Israel, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Slovenia, Spain and Turkey. For Panel B, OECD-16 Average is based on data reported for OECD countries, excluding regions and territories, and is calculated based on data from: Austria, Estonia, Finland, France, Hungary, Israel, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic and Slovenia. The Total Average is based on data for all countries and jurisdictions included in the respective figures.

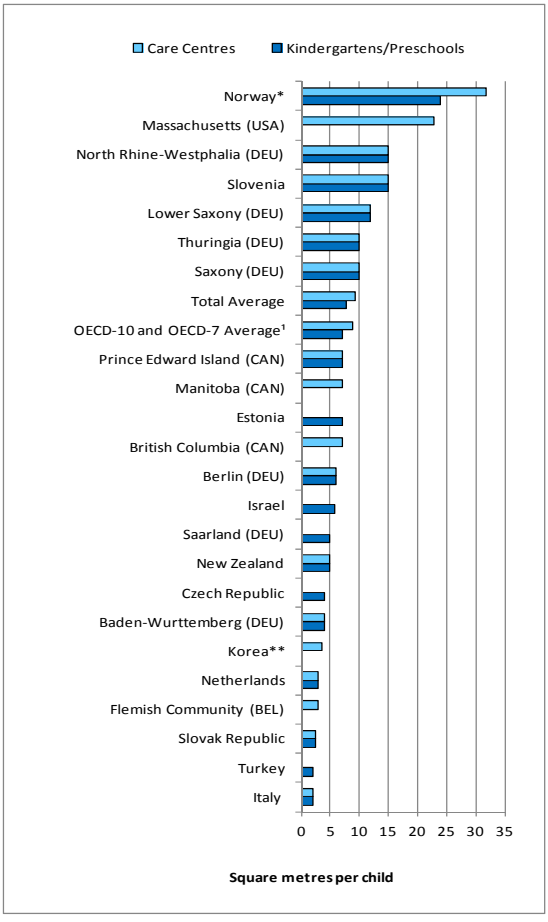
Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Figure 3.8. Minimum space requirements as m² per child in kindergarten/preschool and child care centre

Panel A. Indoor space requirements



Panel B. Outdoor space requirements



* Jurisdictions with separate regulation for different age groups, the data given is based on: Ireland, 1-2-year-olds for care; Japan's data regards infants only; Norway, 0-3-year-olds for care, and 3-6-year-olds for kindergarten; Scotland 0-3-year-olds.

** In Poland, the indoor space requirement for Care Centres and Kindergarten Points/Centres for a maximum of 5 children is set at 16m². For each additional child, the minimum indoor space requirement is 2.5m² per child. Kindergartens have higher and more detailed standards for public buildings, around 2.5 to 3m².

¹ OECD-17 Average refers to indoor space requirements for kindergarten/preschool; OECD-15 Average refers to indoor space requirements for child care.

Notes: Japan's indoor requirements are set at 1.65m² per child for toddlers and 1.98m² per child for infants. In addition, space for kindergarten is regulated as 180m² if the number is 1 and (number of classes – 2) x100+320m² if the number is more than 2. . As indoor space for kindergartens depends on the number of classes, the country is not included in this figure for kindergarten.

* For Norway, the figure for care centres is based on regulation for 0-3-year-olds, whereas the kindergarten figure is for 3-6-year-olds. The minimum outdoor space requirement in Norway is six times the minimum requirement for indoor space.

** Korea has a set space requirement per child for care centres but employs a formula for regulating space in kindergartens; therefore, only a minimum requirement for care has been included in the figure.

¹ OECD-10 Average refers to outdoor space requirements for kindergarten; OECD-7 Average refers to outdoor space requirements in child care.

Notes: Japan's minimum outdoor requirements depend on the number of classes, so the country is not included in this figure. The regulation of outdoor space for child care is referential standards. For kindergarten, it is regulated by the number of classes. If it is one class, 320m²; two, 420m²; three classes or more, 400m² +80x (the number of classes-3).

Notes: Reported averages in the Survey have not been included in the graphs, as they do not constitute a minimum requirement. For Panel A, OECD-17 Average regarding indoor space requirements for kindergarten/preschool is based on data reported for OECD countries, excluding regions and territories, and is calculated based on data from: Austria, Czech Republic, Denmark, Estonia, Finland, Ireland, Israel, Italy, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, and Turkey. OECD-15 Average regarding indoor space requirements for child care is based on the following countries: Austria, Estonia, Finland, Ireland, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia and Spain. For Panel B, OECD-10 Average regarding outdoor space requirements for kindergarten/preschool is based on data reported for OECD countries, excluding regions and territories, and is calculated based on data from: Czech Republic, Estonia, Israel, Italy, Netherlands, New Zealand, Norway, Slovak Republic, Slovenia and Turkey. OECD-7 Average regarding outdoor door space requirements for child care is based on the following countries: Italy, Netherlands, New Zealand, Norway, Slovak Republic, Slovenia and Turkey. The Total Average is based on data for all countries and jurisdictions included in the respective figures.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

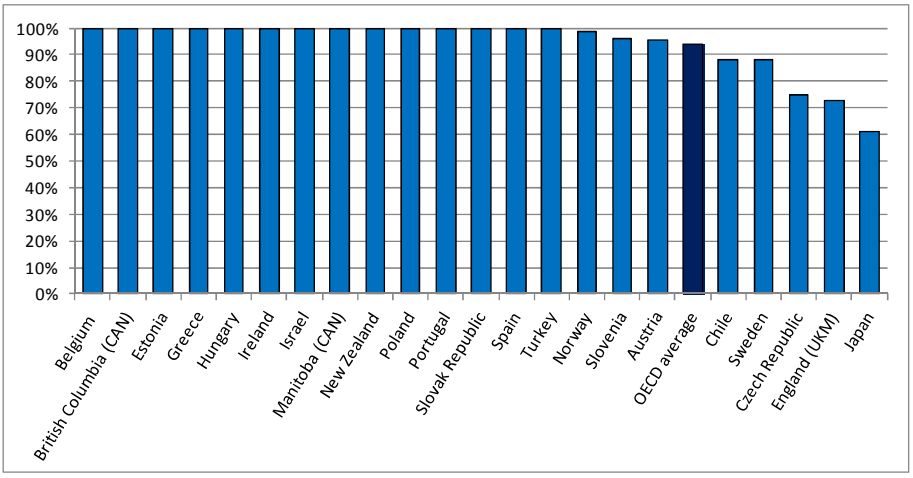
Remuneration of ECEC staff

In most countries, preschool teachers are less well respected than teachers in others levels of education. This is often reflected in lower wages for preschool teaching staff. Remuneration is often one of the drivers for staff to stay in a job and contributes to a person's motivation to work well.

On average, ECEC teaching staff earn 94% of the average wage of primary school teachers. In many OECD countries, preschool and primary school teaching staff are paid at the same rate, *e.g.*, in New Zealand. In Sweden, preschool teachers earn almost 90% of what their primary school teaching peers earn.

Japan has the lowest level of remuneration among the countries listed in Figure 3.9: Japanese preschool teachers are paid 61% of what primary school teachers are paid. Low remunerations might contribute to challenges with keeping staff in the sector.

Figure 3.9. Remuneration for ECEC staff compared to primary teachers



Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

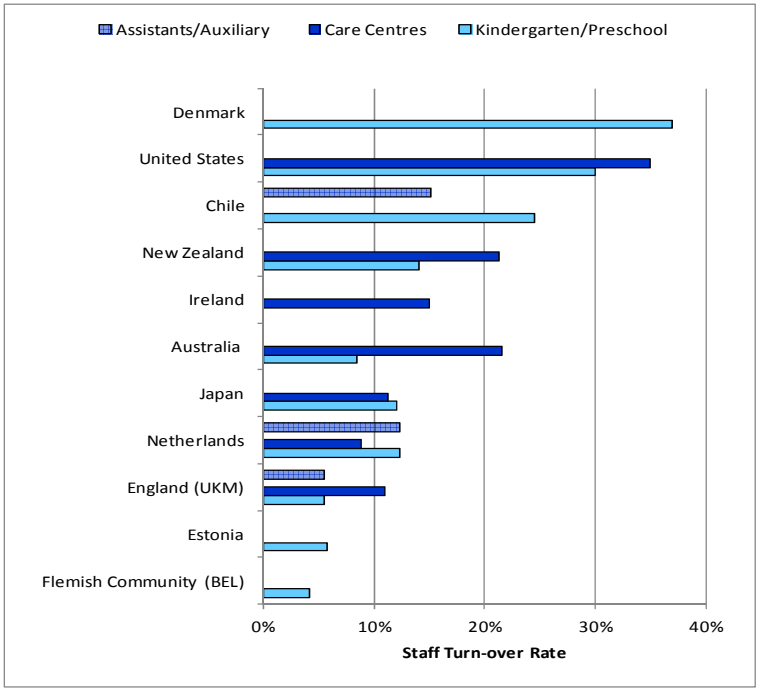
Staff turnover

Working conditions can be reflected in staff turnover rates. Where working conditions for staff are very favourable, fewer professionals might leave the sector; whereas when working conditions are not very well established, turnover rates might be high.

In the ECEC sector, turnover rates are high for staff in caring positions as well as teaching positions. On average, the turnover rate in kindergartens is 17.7%, while it is slightly lower in child care with 15.4% (Figure 3.10). However, large differences are observed among countries.

Japan has a staff turnover rate of 12% in kindergartens and 11.2% in child care centres. This is lower than in New Zealand where the figures are 14.1% and 21.3% respectively. In England, the turnover rate is lower with 11% for child carers and 5.5% for both preschool and auxiliary staff.

Figure 3.10. Staff turnover rates per different types of ECEC staff



Note: "Assistant/Auxiliary Staff" cut across different types of services and will typically require lower qualifications and work with primary staff in the specific ECEC setting.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Recognising prior learning for staff recruitment purposes

Recognition of prior learning (RPL) is used by a number of countries as a tool to recognise professional development or any skills and knowledge acquired through informal and non-formal learning (Table 3.6). Countries using RPL see it as a tool to up-skill the workforce, recruit and qualify the unqualified. In child care, qualifying the unqualified is more common than in preschool/kindergarten. RPL is used in the family day care sector as well, although only in a few countries. In Japan, no formal recognition of prior learning exists but could be considered as a measure to attract staff. New Zealand, for example, recognises prior learning to recruit new staff.

NOTES

1 The findings presented in Chapter 3 are based on data from the OECD Network on ECEC's "Survey for the Quality Toolbox and ECEC Portal" (2011) and on the OECD's desk-based research. For each graph and table, the countries or regions for which data is used are listed (if not presented in the graph).

2 The international ISCED classification system is often used to facilitate international comparisons, four of which are relevant to the OECD survey responses: Level 2: Lower secondary school – normally considered the end of basic education; Level 3: Upper secondary school – normally the end of compulsory education; Level 4: Post-secondary non-tertiary education (*e.g.*, short vocational programs; pre-university courses); Level 5: First stage tertiary education (*e.g.*, first university degree); Level 6: Second stage of tertiary education (leading to an advanced research qualification).

3 www.police.govt.nz/vetting-guidelines

4 For kindergarten/preschool, based on data from: Australia, Austria, British Columbia (CAN), Czech Republic, England (UKM), Estonia, Finland, Ireland, Israel, Italy, Japan, Manitoba (CAN), Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovak Republic, Slovenia, Spain, Sweden and Turkey. For child care, based on data from: Australia, Austria, British Columbia (CAN), Czech Republic, Finland, Israel, Italy, Japan, Manitoba (CAN), Mexico, Netherlands, New Zealand, Norway, Prince Edward Island (CAN), Scotland (UKM), Spain and Sweden.

5 When referring to kindergarten or preschool in countries with an integrated ECEC system, data refers to the children in the older age bracket of ECEC, *i.e.*, children from the age of three to the age that primary schooling starts (unless indicated otherwise).

6 When referring to child care in countries with an integrated ECEC system, data refers to the children in the youngest age group of ECEC, usually zero-to-three-year-olds (unless indicated otherwise).

7 OECD averages are only based on data reported for OECD countries in the respective figures, excluding regions and territories. Data from jurisdictions and regions, as well as countries, are included in the Total Average.

REFERENCES

European Commission (2011), *CoRe Report: Competence Requirements in Early Childhood Education and Care*, European Commission, Brussels.

Council of the European Union (2009), *Council conclusions of 26 November 2009 on the professional development of teachers and school leaders*, available at http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:302:0006:0009:EN:PDF.

CHAPTER 4

WHAT ARE THE CHALLENGES AND STRATEGIES?

Common challenges countries face in enhancing the quality of the ECEC workforce include: 1) improving staff qualifications, education and competences; 2) recruitment; 3) professional development; 4) staff evaluation and monitoring; and 5) working conditions and retention.

Japan has made efforts to tackle these challenges by providing funding for training beginning staff, encouraging communication with parents to increase staff knowledge on child development, and revising training outcome standards. To further its efforts, Japan could consider alternative strategies implemented by New Zealand, Sweden and the United Kingdom, such as defining a clear set of competences for the ECEC system and workforce, validating existing competences and providing support to allow easier entry into the profession, raising awareness of the importance of continuous training, monitoring the quality of the workforce through licence renewal, and improving classroom working conditions.

This chapter aims to identify alternatives Japan could consider when facing challenges in improving workforce quality. For each challenge, the common experiences among countries are described. The chapter then presents the different approaches Japan has been using to tackle the challenges and identifies strategies undertaken by New Zealand, Sweden and the United Kingdom.

The following five challenges that countries often face in improving workforce quality have been identified through the OECD's Survey for the Quality Toolbox and ECEC Portal: 1) improving staff qualifications, education and competences; 2) recruitment; 3) professional development; 4) staff evaluation and monitoring; and 5) working conditions and retention.

1. Improving staff qualifications, education and competences

Qualifications for ECEC staff often overlap and are not transparent among child care workers and early education teachers. Different qualifications leading to different job titles/profiles do not always clearly communicate to staff or parents about the knowledge, skills and competences staff have. Improving qualifications evenly across a country can also be a challenge due to local control over the contents of the education programmes.

Japan's efforts

Revising training outcome standards and expectations for initial education based on changing societal needs

Japan revised its *National Curriculum of Day Care Center Works* in March 2008, clarifying the enhancement of staff quality and the expertise of all staff. Due to changes in the living environments of children and the nature of child rearing by parents, the expectations for the role and quality of day care centres increased. The Action Program to Improve the Quality of Nursery Centres was designed to address the following needs: 1) improvement and enhancement of child care practices; 2) assurance of the health and safety of children; 3) enhancement of the quality and expertise of day care staff; and 4) reinforcement of the foundation to support child care.

Alternative strategies from New Zealand, Sweden and the United Kingdom

Setting minimum standards for teacher education

New Zealand has Graduating Teaching Standards in place, which were set by the New Zealand Teachers Council (NZTC) in 2007 under the Education Act 139AE. Minimum standards of teacher education are ensured by the accreditation and approval of all teacher education programmes by the NZTC. All teacher education providers with programmes approved by the NZTC must demonstrate how they enable students to reach the Graduating Teacher Standards. Providers guarantee that students have met these standards and are "fit to be a teacher" when they graduate from the programme.

Reviewing initial education qualifications

Early childhood education qualifications in **New Zealand**, which are offered by universities, must be approved by the Committee on University Academic Programmes of Universities New Zealand. After approval, universities are allowed to offer the academic programmes and can start implementing them. The content and quality of qualifications are reviewed regularly by these agencies. When necessary, qualifications can be revised to reflect emerging content areas or changing societal or staff needs.

England (**United Kingdom**) has launched an independent review of existing early education and child care qualifications and training. The review will look at the ways in which

qualifications can be strengthened and pathways to support career progression in the sector can be improved to benefit young children, their families and those working in the sector.

Reviewing skills and competences for ECEC staff

Scotland (**United Kingdom**) is currently undertaking a review and discussion on the skills, knowledge and understanding ECEC staff should encompass. A Common Skills Working group has been established to identify what should be included in initial ECEC staff education programmes.[1] Stakeholders are invited to comment on the identified skills and knowledge areas for staff. After receiving the comments, the plan will be revised. An implementation plan for the revision of initial ECEC education programmes was to be drafted at the end of 2011. The goal of this initiative is to strengthen the workforce knowledge and improve quality ECEC delivery.

Early childhood education teaching qualifications in **New Zealand** cover a range of key competences required to work successfully in an early childhood education setting. These competences cover, for example, *Te Whāriki*[2]*,* the New Zealand early childhood education curriculum; theories of pedagogy and teaching practice; the care and education of infants and toddlers; and how to work effectively in the New Zealand cultural context.

Implementing a government-funded programme focusing on improving staff competences

To strengthen staff competence, **Sweden** allocated SEK 600 million to continuing education for preschool teachers and childminders for a three-year period running from 2009-11 under the programme "The boost for preschool". The training was primarily directed at advancing pedagogical competence for preschool staff. The programme gave some thousands of preschool teachers and childminders the chance to take further education courses – at the university level (for preschool teachers) and at the upper secondary/high school level (for childminders). Teachers and childminders kept 80% of their salary during the study period, co-funded by the government and the preschool principal organisers. The courses focussed on children's linguistic and mathematical development and evaluation of preschool activities. There was also an opportunity for preschool teachers to take research studies to have a licentiate degree. The purpose was to increase the number of post-graduated preschool teachers in preschool.

Defining a clear set of competences for the ECEC system and its staff

According to the **European Commission**'s CoRe Report (2011)[3], competences required for staff should be made clear for both the workforce and all ECEC actors involved in creating a strong workforce. According to the European Commission, a competent ECEC system unfolds in the dimensions of knowledge, practice and values. They emphasise that all dimensions are relevant to all layers of the system, and therefore competences should be defined at the individual level, institutional level, inter-institutional and inter-agency level, and governance level.

By analysing the competence requirements across European countries, the European Commission developed a set of relevant competences for each of these levels, contributing to a competent ECEC system. Individual competences refer to the practices, values and knowledge each professional should have and include knowledge of learning strategies, knowledge of communication with children and knowledge of team-working. Institutional competences are laid down in competences for ECEC services and training institutes and include, *e.g.*, pedagogical knowledge of early childhood and diversity (for ECEC services) and knowledge of adult learning (for training institutes). Inter-institutional competences refer to knowledge of co-operation, community development, cross-disciplinary knowledge. At the governance level, competences such as children's and families' rights and knowledge of the local, regional and national contexts are important.

For each of the competences, example practices are described as exemplary actions to promote the development of the competences; and the expected underlying values are described. Such a description of expected competences at different levels for a wide range of actors involved in ECEC can contribute to clearer expectations and identify needs for development and training. Defining a clear set of competences for the sector, at different levels, can contribute to a better understanding of how to support competence and workforce development from a systematic perspective.

Updating and streamlining different education programmes/qualifications

In **New Zealand**, in 1986, child care services were transferred from the Department of Social Welfare to the Department of Education. A year after integrating the child care and education sectors, the government established the Diploma of Education (Early Childhood Education) as the benchmark teaching qualification for the newly centralised system. In 1988, the first three-year teacher training programme with cultural training components began to be phased in. In the early 1990s, the focus of the sector was on quality, training and funding. The shift towards a qualified workforce occurred at the same time as a strong increase in demand for ECEC and a rapid expansion of the workforce. When the government established the Diploma of Education as the benchmark teaching qualification for the newly centralised system, targets were set for the percentage of the workforce that was qualified (100% registered teachers). New Zealand found that this policy led to a significant increase in the cost of ECEC funding for the government. As a result, the government reduced its target of 100% registered teachers in the sector to 80%, deciding that achieving a minimum level of 80% registered teachers by 2012 will maintain sufficiently high standards across the sector.

In addition to this, there is a new, flexible specialist teaching qualification supported by the study awards available from 2011. The Postgraduate Diploma in Specialist Teaching[4], currently being developed by Massey University and the University of Canterbury, will have endorsements in: early intervention; deaf and hearing impairment; blind and vision impairment; learning and behaviour; autism spectrum disorder; and special learning needs.

In **Sweden**, in 2010, the government proposed that current degrees in education be replaced by four new professional degrees: preschool education, primary school education, subject education and vocational education. The new degrees will lead to greater clarity regarding the components of teacher education, and the preschool education programme will have a more specific direction to secure the supply of well-educated teachers. In 2011, the government introduced a new initial training programme to increase the supply of well-educated preschool teachers. The following decisions have been made:

- Regulate preschool teachers as other teachers are regulated;
- Clarify teacher qualifications;
- Create a teacher certification process; and
- Design a state authorisation system (senior subject teachers) to strengthen incentives for preschool teachers to advance the quality of activities and to pursue continuous education.

Both managers and staff who work directly with children in **Sweden** are known as teachers or pedagogues. These staff have taken higher education courses (university or non-university level) usually lasting three-and-a-half years (seven semesters) and covering general education (sociology, arts and sciences); professional studies, including educational psychology and child development; and practical training with work placements in different types of settings.

2. Recruitment

Recruiting high-quality professionals is a major challenge in many OECD countries. Chronic shortages of ECEC staff are observed, especially in remote and disadvantaged areas. Furthermore, lower qualification levels of the workforce, especially among child care workers, often raise concerns among parents and policy makers about the quality of services. Additionally, there are often insufficient incentives for people to work in the sector. The main reasons for the shortages are often cited as: low wages, low social status, heavy workload and lack of career progression paths, which make the profession unattractive and can cause or contribute to the challenge of recruiting staff.

Additionally, the ECEC workforce is generally homogeneous, composed of mostly female workers and from the majority ethnic group.

Japan's efforts

Providing funding for day care training

In Japan, prefectures receive government funds to train day care staff, including people who do not have experience working in a centre. The government plans to increase the number of children accepted by day care centres from 20-38% during 2007-17 and, therefore, to increase the workforce supply in order to accommodate the demand.

Funding training for beginning ECEC teachers

The government in Japan provides funding to prefectures for training beginner teachers as well as teachers with ten years of experience. Teacher training is mainly paid for by the training providers.

Alternative strategies from New Zealand, Sweden and the United Kingdom

Validating existing competences and providing support for easier entry into the profession

New Zealand recognises prior learning (RPL), and people can convert prior learning experiences into credits towards a recognised ECEC qualification. The government has funded the use of RPL to help increase the supply of qualified and registered teachers. For example, New Zealand is working on an establishment of the Tertiary Education Commission, the New Zealand Teachers Council and the development of the Diploma of Teaching ECEC (Pacific) to work with teacher education providers to develop a foundation or bridging courses to help people, particularly Māori and Pasifika peoples, meet entry criteria for teacher education courses.

In establishing graduate-level status for the early years sector, **England** (**United Kingdom**) has developed a "validation pathway", which allows graduates who have experience in the sector to demonstrate their competence against professional standards and be awarded the Early Years Professional Status.

Providing grants and scholarships to students and professionals

In **New Zealand**, student grants and scholarships are provided for hard-to-staff professions, including ECEC, to help students and services meet the costs of pursuing an ECE qualification. A number of scholarships are available to students undertaking a programme of study to prepare them for teaching in Pasifika or Māori immersion services.

In **England** (**United Kingdom**), government funding is provided to local authorities to increase and sustain the number of graduates employed and to provide other types of

pedagogical training for staff. This also extends to the recruitment and deployment of graduate leaders and investment in qualifications.

Funding providers if hiring qualified staff

A new funding system, implemented in **New Zealand** in 2005, provides an incentive for ECEC services to increase the proportion of registered teachers employed. Since December 2007, teacher-led ECEC centres have been required to have at least 50% of their teachers with an ECEC qualification at the diploma or degree level. The funding system supports ECEC centres in achieving this standard.

*Raising public awareness (*e.g.*, providers and parents) about the importance of a high-quality workforce*

England (**United Kingdom**) seeks to encourage employers to have qualified staff and stimulates demand by encouraging parents to seek centres with qualified staff to build trust among key stakeholders. Early Years Professional Status (EYPS) was introduced in response to evidence on graduate leadership from the Effective Provision of Pre-School Education project. Early Years Professionals are graduate-level staff who have demonstrated that they meet a set of national professional standards and have been awarded EYPS.

Promoting a career in the ECEC sector

New Zealand, at the national level, promotes ECEC teaching as a career to people who are potentially interested in the profession and to groups that are underrepresented in the ECEC teacher workforce. The government and initial education provisions provide broad information online about how people can become an ECEC teacher, what the initial education requirements are, and salary and promotion opportunities; and they display the advantages of working in the sector. The government also gives an overview of all institutions offering qualifications in ECEC, how to apply to such programmes, what the costs are and where to apply for financial support.

England (**United Kingdom**) works to attract and support the use of graduates in early education and child care settings; to attract career changers to consider the profession as a career option; and to improve recruitment among under-represented groups, *i.e.*, men, black and other minority ethnic groups. They also continue to invest in and encourage the development of the early education and child care workforce by supporting graduate training, including through the Early Years Professional Status and New Leaders in Early Years programmes.

Promoting workforce mobility across different regions and different countries

New Zealand assesses foreign qualifications and offers a diploma in ECEC if it is comparable to New Zealand's benchmark qualification, the Diploma of Education, required for early childhood teachers. New Zealand also offers relocation grants and return-to-teaching allowances to assist qualified staff to move to areas where there is a shortage of staff, such as remote areas.

Targeting experienced workers to return to work in the sector

New Zealand offers relocation grants and return-to-teaching allowances to assist qualified staff to get back into the profession and to move to areas where there is a high shortage of ECEC staff. The country also developed teacher education courses that allow primary teachers to upgrade their primary teacher qualifications to ECEC teacher qualifications.

Implementing an induction process for new ECEC staff

In **New Zealand**, following verification of the qualification of graduated ECEC students and a police vetting, beginning staff gain provisional teacher registration and then embark on a two-year teacher induction process with a mentor teacher to oversee their programme. They must demonstrate to their mentor teacher through evidence of their teaching that they are able to meet the Satisfactory Teacher Dimensions. At the end of the two years, the mentor may recommend the teacher to the professional leader of the early childhood service as meeting the Satisfactory Teacher Dimensions. The professional leader then recommends the teacher to the New Zealand Teacher Council for full registration. There is Ministry of Education funding support for the first two years of the induction and mentoring programme. Once a teacher is fully registered, the registration needs to be renewed every three years.

3. Professional development

Many countries offer some form of professional development opportunities for ECEC staff. However, the take-up rates are often found to be low. First and foremost, information about training opportunities may not be well known, or the benefits of participating may not be clearly articulated, especially among low-qualified ECEC workers. Second, continuous training and professional development might be disconnected from what they wish to learn; therefore, they may not be motivated to take training. Third, there is an increasing need of staff and managers to be trained in leadership, whether it be in the playroom or leading an ECEC centre. However, this poses a challenge for many countries.

Even when staff are informed of such opportunities and are motivated to take up training, their manager may be reluctant to send them to professional development courses. It is often argued that, when the training leads to the possibility of a higher level of qualification, staff may subsequently wish for a pay raise or leave for a higher paying job elsewhere.

Additionally, staff is increasingly expected to maintain a relationship with parents, as they are becoming more involved in ECEC. Communication and co-operation skills with parents are becoming more important to develop for ECEC staff.

Japan's efforts

Encouraging staff to improve quality through reporting on quality

Japan commissioned a report in 2002 "Improvement in the Quality of Kindergarten Teachers – for the Purpose of Self-Study by Kindergarten Teachers", which was intended to encourage both current and potential teachers to strive to improve the quality of their services throughout employment.

Supporting employers for staff replacement

Japan remunerates staff pursuing training and substitutes staff with staff members who are hired to replace individuals away on training.

Using written communication between staff and parents

Japan has contact memos and notices hanging in all ECEC centres. These inform parents about the latest developments, possibilities to be engaged, data of meetings and other ECEC-related information.

Japan also developed Contact Books in which daily progress is described by ECEC staff. This enables parents to be informed about the behaviour and growth of their children in daily life and is found to be effective in engaging parents in early education and care.

Establishing more flexible times for contacts and communication between parents and staff

ECEC staff in Japan attempt to speak briefly to parents every day when they drop off or pick up their child, as many parents do not have time for long meetings. They speak about what the child will do or has done and how the child is developing in general. It is an important information source for parents but also for staff since they have the chance to ask parents questions about their child. Additionally, informative meetings with ECEC staff are organised in the evenings for parents who cannot attend parent-teacher meetings during the daytime.

Alternative strategies from New Zealand, Sweden and the United Kingdom

Requiring that staff have access to professional development opportunities

There is a requirement that all staff in **New Zealand** centres have access to ongoing professional development. Implementation is the responsibility of each centre. The government provides funding to centres for professional development, including improving qualifications, which covers much of the costs; and most of the courses are provided by colleges of education. Costs of replacement staff (to cover for workers taking courses) are usually split between the government and the centre. All chartered centres are supposed to be moving to a system of staff appraisal, which should identify staff development needs.

Raising awareness of the importance of continuous training among staff and employers

England (**United Kingdom**) has been working on, through an awareness-raising campaign, convincing employers and practitioners of the need for and value of high-level qualifications.

Promoting action on leadership development

The **New Zealand** Teachers Council published an occasional paper[5] focused on leadership in early childhood education in New Zealand. The absence of a cohesive leadership strategy was seen as a significant risk to professional initiatives supporting quality teaching in ECEC. The paper explores the current state of leadership and leadership development in New Zealand, and the issues and dilemmas facing the sector, including the identification of possible future directions. The Ministry of Education has also identified providing "leadership development programmes to strengthen leadership in ECEC" as a priority.

Focusing training on areas in which there is a large need for development

Based on staff needs, **Sweden** focuses training mostly on language development, mathematics, experimental sciences and child assessment of learning and well-being. The National Agency for Education in Sweden has, in co-operation with Swedish Television, made short films to give inspiration on how to implement and stimulate different curriculum subjects, such as mathematics and natural science, in preschool.

New Zealand's experience has been that allowing ECEC services to self-select for participation in professional development activities can mean that some services over participate in professional development while other services do not participate at all. Learning from this lesson, the government pursued a new approach to funding professional development, which requires providers to go into targeted communities and determine training programmes that best meet the needs of those communities.

New Zealand focuses on the implementation of *Te Whāriki*, the Early Childhood Curriculum, and provides training to improve learning outcomes for all young children, especially those at risk. Teachers are expected to strengthen their teaching practices. The government also provides training to support the implementations of *Kei Tua o Te Pae*, Assessment for Learning. Teachers are expected to develop effective assessment practices that meet the aspirations of the curriculum.

Implementing a professional development project focusing on leadership

The Education Leadership project (ELP) in **New Zealand** is a professional development project that aims to nurture curriculum and pedagogical leadership in centres through a research project that has an in-centre lead teacher-facilitator who is mentored by an outside experienced facilitator. While the lead teacher is involved in workshops that explore the theory and practice of leadership, the focus is on the centre's teaching practice and establishing innovative education. The leadership skills developed in this programme have led many of the teachers to take up a further leadership position as the outside facilitator to other centres. Careful building of relationships and a credit view of teachers' teaching and leadership capabilities are central to the programme. Other features include workshops, visits, retreats, presentations, research, ICT innovation, transition projects, inspiration days, and national and international conferences.

Funding institutions that provide continuous training for teachers working with minority or disadvantaged children

In **New Zealand**, the Ministry of Education developed a new programme for centrally funded professional development. The change was in response to a reduction in available funding, which provided an impetus for targeting professional development to ECEC services catering to children from the government's priority groups: Māori, Pasifika and low-socio-economic communities. Centrally-funded professional development contracts are for a three-year period. Providers are required to go into targeted communities, carry out a needs analysis and plan a programme that best meets the needs of particular communities. This new approach to central funding for providers intends to decrease the competitive environment for providers and give way to a more collaborative approach to providing professional development.

Developing practical support kits for leadership positions

In 2002, the **New Zealand** Educational Institute (NZEI) published the Professional Leadership and Management Kit (in book format) in an attempt to provide practical support and guidelines for those in leadership positions in ECEC. A Principal's Kit[6] has been developed by the NZEI as well. These kits aim to give people in leadership positions the tools they need to deal with challenges in leadership and being a principal.

Supporting and training staff to engage parents

Information material on involving parents in preschools in **Sweden** has been developed by the National Agency for Education and distributed to ECEC centres, *e.g.*, a booklet focusing on resources in language stimulation presents examples and articles on how to actively engage parents in language stimulation both in and outside preschools.

Organising development dialogues

Sweden organises at least one development dialogue per year. This is a meeting with ECEC staff and parents of the child to discuss the development and learning of their child. In addition, preschools hold regular meetings with parents to provide them with opportunities to exercise influence over how the goals can be turned into concrete pedagogical activities. Furthermore, parents are involved in the evaluation of preschool activities and have opportunities to participate in work on quality improvement.

4. Staff evaluation and monitoring

Monitoring staff in ECEC refers to the ongoing evaluation of staff performance, as well as rating their quality, for accountability and/or improvement purposes and highlighting trends in the ECEC sector and its workforce. The coherence and co-ordination of monitoring staff

performance in ECEC continues to pose challenges, as many countries do not have monitoring practices in place, or they conduct them on an irregular basis. Additionally, it is often unknown how to monitor staff performance or what exactly should or can be monitored.

Japan's efforts

Monitoring staff performance through self-assessment practices

In Japan, staff performance in kindergartens is monitored by local stakeholders and parents through the external exchange of opinions, while ECEC staff members and management self-assess their own performance as well. Day care centres are obliged by law to conduct self-assessments and are subject to assessment by a third party. However, assessment by local stakeholders is not a legal obligation in day care centres. The self-assessment practices in both day care centres and kindergartens take place at least once per year.

Alternative strategies from New Zealand, Sweden and the United Kingdom

Monitoring the quality of the ECEC workforce through renewal of certificates/licences

In **New Zealand**, registered teachers need to renew their registration for a teacher practicing certificate (licence). They must provide evidence of meeting the requirements for full registration during the appraisal process every three years. This includes a vetting process conducted by the Licensing & Vetting Service Centre[7] "to minimise the likelihood of the more vulnerable members of society (children, older people and those with special needs) being put at risk by individuals who may have displayed behaviour that could be detrimental to others' safety and wellbeing".

Developing a self-evaluation tool for staff

In **Sweden**, self-evaluation kits have been developed so that ECEC professionals can evaluate their knowledge of the curriculum framework and child development as well as their pedagogical practices. This tool can be used for staff to self-reflect on their competences and skills and to help them in their personal development. Pedagogical advisors work comprehensively at the local level to improve the quality of pedagogy in all services by providing up-to-date information on new forms of pedagogy and supporting the organisation of internal quality improvement processes, such as team-evaluation and documentation.

The *Te Whāriki* curriculum in **New Zealand** provides staff with questions for reflection. According to New Zealand, questioning and reflection are the first steps towards self-analysis and personal development and improvement. New Zealand encourages adults working with children to debate the practices they are using and the work they are doing, which forms the base for continued evaluation of their competences and skills. It can identify staff's development needs and can provide input for improving their practices.

Assessing staffing needs in ECEC centres

In **New Zealand**, progress of staffing and workforce in Māori language immersion ECE services and Pacific Island Education and Care Centres is monitored and assessed. These are the services which most often have large staff shortages. Based on these assessments, further steps are taken if necessary to increase teacher supply in these services.

Systematically evaluating quality

In **Sweden**, the quality of preschool is regularly and systematically documented, followed up, evaluated and developed. The aim of evaluation is to obtain knowledge of how the quality of the preschool, *i.e.*, its organisation, content and actions, can be developed so that each child receives the best possible conditions for learning and development. Ultimately, this involves

developing better work processes, being able to determine whether the work takes place in accordance with the goals, and investigating the measures needed to improve conditions for children to learn, develop, feel secure and have fun in the preschool, such as developing or training staff or supplying more staff. To assure that the quality and performance of staff is evaluated, management and heads of preschools are in charge of this and should implement on a regular basis.

5. Working conditions and retention

Many countries experience difficulties with retaining the workforce, with particularly high staff turnover rates in the child care sector. The factors that keep people from working in the ECEC sector are often the same factors that discourage people from pursuing a career in the sector and are largely related to the working conditions: low wages, low social status, heavy workload and lack of career progression paths.

Japan's efforts

Providing allowances for overtime

In Japan, kindergarten teachers and day care staff can receive adjusted allowances for overtime working hours.

Alternative strategies from New Zealand, Sweden and the United Kingdom

Giving pay parity to kindergarten teachers with teachers at other levels of education

Pay parity between kindergarten teachers and primary school teachers in **New Zealand** has made ECEC teaching a more attractive occupation. A funding system that provides incentives for services to employ more qualified, registered teachers has meant that services can afford to pay better salaries and has significantly increased the number of registered teachers in the workforce, leading to more qualified teachers in Early Childhood Education centres trained in the curriculum and its implementation.

Improving classroom conditions to improve working conditions

In 2004, **Sweden** granted an increase of SEK 2 million of state funding to local authorities for the employment of 6 000 additional preschool teachers and child assistants. The grant was intended to reduce class sizes and improve staff-child ratios to 1:5, on average, for children aged zero to six to improve the quality of ECEC and make working conditions more favourable for staff.

Assisting in negotiating for working conditions in the ECEC sector

In **New Zealand**, the government has historically taken responsibility for funding kindergarten teacher salaries and setting their conditions of service. While kindergarten teachers represent only a small part of the total early childhood education workforce (12% in 2010), the government negotiates salaries on their behalf. The working conditions are negotiated between teachers and their employers, except for kindergarten teachers: the Ministry of Education negotiates their terms and conditions on behalf of kindergarten associations.

Providing career opportunities for promotion and mobility

In **Sweden**, preschool teachers have the opportunity to be promoted as senior subject teachers after pursuing research studies to have a licentiate or doctoral degree. Preschool teachers can also work as preschool heads, school managers and municipal administrators.

Providing practical support for staff and management to guide them in their job

The curriculum framework for ECEC in **New Zealand** provides professionals with examples of experiences that help them in their everyday practices. The support guidance is divided into experiences helpful for infants, toddlers and young children to ensure that practices and activities are age-appropriate. It provides ideas for activities and highlights what is important to keep in mind for staff working with children. It also sets out questions for reflection for staff members, which help professionals analyse what they could improve in their everyday work.

Additionally, the website of the Ministry of Education in New Zealand[8] gives examples of practices staff can use in their ECEC centre, gives information on changes or examples of curriculum implementation, and on professional development programmes. The Ministry also has its own official online magazine: the Education Gazette[9]. The magazine covers a variety of news articles, notices and vacancies and provides a monthly update to the early childhood education sector.

The National Agency for Education in **Sweden** publishes support material and General Guidelines with comments for guidance and supervision for municipality management, heads of preschools and staff in preschools.

Additionally, the Swedish Curriculum includes guidelines for preschool staff which specify the responsibilities of teachers to ensure that work is carried out in accordance with the general goals in the curriculum. The guidelines also specify the responsibilities of each person in the preschool's work team. This contributes to a better understanding of the expected tasks of different staff members towards child development.

NOTES

1 http://scotland.gov.uk/Resource/Doc/344986/0114797.pdf

2 www.educate.ece.govt.nz/~/media/Educate/Files/Reference%20Downloads/whariki.pdf

3 European Commission (2011), CoRe Report: Competence Requirements in Early Childhood Education and Care, European Commission, Brussels.

4 www.massey.ac.nz/massey/learning/colleges/college-education/pg-dip-in-specialist-teaching.cfm

5 www.teacherscouncil.govt.nz/research/ece/concept-leadership-ece.pdf

6 www.principalskit.org.nz/

7 www.police.govt.nz/vetting-guidelines

8 www.educate.ece.govt.nz/

9 www.edgazette.govt.nz/

ANNEX A. DEFINITIONS AND METHODOLOGY

Professional development refers to knowledge, skills and competences attained for professional advancement. **Professional development opportunities** are aimed at improving the performance of ECEC staff in already assigned positions. Professional development opportunities are often referred to as "in-service training" and "continuous education/training". The contents indicate which subject areas and topics these training programmes seek to address and improve upon. Countries could choose from the following:

- *Language learning and other subjects*: includes language learning, languages, arts, math, sciences, information and communication technologies, etc.
- *New curriculum*: includes new and updated curriculum, reform in curriculum, etc.
- *Methods/practice*: includes teaching methodologies, teaching strategies and practices, such as Reggio Emilia or inclusive education.
- *Values/ethics*: includes ethics, anti-discrimination, equal opportunity, citizenship, etc.
- *Planning and management*: includes planning of activities and the curriculum, programming, management, leadership, etc.
- *Communication*: includes communication with parents, communication with other staff for team teaching/caring, use of information and communication technologies, etc.
- *Monitoring, assessment and evaluation*: includes monitoring, assessment (*i.e.*, of targets/goals/etc.) of child outcomes, evaluation of development, programme quality and staff performance, etc.
- *Health, safety and social welfare*: includes health, safety, well-being, social welfare, etc.
- *Special needs and educational transitions:* these two subjects were not included in the list to choose from as separate topics, but countries could indicate in a box named "other" whether they were addressing these subjects in professional development.

Recognition of prior learning refers to a process used by governments, accreditation organisations, employers or universities or colleges to evaluate learning acquired outside the classroom and often formally recognised as academic credits, certificates, salary increase, etc.

Working conditions in ECEC refer to the characteristics of work and the workplace that can influence the ability and motivation of professionals to do their work well. They also relate to

ECEC staff satisfaction with the workplace, work tasks and the nature of the job. Indicators to describe working conditions often include salaries and staff turnover rate but also non-financial benefits, such as the possibility to participate in training and staff-child ratio.

Staff turnover rate is based on the number of workers that had to be replaced over a given period of time, calculated as the number of employee departures divided by staff members and multiplied by a hundred.

Comparisons are made among staff working in different settings:

- **Centre-based day care**: encompasses all child care that is provided outside the home in licensed centres. The services provided can be full- or part-time and are most commonly referred to as nurseries, day care centres, *crèches*, playschools and parent-run groups.

- **Preschool early education programmes (kindergartens)**: includes centre- or school-based programmes designed to meet the needs of children preparing to enter primary education. In most countries, these programmes include at least 50% educational content and are supervised by qualified staff. Among respondents, it is common to enrol an older age bracket from around age three in kindergartens or preschools.

REFERENCES

Capko, J. (2001), "Identifying the Causes of Staff Turnover", *Family Practice Management*, Vol. 8, No. 4.

ANNEX B. FIGURES FOR THE SPIDER WEB ON POLICY OUTCOMES[1]

Thirteen indicators have been selected to compare Japan's child outcomes with other OECD countries based on the available data for international comparison.

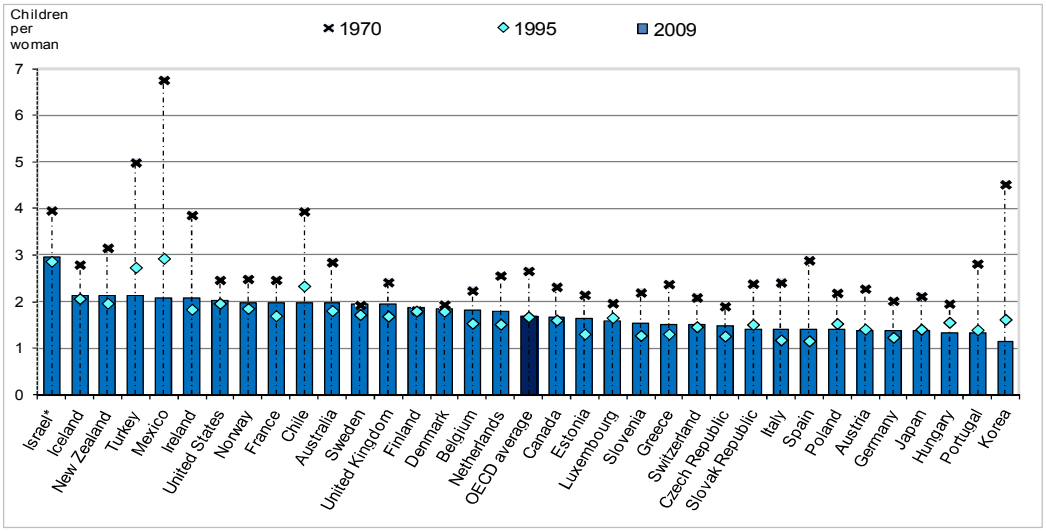
1. Fertility
2. Infant survival
3. Children under 18 who live above poverty line
4. Enrolment in formal care services for children under age three
5. Enrolment in early childhood education and care at age three
6. Enrolment in early childhood education and care at age five
7. PISA reading performance at age 15
8. PISA mathematics performance at age 15
9. PISA science performance at age 15
10. People aged 15-19 who were in education or work
11. Maternal employment rates, age of youngest child under three years
12. Maternal employment rates, age of youngest child three to five years
13. Gender equality in median earnings of full-time employees

Japan has selected international comparison with a focus on New Zealand, Sweden and the United Kingdom where data are available.

1. Fertility

- Fertility rates dropped significantly between 1970 and 2009 in OECD countries. Japan's fertility rate has declined since the 1970s to 1.37 births per woman in 2009, which is one of the lowest fertility rates among OECD countries.

Figure B.1. Trends in total fertility rates



Notes: 2007 for Belgium and Canada; 2008 for Australia, Germany, Greece and Iceland.

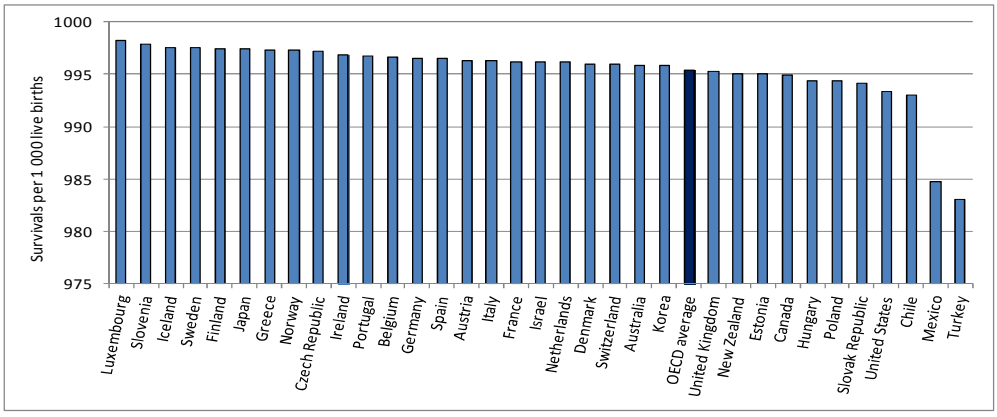
Source: National Statistical Offices, 2010, and Eurostat Demographic Statistics, 2010, from OECD Family Database, January 2011.

2. Infant survival

- In OECD countries, 99 children out of 100 survive as life-born children. Mexico and Turkey are the exceptions with the lowest infant survival rates of the OECD.
- In Japan, the infant survival rate is above the OECD average. In comparison with its reference countries, Japan has a lower infant survival rate than Sweden but a higher one than the United Kingdom and New Zealand.
- During the last three decades, infant mortality rates have considerably decreased from around 15 to 5 deaths per 1000 births in the OECD 34-average. In Japan, the rate has decreased from 6 to 2.6 deaths per 1000 live births.

Figure B.2. Infant survival rates

2008 or latest available year

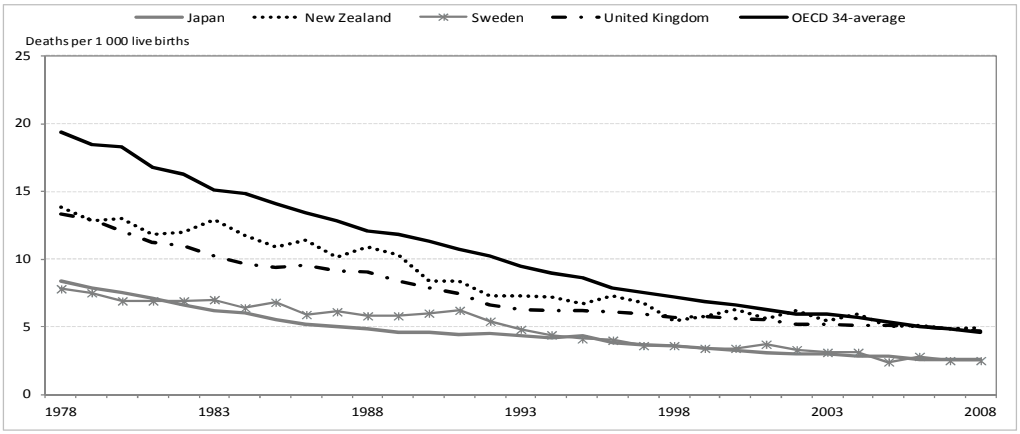


Note: 2007 instead of 2008 for Canada and Ireland; 2006 for Korea and the United States.

Source: OECD Health Data 2010, June 2010.

Figure B.3. Trends in infant mortality rates

A selection of OECD countries, 1984-2006



Source: OECD Health Data 2010, June 2010.

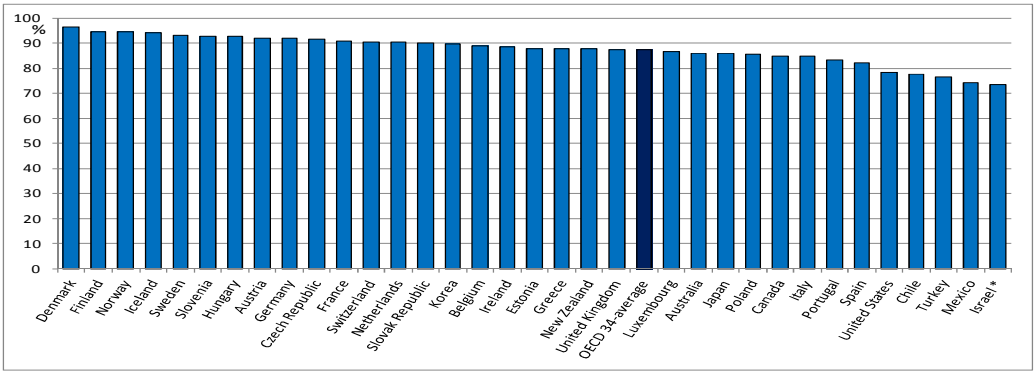
3. Children under the age of 18 living above the poverty line

- On average, one in eight children lives in a family earning less than half of the median income in the OECD countries, *i.e.*, they live in poverty.
- Japan has a lower share of children living above the poverty line than the OECD average with 85.8% of all children under 18 years living above the poverty line, indicating that 14.2% of children grow up in poor families.

- Sweden, along with other Nordic countries, has a relatively large proportion of children living above the poverty line at 93%. New Zealand and the United Kingdom also have a large share of children living above the poverty line (87.8% and 87.5% respectively).

Figure B.4. Children under 18 living above poverty line mid to late 2000s

In 2008 or latest available year



Note: Children <18 above poverty line reports the inverse of poverty for children <18. * Poverty thresholds are set at 50% of the median equivalised disposable income of the entire population.

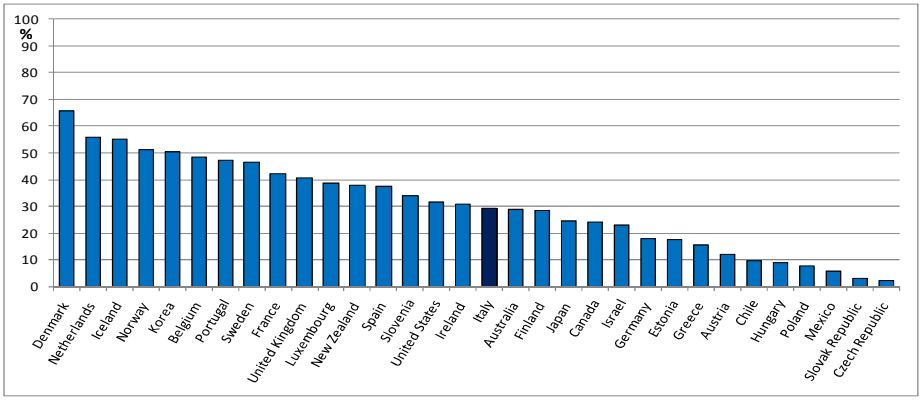
Source: OECD Income distribution questionnaire, version October 2011, for OECD countries; EU-SILC 2009 for non-OECD countries.

4. Enrolment rates in formal child care of children under the age of three

- On average, around 30% of children under age three are enrolled in formal child care facilities in OECD countries, although enrolment rates vary considerably across countries.
- Japan has a lower enrolment rate (24.5%) than Sweden (46.7%), the United Kingdom (40.8%) and New Zealand (37.9%). Japan's enrolment rate is also below the OECD average.
- In many OECD countries, children under the age of three are often taken care of in informal child care services, such as family or domestic care services. Taking into account enrolment in informal care services, enrolment rates are expected to be higher; however, data on enrolment in informal services is currently unavailable.

Figure B.5. Enrolment rates in formal child care for children under age three

As a percentage, in 2008



Note: Data for Japan comes from National Source for Year 2008.

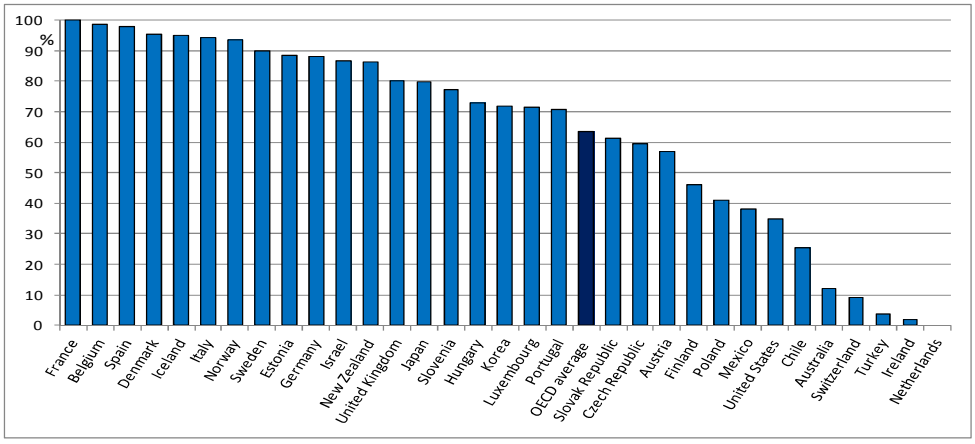
Source: OECD Family Database, November, 2011. Data for Japan (2008) and Korea (2010) come from National Sources.

5. Enrolment rates in formal early education (preschool) at age three

- On average, around 63% of children aged three are enrolled in formal early childhood education services in OECD countries. Enrolment rates for children aged three vary considerably across countries.
- Enrolment is close to 100% in France and Belgium, where free early education starts around age three. On the contrary, it is less than 5% in the Netherlands, Ireland and Turkey where most children still attend child care services instead of preschool when participating in ECEC.
- The enrolment rate for three-year-olds in Japan (79.8%) is above the OECD average but lower than in its reference countries Sweden (89.8%) and New Zealand (86.2%). The United Kingdom's enrolment rate is slightly higher at 80%.

Figure B.6. Enrolment rates in early childhood education and care at age three

Children attending full-time and part-time service in 2009



Note: OECD average does not include Greece or Canada. Data for Japan (2008) and Korea (2010) come from National Sources.

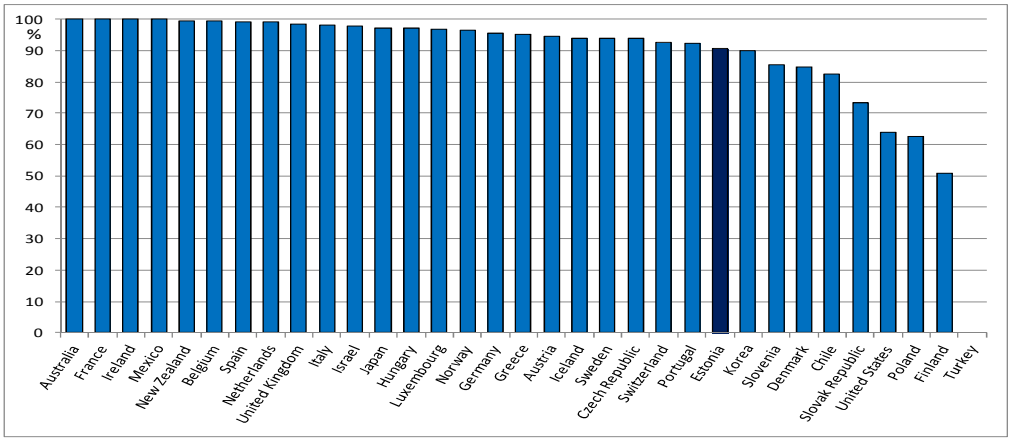
Source: OECD Education Database, November 2011.

6. Enrolment rates in formal early education (preschool) at age five

- In the majority of OECD countries, enrolment rates at age five in early childhood education and care exceed 90%.
- Japan shows almost full enrolment (97.8%), along with Australia, France, New Zealand and the United Kingdom. Enrolment rates in Sweden are lower than those in Japan, though still above the OECD average.

Figure B.7. Enrolment rates in early childhood education (pre-primary education) at age five

Children attending full- and part-time services in 2009



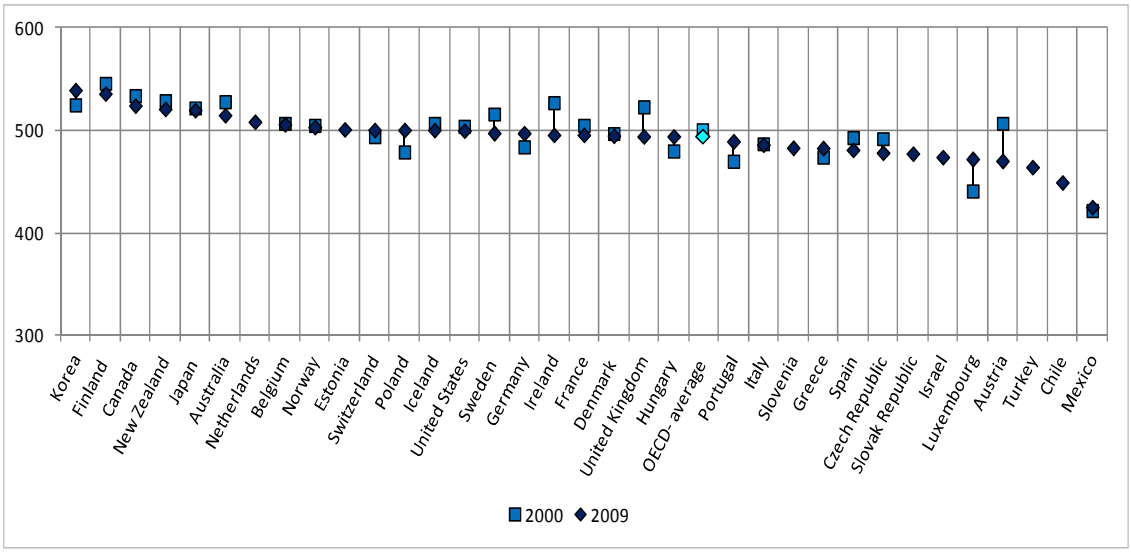
Note: OECD average does not include Canada. Data for Japan (2008) and Korea (2010) come from National Sources.

Source: OECD Education Database, November 2011.

7. PISA 2009 reading performance

- 15-year-olds in Japan score relatively well in comparison to most other OECD countries on the PISA reading test. Only children in Korea, Finland, Canada and New Zealand score better than Japanese students. They outperform their peers in Sweden and the United Kingdom.
- Japan's average for PISA reading test scores have remained stable since 2000; while seven countries, Chile, Israel, Poland, Portugal, Korea, Hungary and Germany, have seen improvements in their scores.
- A closer look at the student distribution by proficiency level can provide further insights. Fifteen-year-olds students in Japan are concentrated in levels 3 and 4.
- Both Japan and New Zealand have an above-average percentage of students at proficiency level 4 or above. In comparison with Sweden and the United Kingdom, Japan has fewer students in level 2 or below.

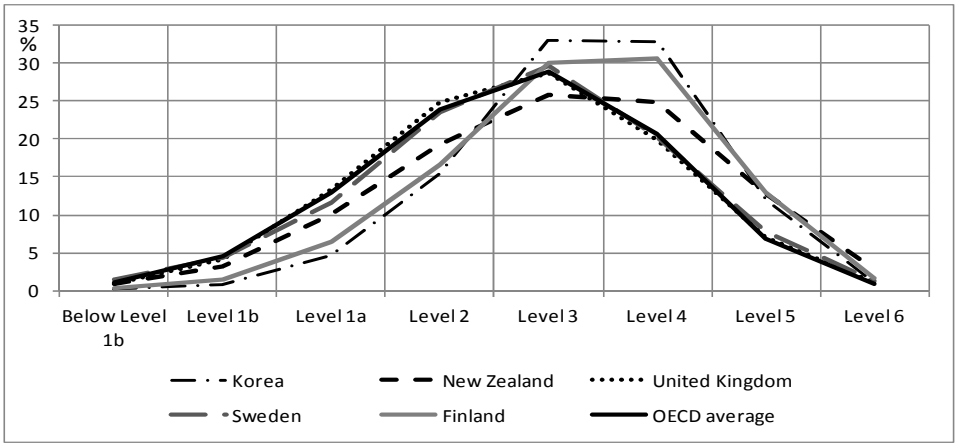
Figure B.8. PISA Reading performance in 2000 and 2009



Source: OECD PISA Databases 2000 and 2009.

Figure B.9. Reading performance dispersion

Percentage of students at the different levels of proficiency in 2009



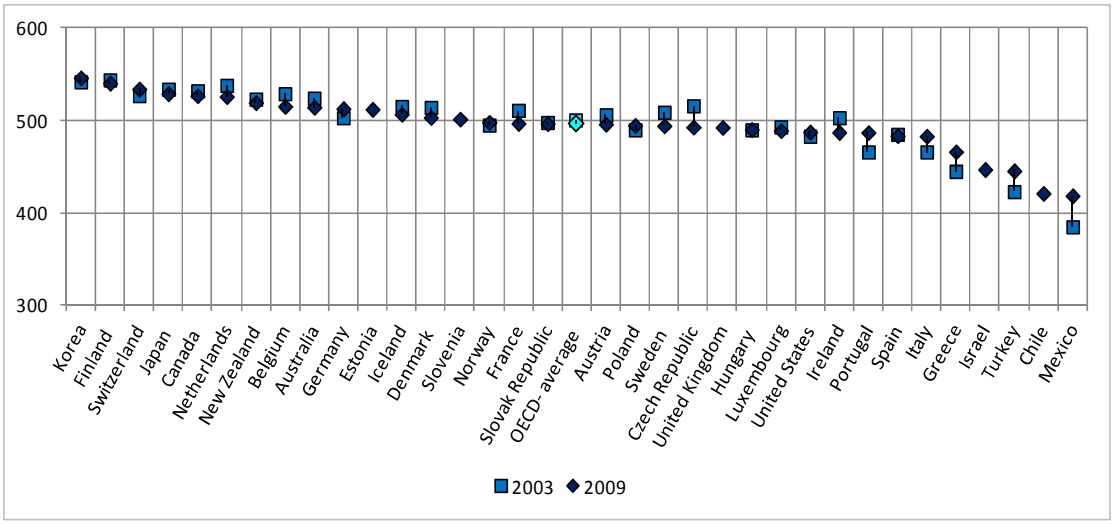
Notes: The OECD Programme for International Student Assessment (PISA) assesses students' reading performance and knowledge about mathematics and science when children are in secondary education at the age of 15. For PISA scores corresponding to each level of proficiency, see PISA Database.

Source: OECD, PISA 2009 Database, Table I.2.1.

8. PISA 2009 mathematics performance

- 15-year-olds in Japan are among the top-performers in the PISA mathematics assessment, but Korean, Finnish and Swiss students outperform the Japanese.
- From 2003 to 2009, Japan's average score decreased by five score points. In Ireland, Sweden, France, Belgium, the Netherlands and Denmark, students' scores decreased with 11 to 16 score points.
- On the distribution scale, Japan has a similar distribution pattern to that of New Zealand with a larger-than-average proportion of students performing at level 3 or 4; while Sweden and the United Kingdom have fewer students at higher proficiency levels and more students at the lower ends.

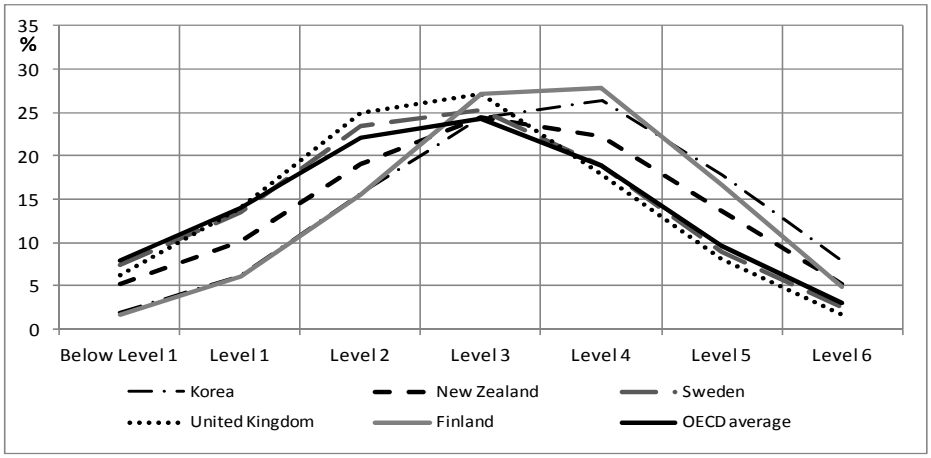
Figure B.10. PISA Mathematics performance in 2003 and 2009



Source: OECD PISA Databases 2003 and 2009.

Figure B.11. Mathematics performance dispersion

Percentage of students at the different levels of proficiency in 2009



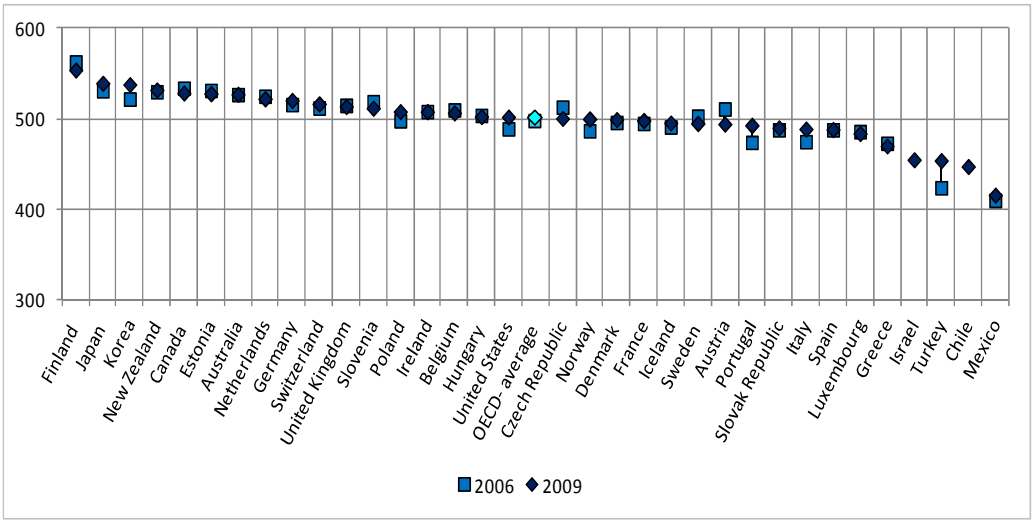
Note: For PISA scores corresponding to each level of proficiency, see PISA Database.

Source: OECD, PISA 2009 Database, Table I.3.1.

9. PISA 2009 science performance

- Fifteen-year-olds in Japan also score well above the average for the PISA science test. Only their Finnish peers do better.
- Japan's performance has increased by 8 score points between 2006 and 2009. Significant improvements in the PISA science test performance are also seen in Turkey, Italy, Norway, Korea, Poland, Portugal and the United States during this period.
- On the performance distribution scale, Japan and New Zealand have a larger-than-average proportion of students at proficiency level 4 or above. Japan also has more students concentrated in the higher levels than New Zealand, Sweden and the United Kingdom.

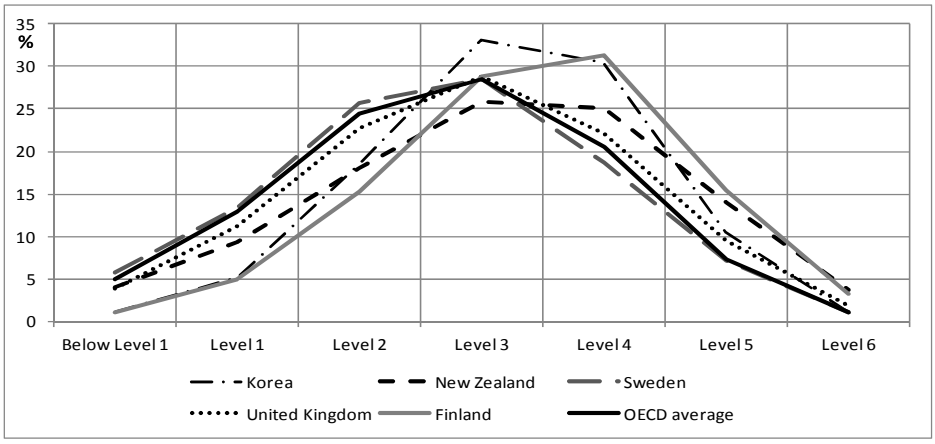
Figure B.12. PISA Science performance in 2006 and 2009



Source: OECD PISA Databases 2006 and 2009.

Figure B.13. Science performance dispersion

Percentage of students at the different levels of proficiency in 2009



Note: For PISA scores corresponding to each level of proficiency, see PISA Database.

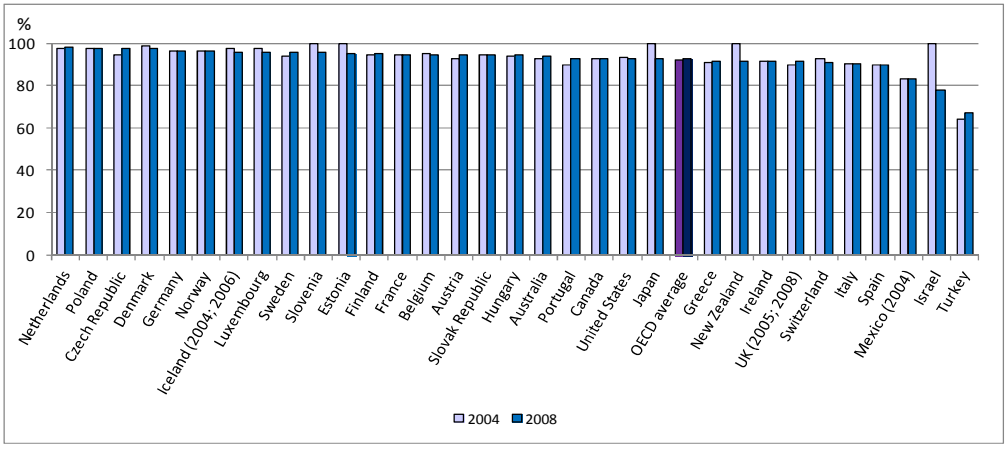
Source: OECD, PISA 2009 Database, Table I.3.4.

10. People aged 15-19 who are in education or work

- On average, 92.4% of all 15-to-19-year-olds in OECD countries are either in education or employment.
- Japan has a similar share of 15-to-19-year-olds working or studying. The number decreased from close to 100% in 2004 to 92.6% in 2008.
- The rest of the population aged 15 to 19 (7.4%) faces the challenge of not attending some form of education or having a job in Japan. New Zealand (8.4%) and the United Kingdom (8.8%) face a similar challenge.

Figure B.14. People aged 15-19 who were in education or work

As a percentage of people aged 15-19 in the total population, 2004 and 2008



Note: In 2008, youth aged 15-24 for Japan. OECD average includes 27 OECD countries.

Source: OECD Education database, 2010.11.

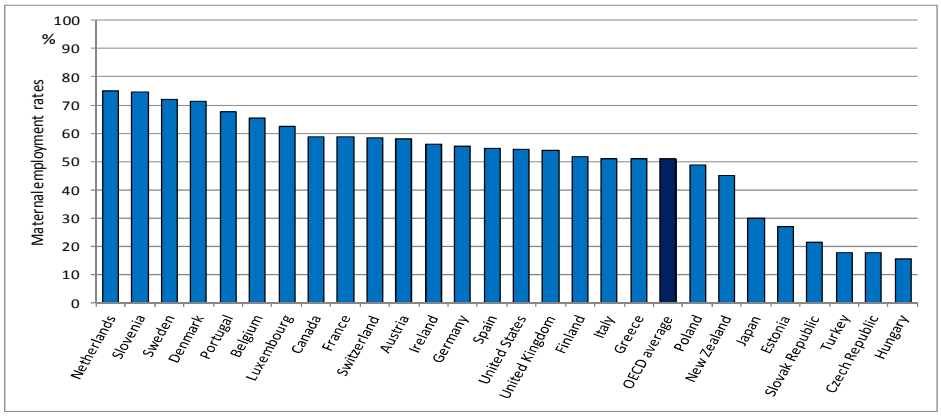
11. Maternal employment rates, age of youngest child under three years

- On average, almost half of all mothers in OECD countries with their youngest child under age three are employed. Employment rates among mothers in Japan with their youngest child under age three are far below the OECD average at 29.8%.

- Employment rates of mothers of under-three-year-olds are much higher in Sweden (71.9%). With the Netherlands and Slovenia, Sweden has the highest maternal employment rates among OECD countries. New Zealand has a lower-than-average proportion of employed mothers with their youngest child under age three (45.1%).

Figure B.15. Maternal employment rates, age of youngest child under three years

In 2008 or latest available year



Note: 2007 for Sweden; 2006 for Mexico and Switzerland; 2005 for Australia, Japan, New Zealand and the United States; 2002 for Iceland; 2001 for Canada; 1999 for Denmark.

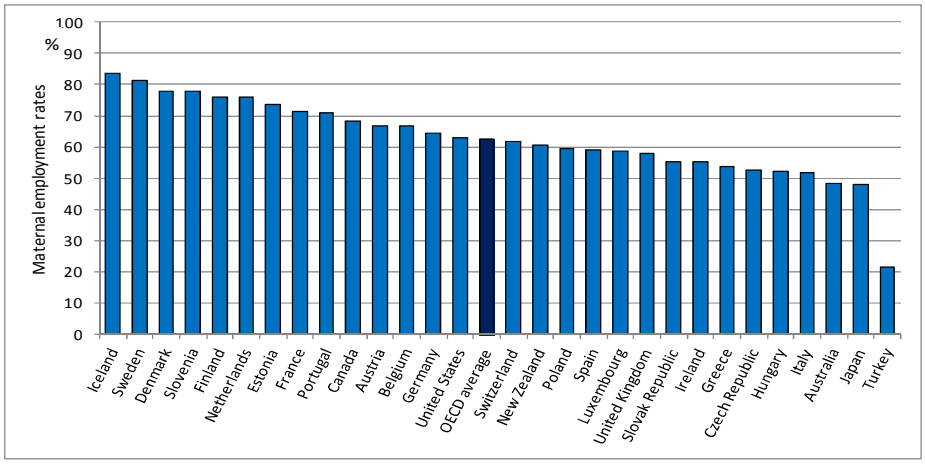
Source: OECD Family Database, May 2011.

12. Maternal employment rates, age of youngest child three to five years

- On average, around 60% of mothers with their youngest child aged three to five are employed in OECD countries. Japan's employment rate for mothers whose youngest child is aged between three and five is among the lowest at 47.9%.
- On the contrary, Nordic countries like Sweden (81.3%) and Denmark (77.8%) have high maternal employment rates. Rates in New Zealand are around the OECD average (60.6%), and the United Kingdom has lower rates than the OECD average.

Figure B.16. Maternal employment rates, age of youngest child three to five years

In 2008 or latest available year



Notes: For 3-5 years, data for Australia and Iceland refer to mothers with a youngest child under age 5. Year 2007 for Sweden; 2006 for Mexico and Switzerland; 2005 for Australia, Japan, New Zealand and the United States; 2002 for Iceland; 2001 for Canada; 1999 for Denmark

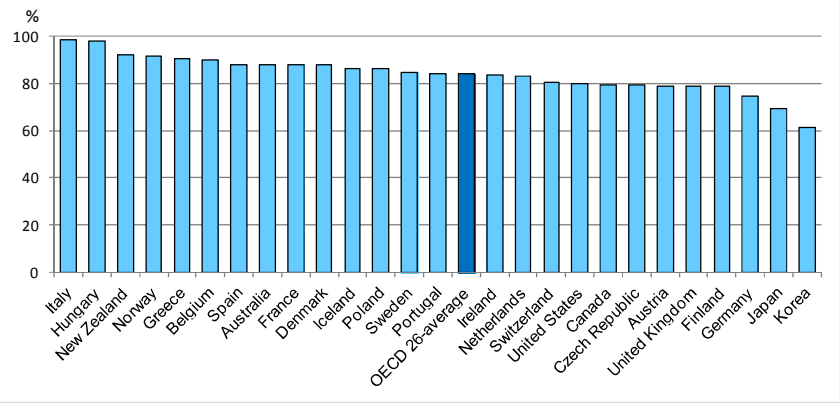
Source: OECD Family Database, May 2011.

13. Gender equality in median earnings of full-time employees

- Among 26 OECD countries, women in full-time employment earn, on average, 82.4% of the median earning of their male colleagues.
- Japan has below-average gender equality in median earnings (69.3%), indicating that there are relatively large differences in earnings between men and women. New Zealand (92.2%), Sweden (84.6%) and the United Kingdom (79%) have a greater gender earning equality than Japan.

Figure B.17. Gender equality in median earnings of full-time employees

In 2008 or latest available year



Source: OECD Family Database, May 2011.

NOTES

1 The 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.

ANNEX C. FIGURES FOR SPIDER WEB ON POLICY INPUTS[1]

Eleven indicators have been selected to compare Japan's policy inputs with other OECD countries based on the available data for international comparison.

1. Public child care and education expenditure at age three
2. Public child care and education expenditure at age five
3. Public spending on family benefits in cash and tax measures at age two
4. FTE (Full Time Equivalent) paid maternity leave
5. FTE (Full Time Equivalent) unpaid maternity leave
6. Required ISCED levels for staff working for the care sector
7. Required ISCED levels for teaching staff working for the education sector
8. Staff-child ratio in child care, zero-to-three-year-olds
9. Staff-child ratio in preschool or kindergarten, three years to compulsory schooling age
10. Remuneration for teaching staff in preschool or kindergarten
11. Proportion of male staff at kindergarten/preschool

Japan has selected international comparison with a focus on New Zealand, Sweden and the United Kingdom where data are available.

1. Public child care and education expenditure at age three

- Lower public spending on child care and education at the early stage might lead to an increase in informal or private ECEC provision. In countries with low public ECEC expenditures, child care fees can become a barrier to enrolling children in the services although the government can support families in coverage of ECEC costs through other means, such as tax breaks and child-related benefits.
- Japan has a below-average public expenditure level on ECEC for three-year-olds. Between 2003 and 2007, there was a decrease in public spending on ECEC for three-year-olds (Figure C.1).

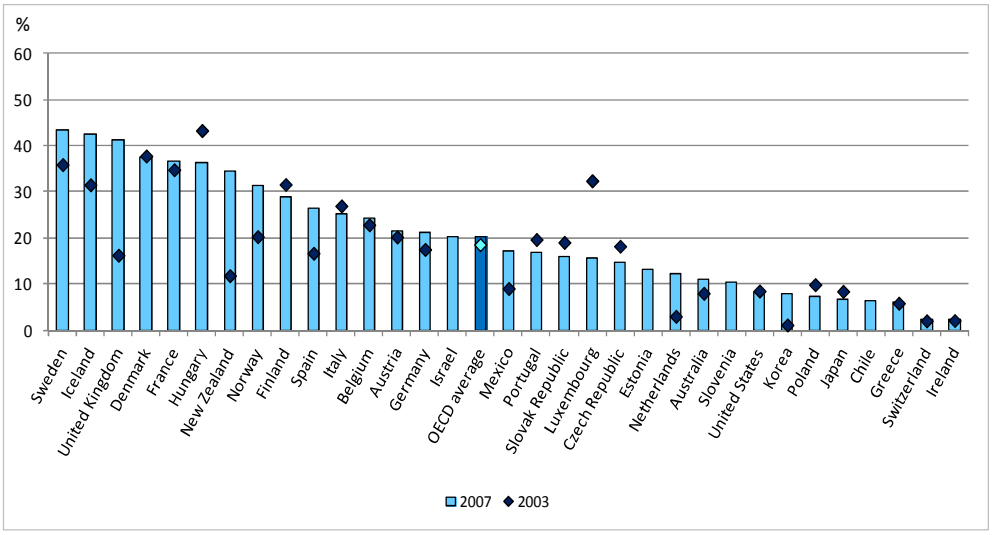
Net child care costs

- Net child care costs vary across OECD countries. Policy measures to support families financially in covering the costs of ECEC and child raising also vary widely. Broadly, four approaches can be indentified:
  1. The costs are set high, and the net costs remain high even after counting child-related benefits and tax credits;
  2. The costs are set high, but the net costs are lower after counting the benefits;
  3. The costs are set low or at the margin of the affordable level, and no effects by the benefits are observed; and
  4. The costs are set low or at the margin of the affordable level, and further, the net costs are made lower.

- Japan takes the first approach for couple families, while taking the fourth approach for sole-parent families. The child care costs for couple families in Japan with different levels of income are higher than the OECD average and remain above average after accounting for child-related benefits and tax deductions. On the contrary, net child care costs for single parent families in Japan reduce significantly after accounting for child-related benefits.
- For dual earning families, the average child care costs in the OECD are equal to 27% of the average wage, and the net child care costs are 18.4% of the average wage. In Japan, the child care costs are set at 37.6% of the average wage, far above the OECD average. After accounting for child-related benefits and tax breaks, the child care costs are reduced to 28%, which is still above the OECD average (Figure C.2).
- In single-parent families with the average wage, child care fees are below the OECD average with 23.9%, while net child care costs are equal to the OECD average with 12.2%. Moreover, in almost half of the OECD countries, the net child care cost for a sole parent earning 50% of average earnings is less than half of those for sole parents on average earning. In Japan, although child care fees are set above the OECD average, the net costs decrease significantly below the OECD average after distribution of child-related benefits (Figure C.3).

Figure C.1. Public spending on early education and child care per child at age three

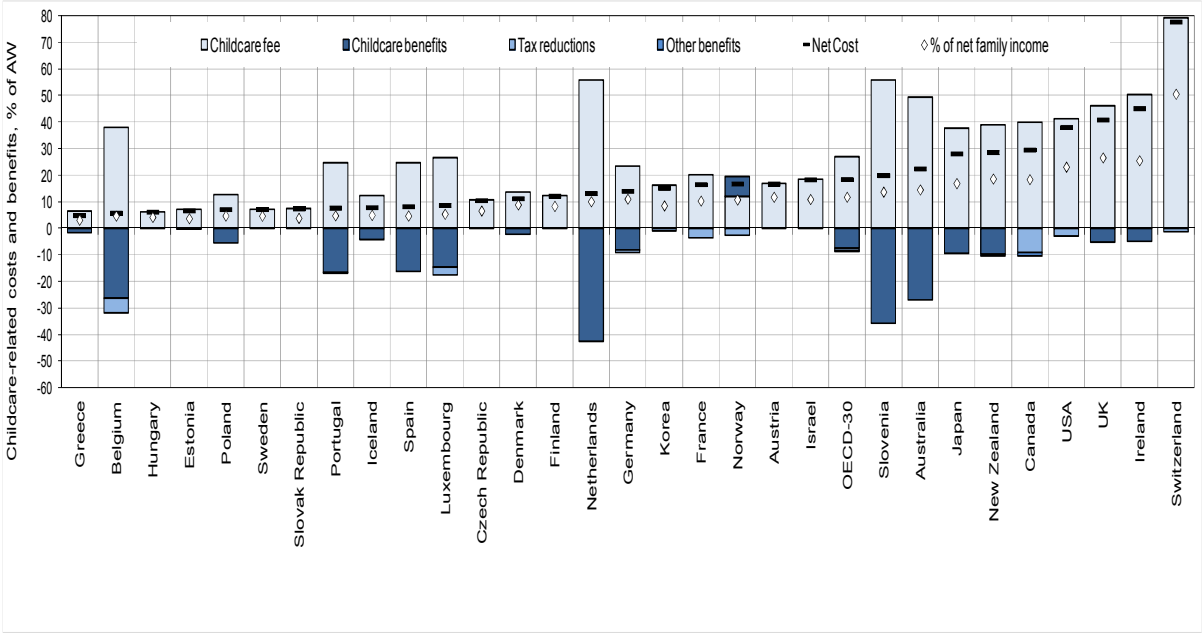
% of median working-age household income (2003 and 2007)



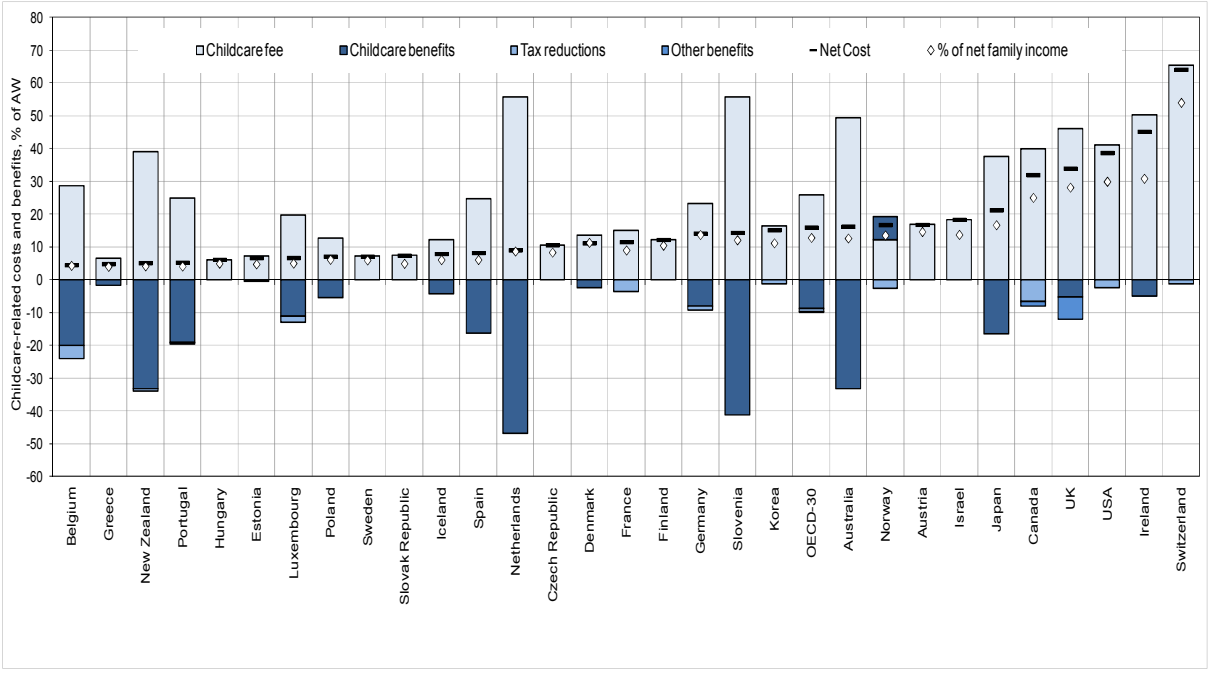
Source: OECD (2009), *Doing Better for Children*, OECD Publishing and OECD (2011), *Doing Better for Families*, OECD Publishing.

Figure C.2. Components of net child care costs for couple families, 2008

Panel A. Both earn 100% of average wage



Panel B. Male earns 100% and female earns 50% of average wage

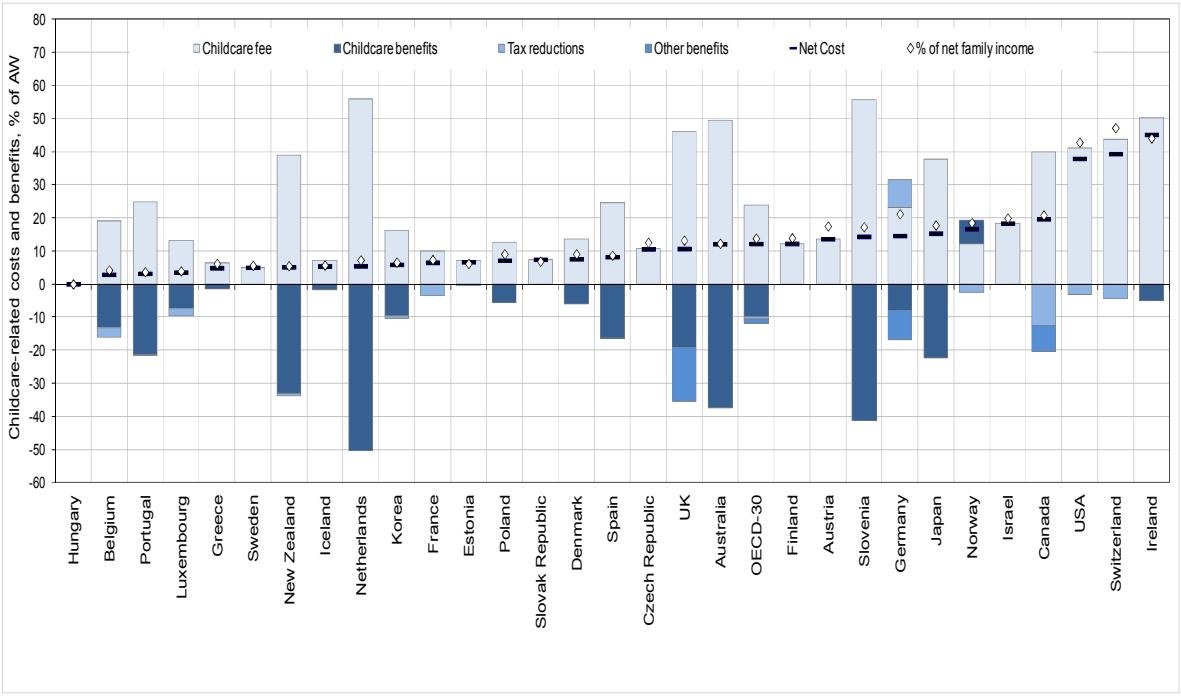


Notes: The child care cost calculations for Austria reflect the situation in Vienna; for Belgium, the French community; Canada, the province of Ontario; the Czech Republic in villages and towns with more than 2 000 inhabitants; for Germany, Hamburg; for Iceland, Reykjavík; for Switzerland, Zürich; for the United Kingdom, England; and for the United States, Michigan. These results do not represent the situation in the rest of the country. For example, net child care costs in the Canadian provinces of Alberta or Québec will be different from Ontario. Information on data for Israel: http://dx.doi.org/10.1787/888932315602.

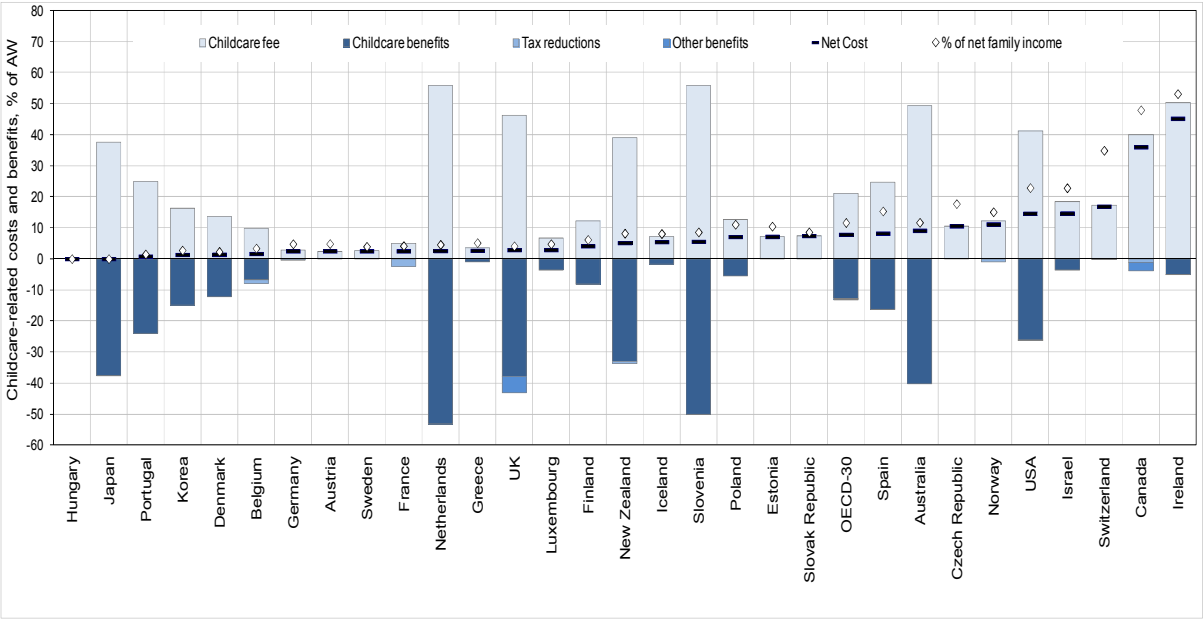
Source: OECD Tax/Benefit models, 2008 from OECD (2011), *Doing Better for Families*, OECD Publishing.

Figure C.3. Components of net child care costs for sole-parent families, 2008

Panel A. Sole parent earns 100% of the average wage



Panel B. Sole parent earns 50% of the average wage



Notes: Results are for 2008. Two children aged 2 and 3. "Family net income" is the sum of gross earnings plus cash benefits minus taxes and social contributions. All fee reductions, including free preschool of child care for certain age groups, are shown as rebates where possible. The child care cost calculations for Austria reflect the situation in Vienna; for Belgium, the French community; Canada, the province of Ontario; the Czech Republic in villages and towns with more than 2 000 inhabitants; for Germany, Hamburg; for Iceland, Reykjavík; for Switzerland, Zürich; for the United Kingdom, England; and for the United States, Michigan. Child care fees used are those determined by government, at either the national or local level, in Belgium, the Czech Republic, Finland, France, Hungary, Iceland, Israel, Japan, Korea, Latvia, Lithuania, Poland, the Slovak Republic and Slovenia. Child care fees for Greece are calculated according to national guidelines. Information on data for Israel: http://dx.doi.org/10.1787/888932315602

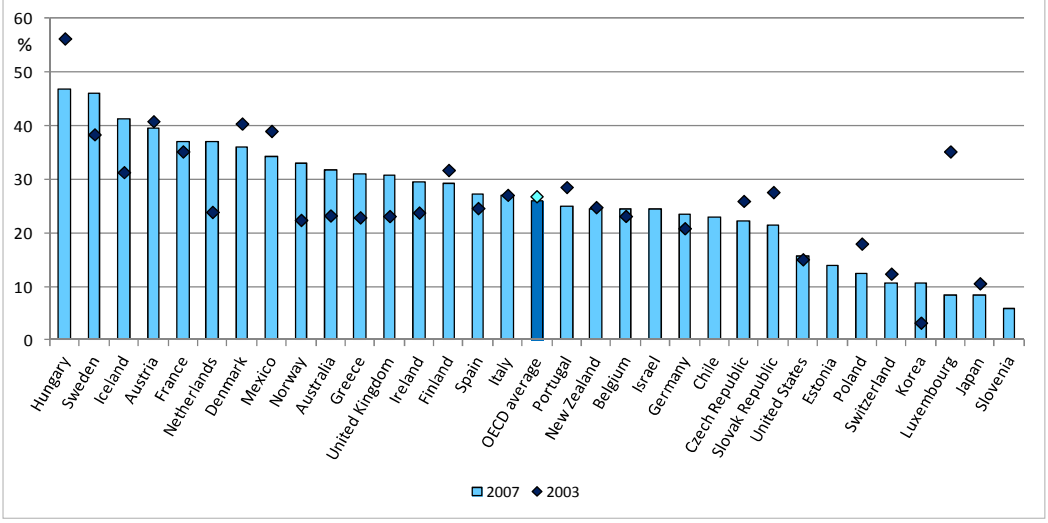
Source: OECD (2008b) Tax/Benefit models from OECD (2011), *Doing Better for Families*, OECD Publishing.

2. Public child care and education expenditure at age five

- Japan has a below-average level of public expenditure on ECEC for five-year-olds. Since 2003, Japan experienced a decrease in child care and education expenditure at age five.
- In comparison with its reference countries, Sweden, the United Kingdom and New Zealand have much higher public spending levels on ECEC for five-year-old children than Japan.

Figure C.4. Public spending on early education and child care per child at age five

% of median working-age household income (2003 and 2007)



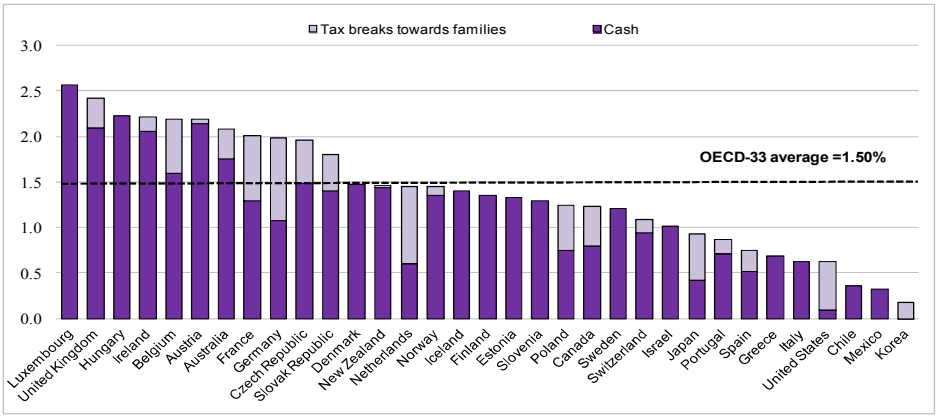
Source: OECD (2009), *Doing Better for Children*, OECD Publishing and OECD (2011), *Doing Better for Families*, OECD Publishing.

3. Public spending on family cash benefits and tax measures

- Besides providing in-kind ECEC services, OECD countries implement measures to financially support families in covering the costs of ECEC and child rearing by distributing cash benefits and tax credits to families.
- Public spending on such measures is, on average, 1.5% of GDP. Japan spends a relatively low proportion of GDP on cash benefits and tax credits with 0.9% of GDP (Figure C.5).
- In comparison with the reference countries, public spending on children in the form of cash benefits and tax breaks is significantly higher in the United Kingdom. New Zealand and Sweden also spend a larger share of GDP than Japan, although New Zealand and Sweden's shares are below the OECD average. These countries spend larger shares on funding ECEC services directly.
- Public spending on family benefits and education changes with the age of the child (Figures C.6 and C.7). Japan invests more in family benefits, almost only through cash transfers, at the earlier stage (birth to age one); while spending on education increases in middle and late childhood (ages six to 18) after compulsory schooling starts.
- In comparison with the reference countries, Sweden and the United Kingdom spend a larger share of the median household income on family benefits at the earlier stage of childhood than Japan. Public expenditure on ECEC in both countries also peak from ages three to five.

Figure C.5. Public spending on family benefits in cash and tax measures

As a percentage of GDP in 2007

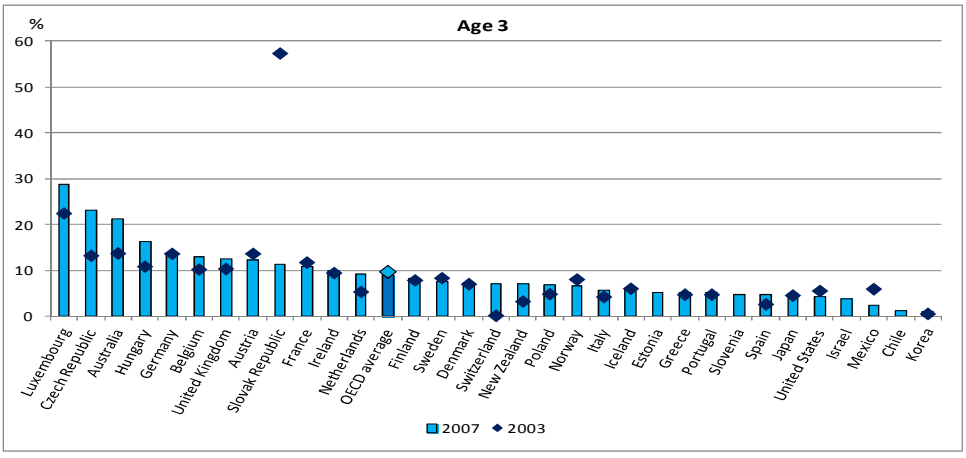


Note: Public support accounted here only concerns public support that is exclusively for families (*e.g.*, child payments and allowances, parental leave benefits and child care support). Spending recorded in other social policy areas as health and housing support). Spending recorded in other social policy areas as health and housing support also assists families, but not exclusively, and is not included here. Data on tax breaks towards families is not available for Chile, Estonia, Greece, Hungary, Israel and Slovenia.

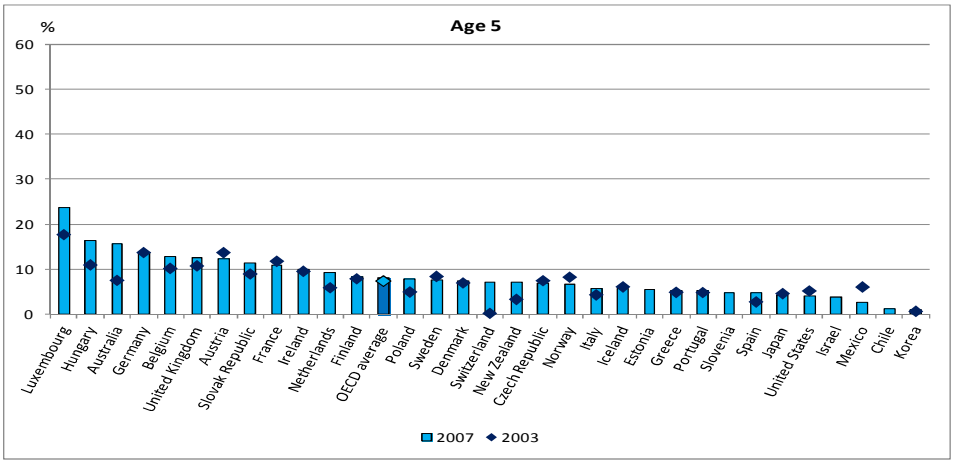
Source: OECD Social Expenditure Database (www.oecd.org/els/social/expenditure), 2010, and ESSPROS, 2010.

Figure C.6. Public spending on family benefits in cash and tax measures per child, % of median working-age household income (2003 and 2007)

Panel A. At age 3



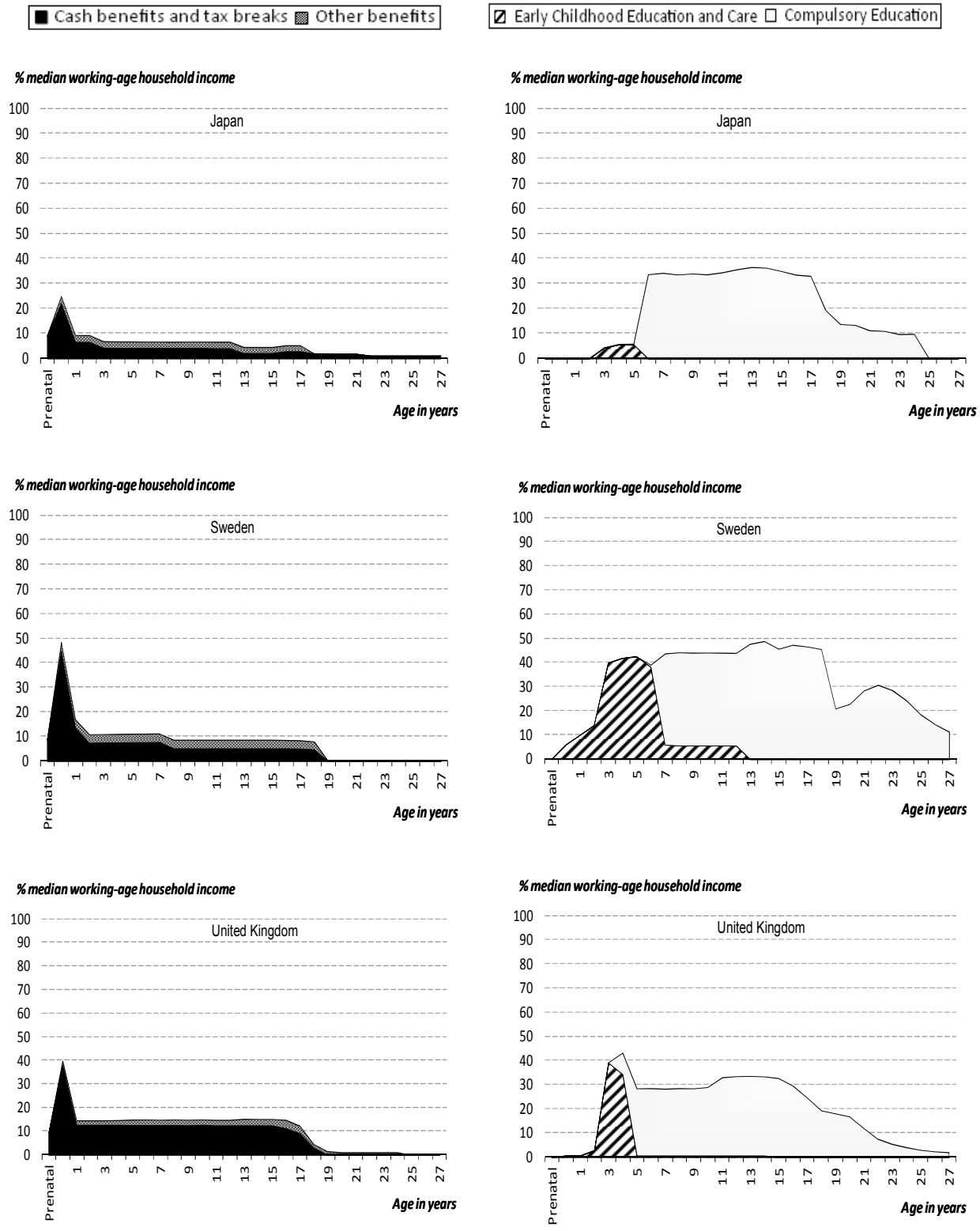
Panel B. At age 5



Source: OECD (2011), *Doing Better for Families*, OECD Publishing.

Figure C.7. Public spending on cash benefits and ECEC services per child

As a proportion of median working-age household income across different age groups, 2007



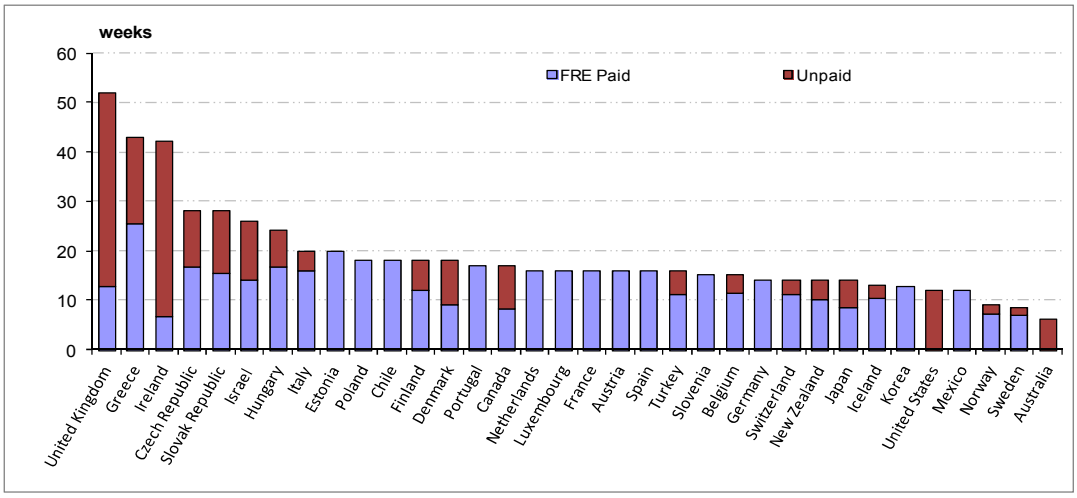
Source: OECD (2011), *Doing Better for Families*, OECD Publishing.

4 - 5. FTE (Full Time Equivalent) paid and unpaid maternity leave[2]

- On average, mothers have a total of 19 weeks of maternity leave in the 34 OECD countries, with a significant variation in length and in the combination of different types of leave (paid versus unpaid).
- Japan provides paid maternity leave for a period of 8.4 weeks and unpaid maternity leave for 5.6 weeks: both are below the OECD average. Mothers in New Zealand (10 weeks) and Sweden (6.8 weeks) also have a relatively short length of paid maternity leave, although unpaid maternity leave entitlements are also in place. In the United Kingdom, paid maternity leave is equal to the OECD average at 12.8 weeks, while unpaid maternity leave (39.2 weeks) is far higher than the average (6.1 weeks).

Figure C.8. Child-related leave periods: Paid and unpaid maternity leave in weeks

Entitled and expressed as a % of maternity leave at Full-Rate Equivalent (FRE) pay, 2007/08



Source: OECD Family database, May 2011.

6 - 7. Required ISCED levels for different types of ECEC staff

- Among most OECD countries, staff in caring positions have lower qualification requirements than staff in teaching positions: most staff in child care need a qualification equal to ISCED level 3, while it is ISCED level 5 for teaching staff.
- Japan implements a minimum qualification requirement of ISCED level 5 for both nursery workers and kindergarten teachers. Scotland does so as well, while staff in caring positions in Sweden and New Zealand need a qualification set at ISCED level 3.

Figure C.9. Minimum required ISCED level for different types of ECEC staff

	Staff working for the care sector
	Teaching staff working for the education sector or in an integrated system for care and education
	Compulsory schooling

Country	Age 0	1	2	3	4	5	6	7
Australia	Child care Worker (4) / Child care Manager (5)							
	Preschool/Kindergarten Teacher (5A)							
Austria	Kindergarten Pedagogue (4A)							
Belgium (Flemish Community)	Child care Worker in the care sector (3)							
			2.5y	Child care Worker in the education sector (3)				
			2.5y	Kindergarten teacher / Pedagogue (5B)				
Belgium (French Community)	Child care Worker (3)							
			2.5y	Pre-Primary Teacher (5)				
Canada (British Columbia)	Early childhood educator (3)							
						Kindergarten teacher (5A)		
Canada (Manitoba)	Early Childhood Educator (5B)							
						Kindergarten teacher (5)		
Canada (Prince Edward Island)	Family Day Carer (3) / Child carer in centre-based care (4)							
					Kindergarten teacher (4)			
Czech Republic	Child care Worker (3)				Pedagogue (3)			
Denmark	Pedagogue (5)							
Estonia		1.5y	Preschool pedagogue (5)					
Finland	Child care worker in kindergarten (2/3 of staff should have at least level 3)							
	Kindergarten Teacher (5B)						Pre-primary Teacher (5B)	
Germany	Child care worker (3)							
	Pedagogue (4A)							
	Pedagogue for childhood or social pedagogue (5)							
Hungary	Child care Worker (3)			Pedagogue (5)				
Ireland				Pre-primary Teacher (5)				
Israel	Child care Teacher (5)							
				Pre-Premary Teacher (5)				
Italy	Educator (child care centres) (5B)			Pre-primary teacher (6)				
Japan	Nursery Teacher (5B)							
				Kindergarten Teacher (5B)				
Korea	Child care Worker (3)							
				Pre-Primary Teacher (5)				
Luxembourg				Pre-Primary Teacher (Instituteur) / Educator (5B)				
Mexico	Indigenous ECEC Teacher (3)			Indigenous preschool Teacher (3)				
	ECE/Preschool Teacher (5)							
Netherlands	Child carer (centred child care) / Official Childminder (3)							
			Playgroup Leader (3)		Kindergarten/ primary school teacher(4)			until 12 y
New Zealand	Playcentre Leader (3)							
	Qualified Education and Care Teacher / Kindergarten Teacher (5B)							
	Teacher for pacific/indiginous children (Kaiako) (5B)							
Norway	Child/Youth Worker (3)							
	Pedagogical Leader (Kindergarten & Family Kindergarten) / Head Teacher (5A)							
Poland	Child care Worker (3)			Kindergarten teacher (5)				
Portugal	Preschool Teacher (5A)							
Slovak Republic	Nursery School Worker (3B)			Kindergarten Teacher (3)				
Slovenia	Family Day Carer (3)							
	Preschool teacher (5B)							
Spain	Early education teacher (5B)			Preschool teacher (5A)				
Sweden		Child minder (3)						
		Preschool teacher (5A)						
Turkey				Pre-Primary Teacher (5A)				
United Kingdom (Scotland)	Child care practitioners (5)							
				Preschool Teacher (5)				
United States (Georgia, Massachusetts, North Carolina, Oklahoma)				Preschool Teacher (5)				

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

8. Staff-child ratio in formal day care services for zero-to-three-year-olds

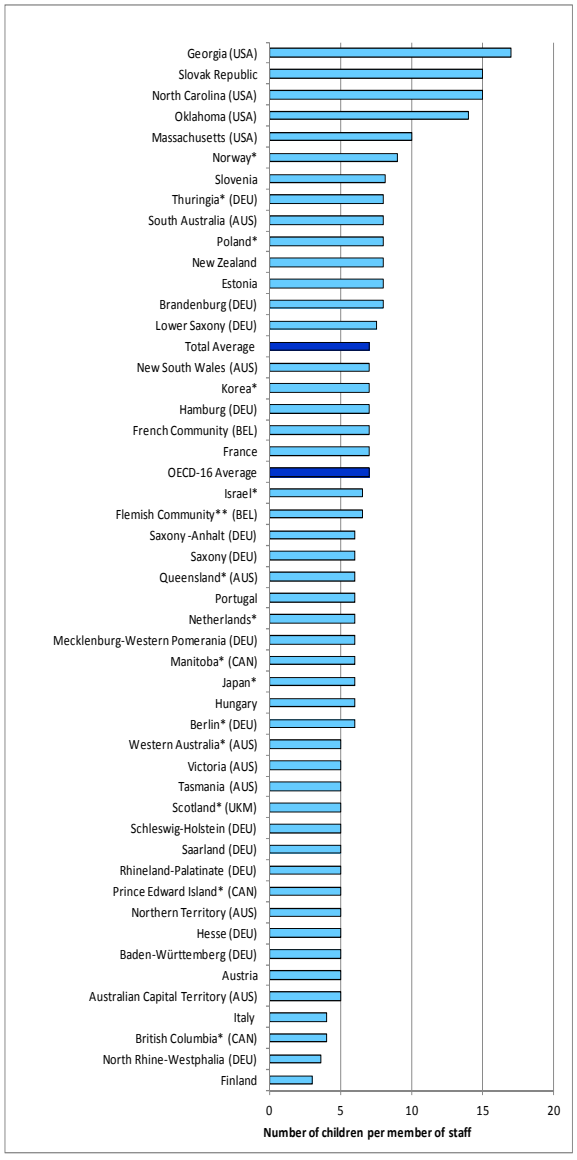
- Infants and toddlers need more intensive care than other young children. Therefore, countries set different minimum standards for young children aged zero to three than for older children in preschool. The average staff-child ratio for zero-to-three-year-olds is one caregiver looking after seven children in formal day care services.
- In Japan, a caregiver looks after fewer children (six children per staff member) than the average, which allows more time for staff to interact with each child.
- The ratio is higher in New Zealand with eight children per staff member, while caring staff in Scotland have a regulated ratio of 1:5. Sweden does not set a regulated minimum staff-child ratio, but the average staff-child ratio is 1:5.3 (Figure C.10, Panel A).

9. Staff-child ratio in kindergarten or preschool services for three-to-six-year-olds

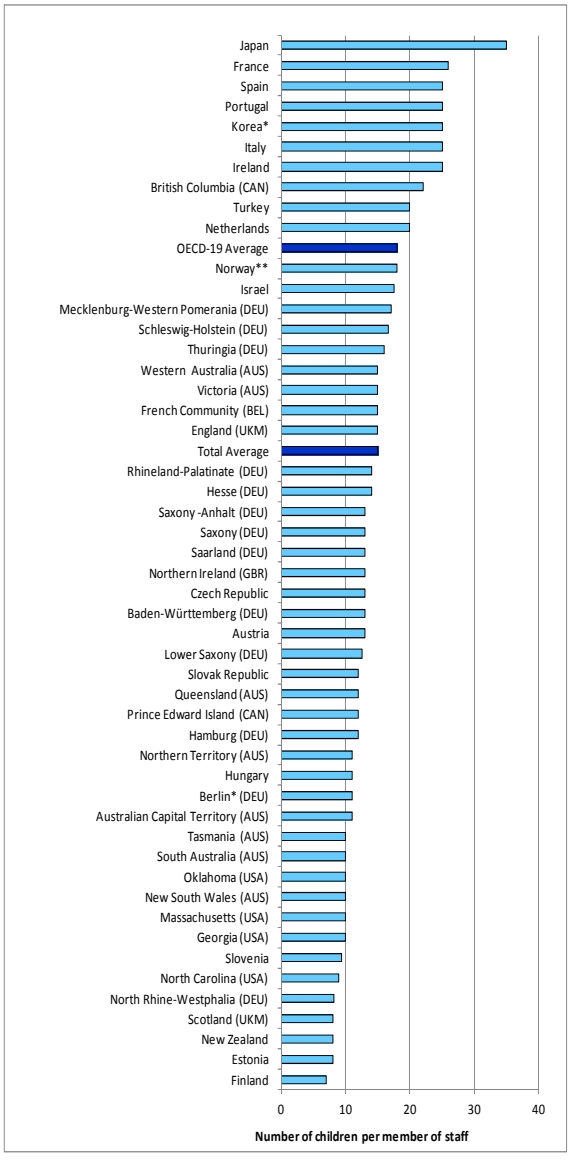
- Regulated staff-child ratios in ECEC are often larger for older children, although the actual ratio can be better than the regulated ratio.
- On average (total average of all countries in Figure 1.29, Panel B), one preschool teacher is assigned to 15 children in preschool services, with a significant variation across countries.
- Japan has the highest staff-child ratio in preschool (35 children per staff member). New Zealand and Scotland (United Kingdom) have smaller ratios with eight children per staff member. Again, Sweden does not have a regulated ratio in place, but the average ratio is 16 children per preschool teacher in preschool class for six-year-olds (Figure C.10, Panel B).

Figure C.10. Child-to-staff ratio in ECEC services

Panel A. In child care (zero-to-three-year-olds for integrated system)



Panel B. In kindergarten or preschool (three years to compulsory schooling age for integrated system)



* Jurisdictions with separate regulations for staff-child ratio for different age groups, the data given is based on: 3-6-year-olds attending for 5-7 hours per day regarding Berlin; and 4-year-olds regarding Korea.

** The figure for Norway applies only to qualified kindergarten teachers, whereas regulation stipulates that if other staff will also be present in the kindergarten setting, the number of children per member of staff is effectively lower. The figure for Norway is based on regulation for 3-6-year-olds.

* Jurisdictions with separate regulations for different age groups, the data given is based on: Berlin (DEU), 2-3-year-olds (attending 5-7 hours per day); British Columbia (CAN), 0-3-year-olds; Israel, 2-3-year-olds; Japan, 1-2-year-olds (while the country has different ratios in place for different ages: the ratio for age 0 is 1:3; age 1-2, 1:6; age 3, 1:20; and age 4, 1:30 – only data regarding 1-2-year-olds is included in the figure); Korea, 2-year-olds; Manitoba (CAN), 2-3-year-olds; Netherlands, 2-3-year-olds; Norway, 0-3-year-olds; Prince Edward Island (CAN), 2-3-year-olds; Queensland (AUS) 2-3-year-olds; Scotland (UKM), 2-3-year-olds; Thuringia (DEU), 2-3-year-olds; Western Australia (AUS), 2-3-year-olds. For Poland, when there is a disabled child in the playroom, the ratio is set at 1:5.

**Subsidised facilities only

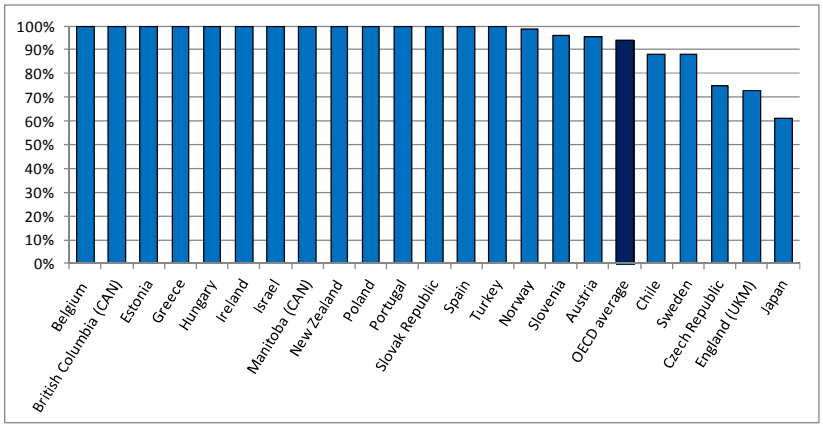
Notes: The Total Average is based on data for all countries and jurisdictions included in the respective figures. For Panel A, OECD-19 Average is only based on data reported for OECD countries, excluding regions and territories, and is calculated based on data from: Austria, Czech Republic, Estonia, Finland, France, Hungary, Ireland, Israel, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Slovenia, Spain and Turkey. For Panel B, OECD-16 Average is only based on data reported for OECD countries, excluding regions and territories, and is calculated based on data from: Austria, Estonia, Finland, France, Hungary, Israel, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic and Slovenia.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

10. Remuneration for teaching staff in preschool or kindergarten, compared to primary teachers

- On average, teaching staff in preschool or kindergarten earn 94% of the average wage of primary school teachers. In many OECD countries, pre-primary and primary teaching staff are paid at the same rate, such as in Belgium, New Zealand and Portugal.
- In Japan, pre-primary teachers are paid less than primary teachers, earning 61% of their average wage. Sweden and England (United Kingdom) are also below the OECD average in remuneration for teaching staff in preschool or kindergarten, but remuneration levels for preschool staff in comparison to primary teachers are higher than in Japan.

Figure C.11. Remuneration for ECEC staff compared to primary teachers

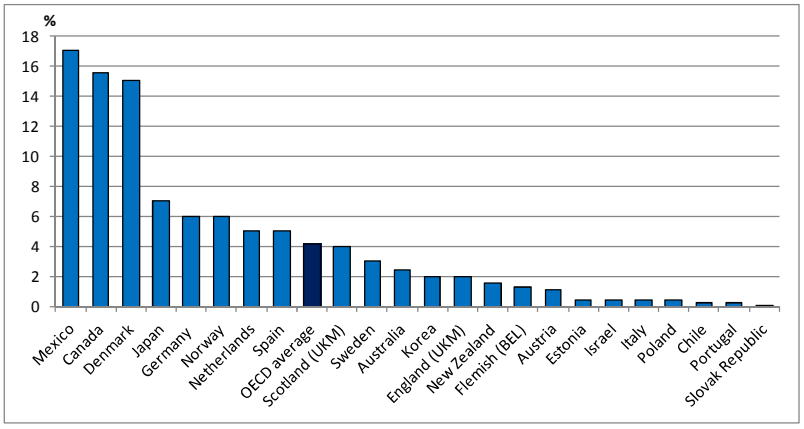


Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

11. Proportion of male staff at preschool or kindergarten

- In OECD countries, the ECEC sector remains female dominated with only a small proportion of men working in ECEC.
- In Japan, 7% of all ECEC workers are male, which is above the OECD average (4.2%). In comparison with its reference countries, Sweden, New Zealand and the United Kingdom have smaller proportions of male staff than Japan.

Figure C.12. Proportion of male staff at preschool or kindergarten



Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

NOTES

1 The 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.

2 Maternity Leave (or pregnancy leave): employment-protected leave of absence for employed women at around the time of childbirth, or adoption in some countries. The ILO convention on maternity leave stipulates the period of leave to be at least 14 weeks. In most countries beneficiaries may combine pre- with post-birth leave; in some countries a short period of pre-birth leave is compulsory as is a 6 to 10 week leave period following birth. Almost all OECD countries have public income support payments that are tied to taking maternity leave. In some countries (Germany, Iceland, Norway and Sweden), there is no separate regulation for maternity leave with stipulations integrated into the parental leave scheme.

ANNEX D. NOTES TO THE SPIDER WEBS

Table D.1. Overview of available indicators per country: Policy outcomes

Country	Fertility	Enrolment in formal care for children under age 3	Enrol-ment rates at age 3	Enrol-ment rates at age 5	PISA Reading/ Maths/ Science	Healthy weight rates among 15 year-olds	Children under age 18 above poverty line	School continuing survival	People aged 15-19 who were in education or work	Maternal employment rates, age of youngest child under 3 years	Maternal employment rates, age of youngest child 3-5 years	Gender equality in median earnings of full-time employees
Australia	x	x	x	x	x	m	x	m	x	m	x	x
Austria	x	x	x	x	x	x	x	x	x	x	x	x
Belgium	x	x	x	x	x	x	x	x	x	x	x	x
Canada	x	x	m	m	x	x	x	m	x	x	x	x
Chile	x	x	x	x	x	m	x	m	m	m	m	m
Czech Republic	x	x	x	x	x	x	x	x	x	x	x	x
Denmark	x	x	x	x	x	x	x	x	x	x	x	x
Estonia	x	x	x	x	x	x	x	m	x	x	x	m
Finland	x	x	x	x	x	x	x	x	x	x	x	x
France	x	x	x	x	x	x	x	x	x	x	x	x
Germany	x	x	x	x	x	x	x	x	x	x	x	x
Greece	x	x	m	x	x	x	x	x	x	x	x	x
Hungary	x	x	x	x	x	x	x	x	x	x	x	x
Iceland	x	x	x	x	x	x	x	x	x	m	x	x
Ireland	x	x	x	x	x	x	x	x	x	x	x	x
Israel	x	x	x	x	x	m	x	m	x	m	m	m
Italy	x	x	x	x	x	x	x	x	x	x	x	x
Japan	x	x	x	x	x	m	x	m	x	x	x	x
Korea	x	x	x	x	x	m	x	m	m	m	m	x
Luxembourg	x	x	x	x	x	x	x	x	x	x	x	m
Mexico	x	x	x	x	x	m	x	m	x	m	m	m
Netherlands	x	x	x	x	x	x	x	x	x	x	x	x
New Zealand	x	x	x	x	x	m	x	m	x	x	x	x
Norway	x	x	x	x	x	x	x	x	x	m	m	x
Poland	x	x	x	x	x	x	x	x	x	x	x	x
Portugal	x	x	x	x	x	x	x	x	x	x	x	x
Slovak Republic	x	x	x	x	x	x	x	x	x	x	x	m
Slovenia	x	x	x	x	x	x	x	x	x	x	x	m
Spain	x	x	x	x	x	x	x	x	x	x	x	x
Sweden	x	x	x	x	x	x	x	x	x	x	x	x
Switzerland	x	m	x	x	x	x	x	m	x	x	x	x
Turkey	x	m	x	x	x	x	x	x	x	x	x	m
United Kingdom	x	x	x	x	x	x	x	x	x	x	x	x
United States	x	x	x	x	x	x	x	m	x	x	x	x

Note: The table shows the availability of the indicators for each country; “m” is for missing and “x” for available.

Table D.2. Overview of available indicators per country: Policy inputs

Country	Public child care and education expenditure at age 3	Public child care and education expenditure at age 5	Public spending on family benefits in cash and tax measures	FTE paid maternity leave	FTE paid paternity leave	Required ISCED levels for staff at the care sector	Required ISCED levels for teaching staff at the education sector	Staff-child ratio in child care for 0-to-3-year-olds	Staff-child ratio in kindergarten/pre-school services for 3-to-6-year-olds
Australia	x	x	x	x	m	x	x	x	x
Austria	x	x	x	x	x	m	x	x	x
Belgium	x	x	x	x	x	x	x	x	x
Canada	m	m	x	x	m	m	m	x	x
Chile	x	x	x	m	x	m	m	m	m
Czech Republic	x	x	x	x	m	x	x	m	x
Denmark	x	x	x	x	x	m	x	m	m
Estonia	x	x	x	x	x	m	x	x	x
Finland	x	x	x	x	x	x	x	x	x
France	x	x	x	x	x	m	m	x	x
Germany	x	x	x	x	x	x	x	x	x
Greece	x	x	x	x	x	m	m	m	m
Hungary	x	x	x	x	x	x	x	x	x
Iceland	x	x	x	x	x	m	m	m	m
Ireland	x	x	x	x	x	m	x	m	x
Israel	x	x	x	x	m	x	x	x	x
Italy	x	x	x	x	m	x	x	x	x
Japan	x	x	x	x	m	x	x	x	x
Korea	x	x	x	x	x	x	x	x	x
Luxembourg	x	x	x	x	x	m	x	m	m
Mexico	x	x	x	x	m	x	x	m	m
Netherlands	x	x	x	x	x	x	x	x	x
New Zealand	x	x	x	x	m	x	x	x	x
Norway	x	x	x	x	x	x	x	x	x
Poland	x	x	x	x	x	x	x	x	m
Portugal	x	x	x	x	x	m	x	x	x
Slovak Republic	x	x	x	x	m	x	x	x	x
Slovenia	x	x	x	x	x	x	x	x	x
Spain	x	x	x	x	x	x	x	m	x
Sweden	x	x	x	x	x	x	x	m	m
Switzerland	x	x	x	x	m	m	m	m	m
Turkey	m	m	m	x	m	m	x	m	x
United Kingdom	x	x	x	x	x	x	x	x	x
United States	x	x	x	x	m	m	x	x	x

Note: The table shows the availability of the indicators for each country; “m” is for missing and “x” for available.

ANNEX E. METHODOLOGY AND DATA SOURCES FOR THE SPIDER WEBS

Table E.1. Spider web methodological notes and data sources: Policy outcomes

Indicator	Notes	Source
Fertility	Year 2009 or latest available year. 2007 for Belgium and Canada; 2008 for Australia, Germany, Greece, and Iceland.	National Statistical Offices, 2010, and Eurostat Demographic Statistics, 2010. (OECD Family database, 2011).
Infant survival	Year 2008 or latest available year. 2007 instead of 2008 for Canada and Ireland; 2006 for Korea and the United States. Infant survival rates are calculated as the inverse of the infant mortality rates (deaths per 1000 live births).	OECD Health Data 2010, June 2010. (OECD Family database, 2011).
Children under 18 above poverty line	Data refer to 2006 for Japan; 2007 for Denmark and Hungary; 2009 for Chile. Children <18 above poverty line reports the inverse of poverty for children <18.	OECD (2011) OECD Income distribution questionnaire, version October 2011, for OECD countries; EU-SILC 2009 for non-OECD countries
Enrolment in formal care for the under 3s	Year 2008.	For children 0-2: Australia, ABS Child care service (2008); Canada, National Longitudinal Survey of Children and Youth (2008); Japan, Statistical Report on Social Welfare Administration and Services (2008); New Zealand, Education Counts' statistics (2008); the US, Early Childhood Program Participation Survey (2005); European countries, EU-SILC (2008) except Germany: administrative data; Nordic countries: NOSOSCO (2007-08); Other: National Authorities. For children 3-5: OECD Education database; Canada, National Longitudinal Survey of Children and Youth (2008); Japan, Ministry of Education, Culture, Sports, Science and Technology (2008); and Korea, Ministry of Health and Welfare (2010), and Eurostat (2008) for non-OECD countries.
Enrolment rates at age 3 and 5	Year 2009. At age 3, OECD does not include Greece and Canada.	OECD Education Database, November 2011. Data for Japan (2008) and Korea (2010) come from National Sources.
PISA Reading, Mathematics and Science	Year 2009. PISA: Programme for International Student Assessment.	OECD, PISA 2009 Database.
People aged 15-19 who were in education or work	Year 2008. 2006 instead of 2008 for Iceland and 2004 for Mexico. Youth aged 15-24 for Japan.	OECD Education database, 2010.
Maternal employment rates, age of youngest child under 3 years	Year 2008 or latest available year. 2007 for Sweden; 2006 for Mexico and Switzerland; 2005 for Australia, Japan, New Zealand and the United States; 2002 for Iceland; 2001 for Canada; 1999 for Denmark.	European Labour Force Surveys (2007-08) for EU countries; Australia: Australian Bureau of Statistics (2005); Canada: Statistics Canada (2001); Denmark: Statistics Denmark (1999); Iceland: Statistics Iceland (2002 for women age 25-54); Japan: Japanese national census (2005); Mexico: Encuesta Nacional de la Dinamica Demografica 2006; Switzerland: Swiss LFS (2006); United States: US Current population survey (2005). (OECD Family Database, 2011).

Table E.1. Spider web methodological notes and data sources: Policy outcomes (continued)

Indicator	Notes	Source
Maternal employment rates, age of youngest child 3-5 years	Year 2008 or latest available year. 2007 for Sweden; 2006 for Mexico and Switzerland; 2005 for Australia, Japan, New Zealand and the United States; 2002 for Iceland; 2001 for Canada; 1999 for Denmark. For 3-5 years, data for Australia and Iceland refer to mothers with a youngest child aged less than 5.	European Labour Force Surveys (2007-08) for EU countries; Australia: Australian Bureau of Statistics (2005); Canada: Statistics Canada (2001); Denmark: Statistics Denmark (1999); Iceland: Statistics Iceland (2002 for women age 25-54); Japan: Japanese national census (2005); Mexico: Encuesta Nacional de la Dinamica Demografica 2006; Switzerland: Swiss LFS (2006); United States: US Current population survey (2005). (OECD Family Database, 2011).
Gender equality in median earnings of full-time employees	Year 2008 or latest available year. Data refer to 2005 for the Netherlands and to 2007 for Belgium and France. The gender wage gap is unadjusted and is calculated as the difference between median earnings of men and women relative to median earnings of men. Estimate of earnings used in the calculations refer to gross earnings of full-time wage and salary workers. However, this definition may slightly vary from one country to another.	OECD (2010), Employment Outlook. (OECD Family Database, May 2011).

Table E.2. Spider web methodological notes and data sources: Policy inputs

Indicator	Notes	Source
Public child care and education expenditure at age 3 and 5 (% of median working-age household income)	Year 2007.	OECD (2011), *Doing Better for Families*, OECD Publishing.
Public spending on family benefits in cash and tax measures	Year 2007. Public support accounted here only concerns public support that is exclusively for families (*e.g.*, child payments and allowances, parental leave benefits and child care support). Spending recorded in other social policy areas as health and housing support). Spending recorded in other social policy areas as health and housing support also assists families, but not exclusively, and is not included here. Tax breaks towards families not available for Chile, Estonia, Greece, Hungary, Israel and Slovenia.	Social Expenditure Database (www.oecd.org/els/social/expenditure), 2010, and ESSPROS, 2010. (OECD Family database, 2011).
FTE (Full Time Equivalent) paid and unpaid maternity leave	Year 2006/07. Information refers to the entitlement for paternity leave in a strict sense and the father quota included in some parental leave regulations (for example, Finland and Iceland). In Finland, the 7 weeks include 3 weeks of standard paternity leave, plus 2 weeks of parental leave that give rights to additional 2 weeks of paternity leave. The individual is assumed to take 26 weeks of parental leave and a remaining period of 130 weeks of child care leave over which home care allowance can be received.	Moss, P. and M. Korintus (2008), International Review of leave Policies and related research, DTI Employment Relations Research Series, No. 100; Missoc tables: Social Protection in EU Member States; OECD Babies and Bosses (various issues) or information provided by National authorities in non EU countries. (OECD Family database, 2011).

Table E.2. Spider web methodological notes and data sources: Policy inputs (continued)

Indicator	Notes	Source
Required ISCED levels for staff at the care sector or education sector		OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.
Staff-child ratio in child care for 0-to-3-year-olds / in preschool or kindergarten for 3-to-6-year-olds	Countries who reported averages for staff-child ratio instead of a minimum requirement in the Survey have not been included in the graphs, as averages do not constitute a regulated minimum requirement. When regulated ratios were indicated as maximum number per children per multiple staff members (*e.g.*, 2:15), the number included in the figure has been calculated based on the maximum number of children for one member of staff (*e.g.*, 2:15 has been re-calculated into 1:7.5). The Total Average is based on data for all countries and jurisdictions included in the respective figures.	OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.
Remuneration for teaching staff in preschool or kindergarten, compared to primary teachers		OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.
Proportion of male staff at kindergarten/ preschool		OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

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The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

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Quality Matters in Early Childhood Education and Care

JAPAN

Early childhood education and care (ECEC) can bring a wide range of benefits – for children, parents and society at large. However, these benefits are conditional on "quality". Expanding access to services without attention to quality will not deliver good outcomes for children or long-term productivity benefits for society.

This series of country reports focuses on quality issues. Each report tackles a specific theme that was selected by the country reviewed. These reports suggest strengths and point to areas for further reflection on current policy initiatives.

Contents

Chapter 1. Where does Japan stand regarding policy outcomes and inputs?
Chapter 2. What does research say?
Chapter 3. Where does Japan stand compared to other countries?
Chapter 4. What are the challenges and strategies?

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