

# Reader's guide

The OECD *Starting Strong* series provides an international comparative perspective on early childhood education and care (ECEC) systems to support countries and jurisdictions in reviewing and designing their policies in this space. As part of the OECD's long-term strategy to develop ECEC, the reviews discuss the strengths and opportunities of different approaches and provide policy orientations that help promote high-quality and equitable ECEC services. The *Starting Strong* reviews are developed in close collaboration with the OECD's Early Childhood Education and Care Network, a unique knowledge-sharing platform for national, regional and local policy makers working on ECEC policies.

This volume of the series, *Empowering Young Children in the Digital Age*, is the culmination of the *Early Childhood Education and Care in a Digital World* project, which was carried out between 2021 and 2023 to investigate ways in which ECEC systems can respond to digitalisation, harnessing opportunities to promote high-quality and equitable ECEC while minimising the associated risks. The project sought to identify the skills that help children thrive as they live and learn in the digital age; examine strategies to prepare the ECEC workforce and the sector at large to exploit the affordances of digital technologies to support quality in ECEC; and explore the role of ECEC in helping to protect children in digital environments and ensuring equitable outcomes of digitalisation.

Building on the multi-dimensional framework for quality in ECEC developed by previous *Starting Strong* publications, a primary goal of this policy review is to discuss strategies and actions covering the following policy levers, which countries can draw on to promote quality and equity in ECEC:

1. quality standards, governance and funding
2. curriculum and pedagogy
3. workforce development
4. family and community engagement
5. monitoring and data.

In addition, the review considers equity and inclusion as a transversal theme.

More information about the *Starting Strong* series and other activities of the OECD's Early Childhood Education and Care Network is available at: [www.oecd.org/edu/earlychildhood](http://www.oecd.org/edu/earlychildhood).

## Methodology, data and structure of the report

Multiple activities were carried out under the *Early Childhood Education and Care in a Digital World* project to generate the underlying data for the analysis presented in this publication. These included the administration of two policy surveys, the collection of case studies and extended exchanges with the countries that decided to engage in the policy review in greater depth.

The data from these sources were supplemented by other activities. To frame policy analysis on recent research and policy developments, extensive desk-based research was undertaken on the implications of digitalisation trends for young children and ECEC systems, building also on insights from related OECD projects, including the horizontal OECD Going Digital initiative and the Directorate for Education and Skills' 21st Century Children and Future of Education and Skills 2030 projects. In addition, three targeted literature reviews were commissioned to academic experts on topics for which a synthesis of the emerging knowledge base was deemed relevant for the project. After consultation with members of the OECD's Early Childhood Education and Care Network, it was decided to focus these reviews on computational thinking in early childhood education, digital competences for ECEC professionals and opportunities to use digital technologies to support children with special needs in ECEC settings. The literature reviews are available at: [www.oecd.org/edu/earlychildhood](http://www.oecd.org/edu/earlychildhood).

In parallel, new statistical analyses were carried out of relevant OECD databases, including the Starting Strong Teaching and Learning International Survey (TALIS Starting Strong), the Teaching and Learning International Survey (TALIS), and the International Early Learning and Child Well-being Study (IELS).

This report includes eight substantive chapters bringing together analyses of these data sources. Chapter 1 summarises the policy directions stemming from the report's findings and outlines a roadmap of policies to address key digitalisation challenges for ECEC. Chapter 2 provides an overview of transformations of the digital era, discussing their implications for young children and ECEC systems. The remaining chapters are organised around the various policy levers and areas covered in the analytical framework. Chapter 3 considers the protection of young children in digital environments. Chapter 4 discusses ECEC curriculum frameworks and pedagogies in light of the digital transformation. Chapter 5 explores how countries are preparing and supporting ECEC professionals to meet the demands of digitalisation. Chapter 6 discusses how digital technologies could be mobilised to strengthen family and community engagement in ECEC. Chapter 7 focuses on equity and inclusion by analysing digital divides among young children and among ECEC centres. Finally, Chapter 8 discusses the opportunities and demands that digitalisation brings for quality monitoring in ECEC.

### ***The ECEC in a Digital World policy survey***

Between February and April 2022, the OECD Secretariat administered a policy survey to members of the OECD's Early Childhood Education and Care Network. Thirty-seven responses were received from 26 countries, including responses for subnational jurisdictions from 3 countries (Australia, Canada and Germany). This resulted in a rich comparative database of digitalisation policies targeting early childhood and ECEC as of 2022.

Guided by the project's data collection framework, the survey included questions organised around the policy levers listed above as well as around the transversal theme of equity and inclusion. In addition, a section was dedicated to identifying policy challenges concerning digitalisation, young children and ECEC.

Most sections of the survey asked participants to provide information on system-level policy developments. However, given the complex architecture of ECEC systems, countries and jurisdictions were asked to provide information on curriculum and pedagogy in relation to specific curriculum frameworks as well as information on engagement with families and communities in relation to specific types of ECEC settings. Countries and jurisdictions could provide multiple sets of responses to questions about different curriculum frameworks and types of ECEC settings.

Annex A provides more detailed information about the data collection and treatment through the survey.

## **Case studies**

Members of the OECD's Early Childhood Education and Care Network were invited to present recent and ongoing policy initiatives related to digitalisation and early childhood at meetings of the Network and dedicated project webinars throughout 2021 and 2022. Further, to increase the number of policy examples and enhance the consistency and comparability of the information collected across countries and jurisdictions, a template was distributed for the submission of case studies. The template outlined the shared elements and questions that case studies were expected to address. A total of 20 case studies were submitted from 16 different countries. More information on the compendium of case studies is available in Annex C.

### ***Study on responses to the COVID-19 pandemic in early levels of education***

In 2021, following the initiative of the G20 Education Working Group under Saudi Arabia's presidency, the OECD was commissioned to carry out a study on the use of digital technologies to maintain continuity of education for young children during the COVID-19 pandemic. A policy survey was administered to OECD, G20 and invited countries on system-level policy developments regarding the use of digital technologies in pre-primary education (International Standard Classification of Education [ISCED] Level 02) and in the first years of primary education (ISCED Level 1, typically for children aged 7-8). The survey collected responses from 34 countries and jurisdictions between February and April 2021. Its results have been used to inform this policy review. The study is available at: <https://doi.org/10.1787/fe8d68ad-en>.

### **Country notes**

Complementary country notes summarise findings and policy pointers relating to responses to digitalisation in ECEC for the six countries that engaged in the policy review in greater depth: Canada, Finland, Japan, Korea, Norway and Sweden. These country notes follow the structure of the main report and highlight relevant policy developments and opportunities for peer learning. The notes, prepared by the OECD Secretariat, are available at: <https://doi.org/10.1787/50967622-en>.

## **Scope**

### **Country coverage**

ECEC systems are often decentralised, with authority for different types of settings or particular aspects of ECEC provision being the responsibility of different levels of government. In federal countries, the mix of responsibilities between national governments and subnational jurisdictions (e.g. provinces, states, territories) can make understanding ECEC systems even more complex from the perspective of international comparisons.

Given the goal of providing internationally comparative data, the Starting Strong VII policy review focused on collecting data at the national level from all countries. However, in federal systems where substantive variation in policies exists across subnational jurisdictions, data were also collected at the subnational level. Indicators and analyses relating to subnational jurisdictions are noted in the report.

### **Settings, curricula and age groups**

Consistent with previous OECD work on ECEC, the data collection for the Starting Strong VII policy review applied to settings belonging to countries' regulated ECEC systems, regardless of type, funding sources, opening hours or programme content. These settings include childcare, *crèches*, kindergartens, nursery schools or preschools, integrated centre-based ECEC, and home-based care.

Building on the reporting procedures implemented in the Starting Strong VI publication, this policy review presents information on ECEC settings and curriculum frameworks as applying to three standardised age groups to facilitate analysis and comparisons of different settings and curricula across age groups within and across countries and jurisdictions. When completing the *ECEC in a Digital World* policy survey, countries and jurisdictions were asked to select specific curriculum frameworks and types of ECEC settings as belonging to one of the following age groups: 1) age 0-2; 2) age 3-5/primary school entry; 3) age 0-5/primary school entry.

This strategy was implemented to facilitate the use of the information, enable meaningful comparisons across age groups within and across countries, and ensure consistency with previous Starting Strong reviews and the development of ECEC indicators in other OECD databases.

### ***Staff roles and development***

The professionals working in ECEC systems have many different roles and titles, including pre-primary school teachers, pedagogues, care workers, educators and counsellors. To address the workforce development and related policy levers, the Starting Strong VII policy review considered these different staff roles and the different types of ECEC settings in which they work.

To collect data that are meaningful across countries and address the different roles of staff across settings, the *ECEC in a Digital World* policy survey asked countries to report on workforce development policies based on the structure of their ECEC systems and applying to three categories of staff: teachers, assistants and leaders. Although these staff categories are not exhaustive, they capture the majority of staff within ECEC centres across countries.

## **Figures and tables**

### ***Labels and symbols***

Certain labels and symbols are used to denote non-available or non-reported information:

- **“Not applicable”**: indicates the corresponding process or aspect does not exist, is not regulated or is not required in that ECEC system, as reported by the system’s ECEC authorities.
- **“m”**: indicates missing information or unchecked response option. In tables displaying results from TALIS Starting Strong 2018, this typically implies there are fewer than 10 centres/leaders and/or 30 staff with valid data, which means there are too few or no observations to provide reliable estimates, or to ensure the anonymity of respondents.

### ***Interpretation of data***

When showing the distribution of a response across countries and jurisdictions in comparative figures and tables, both in the present publication and in the country notes, results from the policy survey generally correspond to system-wide policy developments and can be interpreted as representing country-wide or jurisdiction-wide challenges, policies or programmes.

For a smaller set of figures and tables, in particular those corresponding to the policy levers of curriculum and pedagogy and of engagement with families and communities, results refer to specific types of ECEC settings and curriculum frameworks within countries and jurisdictions, as noted above. As a result, care should be taken in interpreting these figures and tables and, in particular, in drawing conclusions for the level of countries and jurisdictions. A category shown for a country or jurisdiction in a figure may, for instance, only apply to one of several settings or curricula within a country and not all of the settings or

curricula. At the same time, countries and jurisdictions may appear in different categories within the same age group in the same figure, representing different settings in that country.

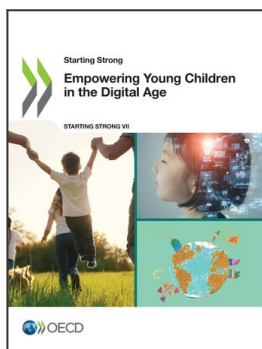
Readers should also be careful in interpreting information from the case studies, since the policy initiatives of programmes covered in the case studies can have varying scope and refer to different levels of governance of the ECEC system and to different age groups, as explained in Annex C.

## ISO codes

ISO codes are used to identify countries and jurisdictions in some figures and tables, to improve their readability.

Country or jurisdiction	ISO code
Australia	AUS
<i>Australia (South Australia)</i>	AUS-SA
<i>Australia (Tasmania)</i>	AUS-TAS
<i>Australia (Victoria)</i>	AUS-VIC
<i>Belgium, Flemish Community (pre-primary education)</i>	BEL-FL PP
<i>Belgium, Flemish Community (childcare settings for under 3's)</i>	BEL-FL U3
Brazil	BRA
Canada, All provinces and territories (centre-based sector)	CAN CB
Canada, All provinces and territories (school-based sector)	CAN SB
<i>Canada (Alberta)</i>	CAN-AB
<i>Canada (British Columbia)</i>	CAN-BC
<i>Canada (Manitoba)</i>	CAN-MB
<i>Canada (New Brunswick)</i>	CAN-NB
<i>Canada (Quebec)</i>	CAN-QC
Costa Rica	CRI
Czech Republic	CZE
Denmark	DNK
Estonia	EST
Finland	FIN
France	FRA
Germany	DEU
<i>Germany (Bavaria)</i>	DEU-BY
Hungary	HUN
Iceland	ISL
Ireland	IRL
Israel	ISR
Italy	ITA
Japan	JPN
Korea	KOR
Lithuania	LTU
Luxembourg	LUX
Morocco	MAR
Norway	NOR
Portugal	PRT
Slovak Republic	SVK
Slovenia	SVN
South Africa	ZAF
Spain	ESP
Sweden	SWE
Switzerland	CHE
United Arab Emirates ( <i>Dubai</i> )	ARE-DU





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