Staff teams in early childhood education and care centres

This Policy Brief draws on data from the OECD Starting Strong Teaching and Learning International Survey (TALIS Starting Strong) 2018 and focuses on staff roles and training profiles in early childhood education and care (ECEC) centres. ECEC staff are central to promoting young children's development, learning and well-being. Data from nine countries are used to describe the different approaches to staffing and resulting team compositions in centres of different sizes, those that are co-located with primary schools, and across settings that serve different groups of children (i.e. children with special needs and those from socio-economically disadvantaged households). Staff initial education and ongoing professional development are compared for two of the main roles of staff working with children: teachers and assistants. Results highlight cross-country differences but also suggest several policy considerations that are relevant across contexts. These include structuring ECEC staff teams to address the varied demands of working with young children, creating conditions to promote informal collaborative learning among ECEC professionals and attracting staff with specific training to work with children with special needs or from socio-economically disadvantaged backgrounds to centres where their expertise is most needed. Fostering favourable working environments for staff can increase equity of opportunities for all children in ECEC.

Introduction

Early childhood is a time of rapid development, when children's learning and well-being are strongly influenced by their interactions with others. High-quality early childhood education and care (ECEC) offers children foundational opportunities that can support equity in their educational and life trajectories, as well as support their individual rights in the present. A cornerstone of high-quality ECEC is the staff with whom children interact each day. The OECD Starting Strong Teaching and Learning International Survey (TALIS Starting Strong) focuses on the ECEC workforce to better understand staff and leader perspectives on their work and the settings where young children spend time outside of home. This policy brief draws on data from this survey, collected in 2018, to describe the different staff roles and team compositions in ECEC centres across the nine participating countries: Chile, Denmark, Germany, Iceland, Israel, Japan, Korea, Norway and Turkey.



ECEC staff's initial education, ongoing professional development and working conditions shape their interactions with children, and thereby ECEC quality. However, the profiles of staff who work in ECEC settings can vary tremendously, both within and across countries, with implications for children's experiences in ECEC. Within countries, the roles that staff members have in their centres, such as teacher or assistant, are often associated with different education and training profiles. Across countries, ECEC teams are organised differently in terms of these staff roles (OECD, 2019[1]). This policy brief builds on the OECD's previous reporting regarding differences between teachers and assistants, as well as more and less experienced staff (OECD, 2020[2]), to examine team compositions as a whole in ECEC centres.

In addition to teachers and assistants, ECEC teams may include a variety of other staff who work with children, reflecting a setting's organisation and goals. Such roles can include leaders as well as staff who support particular aspects of ECEC programming (e.g. music or sports activities), those who work with specific children, or students completing work-based training (e.g. interns). This range of staff profiles can enrich children's experiences in ECEC, but can also pose challenges around ensuring team members work effectively together despite differences in their professional focus and training.

According to staff who participated in TALIS Starting Strong 2018, working with children with special needs is a top priority for both professional development and reallocation of spending within ECEC systems (OECD, 2019[1]). This finding highlights the increasing attention to children's individual needs in ECEC as well as in education systems more broadly (OECD, 2019[4]). It also suggests the important role that staff with targeted competencies to work with individual children may play in terms of supporting quality in ECEC settings overall. In addition to working with children with special needs, staff with training to work with children from diverse backgrounds, including socio-economically disadvantaged homes or who speak a different language at home than in ECEC, are critical for ensuring that ECEC settings equitably serve all children.

What is TALIS Starting Strong?

The OECD Starting Strong Teaching and Learning International Survey (TALIS Starting Strong) is an international, large-scale survey of staff and leaders in early childhood education and care (ECEC). TALIS Starting Strong uses questionnaires administered to staff and leaders to gather data. Its main goal is to develop robust international information relevant to developing and implementing policies focused on ECEC staff and leaders and their pedagogical and professional practices, with an emphasis on those aspects that promote conditions for children's development, learning and well-being.

TALIS Starting Strong 2018 included nine countries: Chile, Denmark, Germany, Iceland, Israel, Japan, Korea, Norway, and Turkey. All of these countries collected data from staff and leaders in pre-primary education (ISCED level 02) settings. In addition, four of the nine countries (Denmark, Germany, Israel and Norway) collected data from staff and leaders in settings serving children under age 3. The objective of the survey was to obtain a representative sample in each participating country of staff and leaders providing ECEC for each level of ECEC in which the country participated. The international sampling plan for TALIS Starting Strong used a two-stage probability sampling design: staff were randomly selected from the list of in-scope staff in each of the randomly selected ECEC settings. The leader of each setting (i.e. the person with the most responsibility for administrative, managerial and/or pedagogical leadership) was automatically selected for participation as well. A more detailed description of the survey design and its implementation can found in the *TALIS Starting Strong 2018 Technical Report* (OECD, 2019_[3]).

Note: The International Standard Classification of Education (ISCED) is an instrument for compiling statistics on education internationally. Source: OECD (2019_[3]), *TALIS Starting Strong 2018 Technical Report*, http://www.oecd.org/education/talis/TALIS-Starting-Strong-2018-Technical-Report.pdf.

Who are the staff working with children in ECEC centres?

As part of the TALIS Starting Strong 2018 data collection, all staff who worked regularly in a pedagogical way with children in officially registered settings providing ECEC in participating countries were eligible to participate. Leaders of ECEC centres were identified as the person with the most responsibility for administrative, managerial and/or pedagogical leadership. They were asked to provide information about their centres, including the number and type of staff employed. Leaders were asked about seven categories of staff roles that were considered to capture different team compositions across the nine participating countries: leaders, teachers, assistants, staff for individual children, staff for special tasks, interns and other ECEC staff. Countries had the option to use additional, more specific staff role categories for purposes of national data analysis, but these roles were simultaneously coded to reflect one of the overarching international categories. The international staff categories were translated from English into the language(s) used in each country by someone familiar with the ECEC system, and verified by another knowledgeable person. Given the small number of staff for individual children and staff for special tasks, these two categories are combined for all analyses presented in this policy brief. Although the leaderreported data on staff roles cannot be linked to individual staff responses on the questionnaire, they give an overview of the different profiles of human resources available in ECEC centres in participating countries.

Across the nine participating countries, the composition of staff teams in ECEC centres demonstrates different approaches to providing ECEC (Figure 1). In most of these countries (Chile, Denmark [with low response rates], Germany, Iceland², Israel's pre-primary sector, Korea and Norway), there are officially distinguished roles for teachers and assistants. In contrast, in centres for children under age 3 in Israel as well as in pre-primary centres in Japan and Turkey, the distinction between teachers and assistants is generally not present: although leaders in these countries reported some assistants in their staff teams, this is not an officially recognised role.

Another difference in ECEC centres' human resources across countries is the number of leaders. On average, there is approximately one leader per centre across countries, with the exceptions of both preprimary and centres for children under age 3 in Denmark (with low response rates) and pre-primary centres in Chile, Israel and Turkey (OECD, 2019_[11]). In Israel this reflects the small nature of pre-primary centres, where one teacher is also the leader and has responsibility for pedagogical and administrative management (OECD, 2021_[51]). Given their key role working directly with children, these leaders in Israel are included in the teacher category in the data presented here. In Chile, Denmark (with low response rates) and Turkey, on average, leaders report more than one leader per centre. In these countries, leadership functions might be explicitly shared by multiple individuals, some of whom may also be taking on duties as staff working directly with children (OECD, 2019[1]). The situation in Denmark may also reflect a relatively strong degree of local authority in determining staff roles (OECD, 2021[5]).

In addition to differences in human resources in terms of teachers, assistants and leaders in the TALIS Starting Strong 2018 participating countries, the presence of interns and specialised staff also varies. Interns are included in ECEC staff teams in all countries except pre-primary centres in Iceland and Japan, although their presence is quite limited in some countries (pre-primary centres in Korea and centres for children under age 3 in Israel) and more widespread in other countries (both levels of ECEC in Germany and pre-primary centres in Turkey). Specialised staff, who may support education and care for individual children or offer specialised activities for all children (e.g. music or sports), are identified by leaders in all

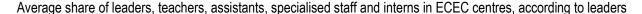
¹ For detailed information on data collection procedures, please refer to the TALIS Starting Strong 2018 Technical Report (OECD, 2019_[3]). Although data were collected in home-based settings for children under age 3 in Denmark, Germany and Israel, this policy brief focuses only on centre-based settings to facilitate comparability with findings from the pre-primary sector (ISCED level 02) and across countries.

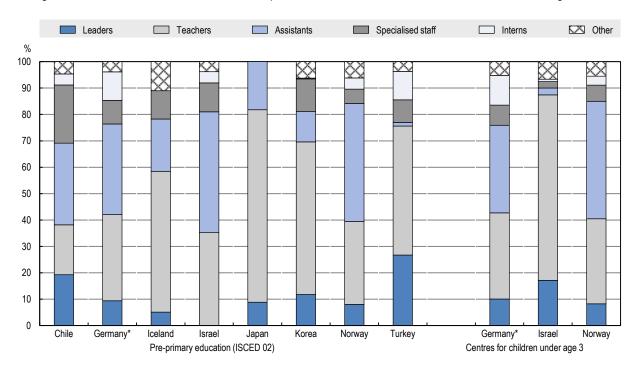
² The data reported by leaders reflect staff roles in the ECEC centre and not necessarily whether staff are certified teachers (leikskólakennarar). OECD EDUCATION POLICY PERSPECTIVES © OECD 2022

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countries with the exception of Japan. As with assistants, the role of specialised staff is not formally recognised in Turkey. In general, specialised staff make up a relatively small proportion of the centre human resources reported by ECEC leaders, although there are notable variations across countries. For example, on average in Chile, leaders report that specialised staff account for nearly a quarter of the workforce in their centres.

Figure 1. Human resources in ECEC centres





^{*} Estimates for sub-groups and estimated differences between sub-groups need to be interpreted with care. See (OECD, 2019[1]) for more information.

Notes: In pre-primary centres in Israel, one teacher is also the leader and has responsibility for pedagogical and administrative management. Given their key role working directly with children, these leaders in Israel are included in the teacher category in the data presented here. Data from Denmark are excluded from this figure due to low response rates in the survey that may result in bias in the estimates reported and limit the comparability of the data.

Previous reporting (OECD, 2019[1]) focused on the composition of the workforce at the country level and calculated the percentage of staff in each role as the ratio of the average number of staff in each role within a country to the average number of staff in centres within that country. The percentages reported here focus on the composition of staff at the centre level and use the ratio of the number of staff in each role within a centre to the total number of staff within that centre, with the resulting values averaged for each country. The current approach also excludes centres with missing data for any category of staff role and provides results that differ somewhat from previous reporting.

Source: (OECD, 2019₍₆₎), TALIS Starting Strong 2018 Database, http://www.oecd.org/education/school/oecdtalisstartingstrongdata.htm (accessed 11 April 2022).

How does the composition of teams vary with centres' characteristics?

The characteristics of ECEC centres and characteristics of the children enrolled may be associated with the composition of teams working there. This section examines two characteristics of ECEC centres that can contribute to determining staffing profiles: the size in terms of the number of children enrolled and whether the centre is co-located with a primary school. In addition, to capture diversity of children enrolled

in ECEC centres, this section looks at whether 11% or more of the children in the centre have identified special needs, or come from socio-economically disadvantaged homes. Associations between team composition and these centre characteristics and aspects of child diversity differ across countries; while full results are presented in Table 1, the text of this section focuses primarily on the trade-offs centres make in the relative percentages of teachers, assistants and specialised staff.

Leaders report different ways in which the size of a centre is related to the staff who are part of the centre's team. In pre-primary centres in Germany, the percentage of teachers is higher in large centres compared to small ones, and this is offset by having a smaller share of specialised staff in large centres compared to small ones (centres in the top quartile of the number of children enrolled versus centres in the bottom quartile, within countries). In Denmark (with low response rates) in centres for children under age 3, large centres have a greater share of assistants in their teams, which is balanced by a smaller share of specialised staff, compared to small centres. In Chile, Korea and Turkey the percentage of specialised staff is higher in large centres compared to small ones (with no trade-off in terms of the percentage of teachers or assistants), suggesting that in these countries, larger centres may have greater capacity for staff to take more specialised roles. Similarly, in centres for children under age 3 in Germany, Israel and Norway, the percentage of teachers is higher in large centres compared to small ones, with no corresponding reductions in the percentages of assistants or specialised staff. In these centres for very young children, the larger size may support having more staff with higher qualifications, or who are focused on leading pedagogical work.

For ECEC centres co-located with primary schools, the percentage of teachers on the team is higher in centres for children under age 3 in Israel and in pre-primary centres in Turkey, compared to centres that are not co-located with primary schools. In turn, in centres for children under age 3 in Israel, the percentage of assistants on the team in centres co-located with primary schools is smaller, and in Turkey, the percentage of both assistants and specialised staff on the team is smaller. In pre-primary centres in Chile and Israel, the percentage of assistants is lower in centres that are co-located with primary schools, but the share of specialised staff is higher in these centres. These differences may represent varying approaches to staffing in primary schools, and how staff resources can be shared between primary and pre-primary when these settings are co-located.

In TALIS Starting Strong, children with special needs were defined as those for whom a special learning need has been formally identified because they are mentally, physically, or emotionally disadvantaged. Consistent with their role of supporting these children, in centres with more children with special needs, the percentage of specialised staff is greater in pre-primary centres in Chile, Denmark (with low response rates), Germany and Israel, and in centres for children under age 3 in Germany and Norway (Figure 2). In Chile, these centres with more children with special needs in turn have smaller shares of both teachers and assistants on their teams. In pre-primary centres in Germany and Israel, the greater share of specialised staff on teams in centres with more children with special needs is offset by having fewer assistants in these centres. In Japan, leaders report fewer teachers and more assistants in centres with more children with special needs. In contrast, in centres for children under age 3 in Denmark (with low response rates), there is a greater share of teachers and a smaller share of assistants on staff teams in centres with more children with special needs. The prevalence of centres with more children with special needs varies by country as well, which could reflect differences in the countries' inclusion policies regarding children with special needs, or in the number and level of training of professionals available to diagnose specific needs and integrate children with identified special needs in ECEC (OECD, 2019[1]).

Specialised staff make up a larger proportion of staff teams in centres with a greater concentration of children from socio-economically disadvantaged homes in pre-primary centres in Chile and Denmark (with low response rates), and in centres for children under age 3 in Germany. In Chile, staff teams have a smaller proportion of both teachers and assistants in centres with a greater concentration of children from socio-economically disadvantaged homes. Different staffing profiles may be adapted to the

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country-specific contexts and needs of children from socio-economically disadvantaged homes; however, it is important to ensure that staff teams are sufficiently and appropriately resourced and trained to meet the challenges of working with this population of children.

Table 1. Staff composition in ECEC centres, by centre characteristics

Differences in the percentage of teachers, assistants and specialised staff in ECEC centres, according to leaders

	+ Positive difference - Negative difference Difference is not significant Not applicable											
	Centre size: top quarter - bottom quarter¹			Centre co-located with school – Centre not co- located with school ²			Concentration of children with special needs: high – low ³			Concentration of children from socio-economically disadvantaged homes: high – low ⁴		
	Teachers	Assistants	Specialised staff	Teachers	Assistants	Specialised staff	Teachers	Assistants	Specialised staff	Teachers	Assistants	Specialised staff
Pre-primary education (ISCED 02)												
Chile			+		-	+	-	-	+	-	-	+
Germany*	+		-			-		-	+			
Iceland												
Israel	-				-	+		-	+		-	
Japan							-	+				
Korea			+	-								
Norway						-						
Turkey			+	+	•	-	+					
Denmark**		+		•					+			+
Centres for children under age 3												
Germany*	+								+			+
Israel	+			+	-				-			
Norway	+					-			+			
Denmark**		+	-		-	-	+	-			-	

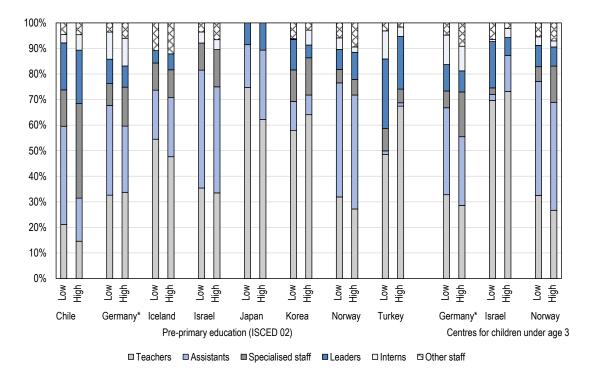
- 1. Quarters refer to 25% of ECEC centres inside a country. The lowest quarter refers to the 25% of ECEC centres for which the statistics obtained are the lowest (i.e. the 25% of centres within a country that register the lowest number of children), while the top quarter refers to the 25% of centres for which the statistics are the highest (i.e. the 25% of centres within a country that register the highest number of children).
- 2. "Co-located with school" refers to centres that share their location with a primary school.
- 3. "Children with special needs" are those for whom a special learning need has been *formally identified* because they are mentally, physically, or emotionally disadvantaged. A "high" share is considered to be 11% or more, a "low" share less than or equal to 10%.
- 4. "Socio-economically disadvantaged homes" refers to homes lacking the basic necessities or advantages of life, such as adequate housing, nutrition or medical care. A "high" share is considered to be 11% or more, a "low" share less than or equal to 10%.
- * Estimates for sub-groups and estimated differences between sub-groups need to be interpreted with care.
- ** Low response rates in the survey may result in bias in the estimates reported and limit the comparability of the data.

Note: In the pre-primary sector in Israel, centres are small and do not vary much in size. For this reason, differences in staffing profiles related to centre size should be interpreted with caution for these centres.

Source: (OECD, 2019(i)), TALIS Starting Strong 2018 Database, http://www.oecd.org/education/school/oecdtalisstartingstrongdata.htm

Figure 2. Staff composition in ECEC centres, by concentration of children with special needs

Average share of teachers, assistants, specialised staff, leaders and interns in ECEC centres, according to leaders



^{*} Estimates for sub-groups and estimated differences between sub-groups need to be interpreted with care. See (OECD, 2019_[11]) for more

Notes: "Children with special needs" are those for whom a special learning need has been formally identified because they are mentally, physically, or emotionally disadvantaged. A "high" share is considered to be 11% or more, a "low" share less than or equal to 10%.

In pre-primary centres in Israel, one teacher is also the leader and has responsibility for pedagogical and administrative management. Given their key role working directly with children, these leaders in Israel are included in the teacher category in the data presented here.

Data from Denmark are excluded due to low response rates in the survey that may result in bias in the estimates reported and limit the comparability of the data.

Source: (OECD, 2019(ii), TALIS Starting Strong 2018 Database, http://www.oecd.org/education/school/oecdtalisstartingstrongdata.htm (accessed 11 April 2022).

How does education and training vary by staff role?

Due to the small number of specialised staff who participated in TALIS Starting Strong in most countries, this section focuses only on teachers and assistants.

In several countries that have separate teacher and assistant roles³ (the pre-primary sector in Chile, Denmark [with low response rates], Germany, Israel and Norway, and in settings for children under age 3

³ Within ECEC settings participating in TALIS Starting Strong, staff were identified as eligible to participate as a centre leader (the person with the most responsibility for administrative, managerial and/or pedagogical leadership) or in one of several roles working directly with children: teacher; assistant; staff for individual children; staff for special tasks; or intern. These roles were reported by a centre coordinator and not by the leader or staff. In all countries, these roles can, but do not necessarily, reflect differences in staff credentials. Rather, for TALIS Starting Strong the data reflect the roles that staff members typically have within their centres.

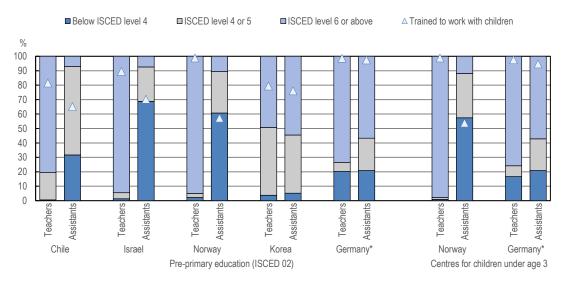
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in Denmark [with low response rates], Germany and Norway), teachers generally have greater educational attainment and in many cases it is more common for them to have had training specifically to work with children, compared with assistants (Figure 3). In addition, assistants and staff with lower levels of initial education generally participate in less ongoing professional development than teachers and their more educated peers (OECD, 2019[1]).

However, the content of professional development activities is broadly similar for teachers and assistants, among those who participate (Figure 4). One exception to the overall similarities in ongoing training is that assistants' professional development activities more frequently covered content on child health and personal care, compared to teachers'. This may be related to a greater focus on care, relative to education, in the role of assistants relative to teachers, or could represent a tendency for assistants to participate in more foundational training activities (e.g. focused on meeting basic health and safety requirements). In countries where assistants comprise a large share of the staff in ECEC centres, it is particularly important to consider that children's daily experiences are strongly shaped by these staff, and to therefore ensure that policy supports their initial preparation and ongoing training for their work.

Figure 3. Educational attainment of teachers and assistants and content of initial training

Staff reports of their highest level of education and whether they received training specifically to work with children, by teachers and assistants



^{*} Estimates for sub-groups and estimated differences between sub-groups need to be interpreted with care. See (OECD, 2019[1]) for more information.

Notes: Teachers and assistants are distinguished based on the initial identification of staff members who were eligible to participate in TALIS Starting Strong 2018. This distinction between teachers and assistants is not used for Japan, Turkey and Israel's sector serving children under age 3. In Iceland, a shortage of certified ECEC teachers means that staff without this credential (i.e. assistants) may be serving as teachers in some centres: for this reason, data from Iceland are not included in comparisons of teachers and assistants. See (OECD, 2019[1]) for more information.

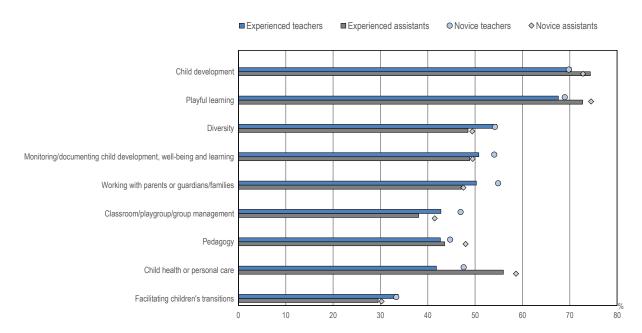
Data from Denmark are excluded due to low response rates in the survey that may result in bias in the estimates reported and limit the comparability of the data.

Respondents in the "Below ISCED level 4" group are those whose highest education is at a secondary level or below. Respondents in the "ISCED level 4 or 5" group are those whose highest education is beyond secondary schooling but less than a Bachelor's degree (or equivalent). Countries are ranked in ascending order of the percentage of staff below ISCED level 4.

Source: (OECD, 2019_[1]), Providing Quality Early Childhood Education and Care: Results from the Starting Strong Survey 2018, TALIS, , https://dx.doi.org/10.1787/301005d1-en.

Figure 4. Thematic areas of ongoing professional development, by role and experience

Average percentage of pre-primary staff covering thematic areas in professional development in the last 12 months



Notes: Estimates are for staff who report participation in at least one type of professional development activity in the 12 months prior to the survey. Teachers and assistants are distinguished based on their self-reported role in the first group of children they worked with on their last working day before the Survey (the target group). Experienced staff have more than three years of work experience in the early childhood education and care (ECEC) sector. Novice staff have three or less years of work experience in the ECEC sector.

Areas are ranked in descending order of the percentage of experienced teachers covering the area in their professional development activities. Source: (OECD, 2020_[2]), Building a High-Quality Early Childhood Education and Care Workforce: Further Results from the Starting Strong Survey 2018, TALIS, https://dx.doi.org/10.1787/b90bba3d-en.

Policy pointers

The different composition of staff teams in ECEC centres across countries means that policies must be adapted to local contexts. However, ensuring access to targeted and ongoing training opportunities for all staff is a key area where policy can enhance quality in ECEC settings. Policy approaches can include:

- Structuring ECEC staff teams to address the different demands of working with young children. ECEC staff are expected to engage in a range of activities beyond working directly with children. Previous findings from TALIS Starting Strong show that staff who spend a higher percentage of their time working without children are more likely to be stressed by work performed without children, such as administrative work (OECD, 2020_[2]). By organising ECEC teams in ways that support good balance across types of roles and job responsibilities, job stress could be reduced for all ECEC professionals. This approach can be taken by using the formal roles that already exist in some countries (e.g. teacher, assistant, specialised staff), but can also be achieved through creating teams with complementary skill sets even when there are not official role distinctions, such as in Japan and Turkey.
- Creating conditions to promote informal collaborative learning among ECEC professionals. The different training profiles of various staff in ECEC centres show that areas of expertise differ. ECEC systems can take advantage of this variation by supporting staff to learn from one another in informal ways. This may include making time available for collaboration in staff schedules,

- requiring ECEC centres to develop collaboration-focused strategies as part of their professional development plans, and assigning and supporting centre-level personnel with responsibilities to encourage and develop teamwork opportunities.
- Attracting staff with high levels of relevant training to centres with higher shares of children with special needs and from socio-economically disadvantaged homes. The composition of staff teams varies across countries in relation to the characteristics of children enrolled in ECEC centres. Overall results from TALIS Starting Strong yield little evidence that staff profiles or working conditions differ systematically across ECEC centres serving a higher or lower share of children from socio-economically disadvantaged homes; however, strong reasons remain for ECEC systems to prioritise efforts to attract, develop and retain a high-quality workforce in settings where more children from socio-economically disadvantaged homes attend. Similarly, staff training profiles should be tailored to meet the needs of working with more children with special needs in some settings. By creating favourable working environments for staff and learning environments for children, ECEC can meet its potential to increase equity in well-being and education for all children.

The bottom line: early childhood education and care staff have diverse profiles

Early childhood education and care (ECEC) staff are central to promoting young children's development, learning and well-being. ECEC staff work in teams and the staff roles included these teams vary both across countries and within countries, for instance related to the size and location of ECEC centres. Initial education and ongoing professional development of staff in different roles (e.g. teacher compared with assistant) also varies, with implications for children's daily experiences in their ECEC settings. Creating staff teams with complementary skill sets and fostering collaborative learning among ECEC professionals are policy approaches that can make the most of these different training profiles. In addition, ensuring staff with specific training to work with children with special needs or those from socio-economically disadvantaged backgrounds are present in centres with higher shares of these children can help increase equity in ECEC for all children.

TALIS Starting Strong

This document was prepared by the TALIS Starting Strong team at the OECD.

The Starting Strong Teaching and Learning International Survey (TALIS Starting Strong) provides early childhood staff and centre leaders with an opportunity to share insights on their professional development; pedagogical beliefs and practices; and working conditions, as well as various other leadership, management and workplace issues. TALIS Starting Strong is the first international survey of the ECEC workforce.



For more information

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See: OECD TALIS Starting Strong

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