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Abstract

Curriculum plays an important role in ensuring continuity and progression from early childhood education and care (ECEC) to primary education. The alignment of curricula and standards across these settings shapes children's early experiences with education systems, with implications for children's relationships and engagement in both ECEC and primary school, as well as longer-term learning and well-being outcomes. Governments can achieve curricular continuity in various ways, ranging from high-level alignment of goals across multiple curriculum documents to full integration of the curriculum into a single document that covers both ECEC and primary school. The broader contexts of education systems, such as organisation and governance, the training of staff and teachers who work in these settings, matter for curricular continuity – and an integrated curriculum alone does not guarantee a continuous experience for children. International data and in-depth case studies from seven jurisdictions (Japan, Luxembourg, New Jersey [United States], New Zealand, Norway, Scotland [United Kingdom] and Victoria [Australia]) provide insights to these different approaches to curricular alignment.

Résumé

Les programmes d'enseignement jouent un rôle important dans la progression des enfants et la continuité pédagogique de l'éducation préscolaire à l'école primaire. Les programmes et normes scolaires façonnent la première expérience que font les jeunes enfants du système éducatif et permettent de définir les liens qu'ils développent avec le système scolaire. L'harmonisation de ces programmes favorise la participation des enfants pendant les premières années d'enseignement, mais aussi leur apprentissage futur et leur bien-être. Les pouvoirs publics disposent de différentes manières d'assurer la continuité des programmes d'enseignement, depuis l'alignement des objectifs pédagogiques à travers les documents relatifs aux programmes scolaires jusqu'à l'intégration complète de ces programmes dans un programme d'enseignement unique englobant l'éducation préscolaire et l'école primaire. Les contextes dans lesquels s'inscrivent les systèmes éducatifs - notamment au niveau de leur organisation, de leur gouvernance ou de la formation du personnel et des enseignants qui y travaillent - sont également importants pour la continuité des programmes d'enseignement. L'intégration des programmes d'enseignement ne garantit pas à elle seule un parcours scolaire sans heurt pour les enfants. Des données internationales et des études de cas approfondies portant sur sept territoires (Écosse [Royaume-Uni], Japon, Luxembourg, New Jersey [États-Unis], Norvège, Nouvelle-Zélande et Victoria [Australie]) permettent d'apporter des éclairages sur différentes approches de l'harmonisation des programmes d'enseignement.

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Key messages

- **Most jurisdictions try to build curricular continuity between early childhood education and care (ECEC) and primary school.** The increasing attention to this issue means that approaches are changing rapidly: the seven jurisdictions (Japan, Luxembourg, New Jersey [United States], New Zealand, Norway, Scotland [United Kingdom] and Victoria [Australia]) analysed in this paper reported ongoing efforts to revise and align curricular documents for ECEC and primary school.
- **The organisation of the education system and policies concerning staff and teachers are critical for the curricular continuity.** In addition to the over-arching organisation of ECEC and primary school systems, different qualifications and working conditions for staff and teachers at both levels can create opportunities or challenges for ensuring curricular continuity for children.
- **Designing and implementing transition and continuity strategies is often the responsibility of regional and local authorities or providers.** This approach provides flexibility to adapt to local needs and preferences but can also pose difficulties for monitoring the extent to which curricular continuity exists between ECEC and primary education.
- **Differences in the goals of ECEC and primary education can have an impact on curricular alignment.** Goals range from the skills that the education system promotes or how the system provides adequate learning environments to a focus on expectations for child development and learning for the future. These differences have implications for how jurisdictions design and align or integrate curricula for ECEC and primary education.
- **Alignment at a broader level of goals or strands of education can also promote continuity across educational settings for young children.** The learning areas covered by the curricula need not be exactly the same when curriculum frameworks or other documents provide shared goals across ECEC and primary school.

1. Introduction

Curriculum plays an important role in promoting continuity and progression from early childhood education and care (ECEC) to primary education. The alignment of curricula and standards across these settings shapes children's early experiences with education systems, with implications for children's relationships and engagement in both ECEC and primary school, as well as longer-term learning and well-being outcomes (OECD, 2017[1]).

To date, research is sparse on what practices can best provide continuity and enhance children's progress across the early years of engagement in education systems. Many questions remain on the benefits and potential drawbacks of different types of curricular integration or alignment between ECEC and primary school. For instance, explicitly aligning curricula may be a tool to promote continuity but because curricula do not operate independently of the rest of the education system, the success of curricular alignment may not be readily evident. Furthermore, to the extent that aligned curricula fail to address the developmental needs of children at different stages, this curricular approach could be detrimental. This paper describes strategies governments use to support curricular continuity within the larger contexts of education systems by drawing from existing OECD cross-country research and newly developed case studies on jurisdictions employing a range of approaches to curricular alignment and integration.

The content of this paper is organised around four over-arching questions (see Box 1.1). A brief literature review provides grounding in the extant research on curricular alignment and integration, and then the guiding questions are addressed through international insights. The paper concludes with a summary of lessons learnt.

Box 1.1. Guiding questions identified together with the National Council of Curriculum and Assessment (Ireland)

As the curriculum advisory body in Ireland, the National Council for Curriculum and Assessment (NCCA) is currently reviewing and redeveloping the full primary school curriculum in Ireland. Solid research evidence along with practice evidence from schools and settings is required to understand the practicalities, opportunities and constraints of education provision in early primary aligning with and building on preschool education. This paper is intended to expand the existing evidence base with regard to the following questions.

Continuity and progression in transitions from ECEC to primary school

1. Looking across jurisdictions and in the context of curriculum policy documentation: How are continuity and progression between early childhood education and care (ISCED 0) and early primary education (ISCED 1) supported?

Curriculum organisation from birth to 8 years of age

2. In the case of the selected jurisdictions, how is the curriculum organised from birth to 8 years? For example, how many stages are there during this period? What age range does each stage encompass and why?
3. Which jurisdictions have a single curriculum stage that incorporates experiences in preschool education (ISCED 02) and the early years of primary education (ISCED 1)? What are the defining features of this stage that distinguish it from earlier ECEC experiences (ISCED 01) and later stages in children's primary education?

Successful implementation of continuity and progression

4. To what extent has the curriculum in the jurisdictions been successful in promoting/achieving continuity and progression between early childhood education and care and early primary education?

Increasingly, governments recognise the importance of innovation in education systems, with the goal of helping young children and students thrive as they prepare for the evolving demands of future societies. Curriculum can serve an important role in supporting schools and teachers in bridging the education systems of the past with the demands on the education systems of the future (OECD, 2018[2]). Yet, the task of identifying the best strategies for curricular revisions is not straightforward and hinges on the specific goals and values for education at different ages and stages of development. The needs of young children, who are rapidly developing and acquiring new skills both at home and in ECEC or school settings, are particularly important to consider. A breadth of research underscores the implications of early learning for children's well-being in the present and in their later life outcomes (Shuey and Kankaras, 2018[3]).

The transition from ECEC to primary school is a major step for children and one that curriculum continuity can facilitate. Well-managed transitions are important because they can support child well-being, enable the benefits of ECEC to endure, prepare children for school and for life and improve equity in education outcomes (OECD, 2017[1]). Furthermore, continuous and aligned curricula aim to provide students with consistent,

progressive and holistic support for their development and learning processes (OECD, 2017[1]). By integrating or aligning curricula across ECEC and primary school, governments can support continuity for young children while simultaneously promoting progress and setting strong foundations for later stages of education. At the same time, concerns about "schoolification" and age-appropriate practice need to be considered as curricula converge across levels.

Although curriculum is an important tool to support transitions, there is not necessarily one best approach to the curricular alignment and/or integration for supporting children's learning and well-being. Moreover, curriculum is embedded in broader education systems, including the organisation of the system, governance and division of responsibilities and the over-arching goals of the education system and its component pieces. Professional continuity for staff and teachers, including support to ensure curricula are implemented as intended, is another key component of the context in which curricular continuity and children's transitions are embedded. This context of the education system is critical for understanding curriculum implementation from ECEC to primary school and beyond, with implications for children's experiences and the success of efforts to promote continuity.

Understanding curriculum and transitions

Curriculum needs to be carefully defined for analysis of continuity and progression

Curriculum is a complex concept influenced by various factors (Litjens and Taguma, 2010[4]) that reflect a society's political, policy and technical consensus on the goals and values regarding children's learning, development and well-being. In line with the OECD's *The Future of Education and Skills 2030* project, this paper understands curriculum as "a political, policy and technical agreement among the various institutions and stakeholders, from both inside and outside the education system, on why, what, how, when and where to educate and learn" (OECD, 2018[5]).

Within this definition, curriculum can further be understood as "intended", "implemented" or "achieved". *The intended - also official or planned - curriculum specifies what authorities and society expect students will learn at school and how the outcomes of the teaching and learning process will be assessed. The implemented curriculum, also defined as the "taught curriculum" or "curriculum in action", is the "actual teaching and learning activities taking place in schools through interaction between learners and teachers as well as among learners"* (OECD, 2018[2]). Finally, the achieved curriculum may differ from the intended and implemented curriculum as it "indicates what learners actually acquire as a result of teaching and learning, assessed through different means and/or demonstrated in practice" (OECD, 2018[2]).

Curriculum and pedagogy are terms that at times are used interchangeably, notably in research. For instance, studies may refer to content-specific activities without clarifying whether or not they are suggested or prescribed by the curriculum (Sylva et al., 2016[6]). This imprecision limits the conclusions that can be drawn from existing research, as only a few studies have looked at the relationship between curriculum and pedagogy or links with either curriculum or pedagogy and children's outcomes (Slot et al., 2016[7]; Sylva et al., 2016[6]).

Hence, it is important to make clear distinctions for both terms. While ("intended") curriculum typically states the knowledge, skills, values and attitudes that children are expected to develop, pedagogy can be referred to as the practice, craft or art of teaching

(Siraj-Blatchford et al., 2002[8]; Sylva et al., 2016[6]). Pedagogical activities then can be regarded as the daily implementation of the curriculum (Bélanger et al., 2018[9]).

The term pedagogy can also denote the theoretical foundation of an approach and a set of principles and values for defining specific teaching methods. In this broader definition, pedagogy could be considered to inspire rather than support curriculum (Sylva et al., 2016[6]). Not all curricula or curriculum frameworks present a clear theoretical foundation of a particular pedagogical approach. Rather, some are broad and can embrace varied pedagogical practices.

Curriculum is a crucial agent of education policy as it is a deliberate specification of what is valued for a particular level of education, potentially including learning objectives, content, methods (including assessment) and materials for teaching and learning, as well as arrangements for teacher training and professional development (OECD, 2018[2]; Sylva et al., 2016[6]). A curriculum framework is an over-arching document that articulates the broad vision of curricula within the broader context of the education system. Curriculum frameworks often provide principles to help staff organise their pedagogical work to address developmental goals or learning standards (OECD, 2018[2]). Although implemented and achieved curricula are considered at some points, this paper focuses on intended curricula, which are often documented in curriculum frameworks at a jurisdiction level.

Curricula are often understood differently across ECEC and primary school

Differences in pedagogical views of ECEC and primary school staff can be an obstacle to continuity for children during the transition to compulsory education (OECD, 2017[1]). Historically, there have been divisions between ECEC and primary school, as well as divisions within ECEC itself. On the one hand, ECEC has been associated with its "care" responsibility, especially for very young children, and only gradually has there been a shift towards explicitly recognising the educational dimensions of ECEC. The approach to education in early years has been understood differently from traditional approaches used in primary school: it involves lower child-teacher ratios, smaller group sizes, more child-centred interactions, greater attention to playtime and less emphasis on teacher-led pedagogies. The shift towards education as a central goal of ECEC relates to the growing body of research in psychology, neuroscience and economics that highlights the benefits associated with high-quality ECEC programmes (Heckman and Masterov, 2007[10]; Howes et al., 2008[11]; Shonkoff and Phillips, 2000[12]).

Primary school has traditionally been predominantly concerned with academic responsibility and characterised by a structured school culture that emphasises cognitive skills over other dimensions of learning (e.g. socio-emotional) (Frede and Ackerman, 2007[13]; Moss, 2012[14]). Thus, primary school tends to focus on skill-specific, academically-oriented pedagogical activities: primary school curricula are typically divided into traditional school subjects (Frede and Ackerman, 2007[13]).

Elaborating a curriculum can be a challenging task; it requires articulating society's values, community expectations, culture and language, as well as research findings (OECD, 2011[15]). ECEC curricula often contrast with curricula used in primary schooling, in part because the latter tend to focus heavily on the contents to be taught, whereas the former typically rely on psychological and educational theories that provide implications for pedagogical practice, i.e. *how* to teach, rather than *what* to teach (Frede and Ackerman, 2007[13]).

Box 1.2. International Standard Classification of Education (ISCED) classifications covering early childhood education and care (ECEC) and primary education

Throughout this paper, the term early childhood education and care (ECEC) will be used to refer to regulated arrangements that provide education and care for children from birth to compulsory primary school age. The International Standard Classification of Education (ISCED) is the reference classification for categorising education programmes and related qualifications by education levels and fields. The latest version (ISCED 2011) has nine levels of education, from Level 0 to Level 8, where ISCED 0 refers to early childhood education and ISCED 1 refers to primary education.

Education programmes at ISCED Level 0 are sub-classified into two categories depending on age and the level of complexity of the educational content: early childhood educational development (ISCED 01) and pre-primary education (ISCED 02). The latter include ECEC centres that provide services for children to support early development in preparation for participation in school and society, and that accommodate children from age 3 to the start of primary education. For ISCED 02, the terms pre-primary and preschool are used interchangeably in this paper.

For ISCED 01, and especially for ECEC for children under the age of 3, not all key types of registered ECEC provisions may be included in countries' reports on curriculum. This situation may be the case, for instance, when no curriculum is in place or when the ECEC setting is not under the responsibility of the same ministry as ISCED 02 and ISCED 1.

ISCED classification		Level of education	Description
ISCED 0	ISCED 01 Early childhood educational development ISCED 02 Pre-primary education	Early childhood education	Refers to early childhood programmes that have an intentional educational component and aim to develop cognitive, physical and socio-emotional skills necessary for participation in school and society. Programmes at this level are often differentiated by age
ISCED 1		Primary education	Designed to provide a sound basic education in reading, writing and mathematics and a basic understanding of some other subjects. Entry age: between 5 and 7. Typical duration: six years

Source: OECD (2017[16]), *Education at a Glance 2017: OECD Indicators,* https://doi.org/10.1787/eag-2017-en; OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, https://doi.org/10.1787/9789264276253-en.

Despite the incipient research on curriculum effectiveness, there is an increasing concern about the role of curriculum for children from birth to school entry. Most OECD countries have designed and implemented curricula in ECEC services, especially for ISCED 02 (see Box 1.2) (OECD, 2011[15]). The relevance of adopting an explicit curriculum framework for the preschool years is increasingly accepted (Bertrand, 2007[17]) although there is still strong debate about what constitutes appropriate curricula and pedagogy for younger children (Chazan-Cohen et al., 2017[18]; Sylva et al., 2016[6]). This paper focusses predominantly on curricula for the preschool and early primary school years, giving only limited attention to curricula for children younger than 3 years. This focus reflects, in part, the greater consensus around the role of curriculum frameworks during later stages of

ECEC, but also reflects the emphasis of the guiding questions on continuity and progression from ECEC to primary school.

The literature on ECEC curricula highlights the importance of children engaging in experiential and relational activities. In this line, research shows that child-centred practice and small group activities, which allow children to engage in active discussions and interactions, are associated with higher process quality in ECEC settings (Sylva et al., 2016[6]). Process quality refers to the nature of the daily classroom experiences of children, notably their interactions with others (e.g. teachers, peers). Process quality in ECEC lays the foundation for realising the benefits of ECEC in terms of children's development, learning and well-being (OECD, 2018[5]). Curriculum implementation can be considered an aspect of process quality.

In ECEC, a constructivist approach is often the preferred curriculum model, advocating the importance of attending to children's overall development (Copple and Bredekamp, 2009[19]; Frede and Ackerman, 2007[13]). This is based, in part, on research showing that the economic benefits of attending high-quality preschool programmes come from a combination of socio-emotional and academic competencies (Boyd et al., 2005[20]; Frede and Ackerman, 2007[13]).Yet, there is wide variety in terms of design and focus of ECEC curricula. Often, ECEC curricula are described as whole-child, holistic curricula or as skill-specific curricula (Boyd et al., 2005[20]; Frede and Ackerman, 2007[13]). The first emphasises a child-centred approach and tends to be associated with the arrangement of the classroom and materials to promote active learning. Skill-specific curricula, on the other hand, focus on promoting learning in specific areas including academic (particularly literacy and mathematics) and socio-emotional skills (Jenkins and Duncan, 2017[21]). These curricula are often influenced by the setting of standards around child development and learning and reflect a more structuralist approach to teaching and learning.

However, in practice, the dichotomy that is often applied to distinguish between holistic and skill-specific curricula is not always relevant. That is, even when curricula include a specific focal area, they can nonetheless also promote child-centred, active learning and promote children's learning and development in areas beyond the focal domain (Weiland et al., 2018[22]). Conversely, curricula that take a more holistic approach without specifying focal content areas can also contribute to children's learning and development in specific areas (Marshall, 2017[23]). Effects of curricula can be difficult to evaluate given their influences (intended or otherwise) on both specific and global aspects of child development as well as their importance for short-term learning gains versus longer-term implications for children's learning and well-being. Furthermore, the ways in which curricula are implemented appears to be of central importance for children's learning, development and well-being, making it all the more challenging to discern important aspects of curriculum frameworks from other aspects of teaching and learning environments.

The overlap and similarities between skills-specific and holistic curricula notwithstanding, research in Europe shows that holistic, child-centred curricula with a recognition that children learn through play are most typical for ECEC across jurisdictions (Sylva, Ereky-Stevens and Aricescu, 2015[24]).This finding is consistent with other international perspectives, including in the United States (NAEYC/NAECS-SDE, 2003[25]), New Zealand (New Zealand Ministry of Education, 2017[26]). Australia (DEEWR, 2010[27]), Canada (Ontario Government, 2007[28]), Japan (Ministry of Education, Culture, Sports, Science and Technology, Japan, 2017[29]) and Latin America and the Caribbean (Harris-Van Keuren and Rodríguez Gómez, 2013[30]). There also appears to be a shared understanding that an ECEC curriculum should set common goals within an open

framework, providing a good balance between education and care aimed at promoting children's development, well-being and learning. The values of this type of approach to curriculum are typically shared by parents, ECEC staff and policy makers (Moser et al., 2017[31]). These social values around ECEC, and parents' expectations, in particular, play an important role in shaping the curriculum approaches adopted by jurisdictions, as well as the implementation of ECEC curricula at local levels.

In contrast to the debates on curricular approaches in ECEC, in primary school curriculum documents, the intended learning for students is typically expressed through subject areas or broad learning areas (Frede and Ackerman, 2007[13]). In addition, primary school curriculum documents tend to address age-specific learning goals or standards, either according to school grades or in groupings of levels or stages covering a band of two or three years; in ECEC it is more common for curriculum documents to address broader, overall goals. Overall developmental goals or learning standards are often mentioned in both ECEC and primary school curriculum frameworks, whereas developmental goals by age are more likely to be covered only in primary school curriculum frameworks (OECD, 2017[1]). However, not all jurisdictions specify goals or standards by age, grade or stage in the primary years.

Relative to ECEC, primary school curricula also have a stronger tendency to focus on academic content. This focus is generally associated with more teacher-led pedagogies and also typically takes place in settings with higher student-staff ratios. In terms of learning content, some areas of primary school curricula that are also commonly covered in ECEC settings include: literacy and language; numeracy; physical education; arts; music; aspects of social sciences; and natural science. On the other hand, aspects such as religion, information and communication technology (ICT) skills, knowledge and understanding concerning civics, history and geography, and learning and using and foreign languages are more likely to be covered in primary than ECEC curricula (OECD, 2017[1]).

Beyond having an aligned or integrated curriculum between ECEC and primary school, it is important to consider pedagogical continuity between the two settings. The learning and developmental goals, the role of play and academic content, and the best ways of interacting with young children are at the core of debates around curriculum and pedagogy in ECEC (Ciolan, 2013[32]; Sylva et al., 2016[6]). Play is a way to actively engage children in experiential and relational activities and is a crucial component of curriculum that fosters children's learning and development during early childhood, including in the early years of primary school (Wood and Attfield, 2005[33]). The literature highlights the importance of including experiential and relational activities in ECEC as the best ways for children to learn and develop. In this line, understanding children as active learners and encouraging experimental and collaborative child-centred activities in small groups is also an important element of ECEC curricula.

In primary school curricula, there is typically less time for play (and in some cases ideological opposition to play), contributing to discontinuities in pedagogy across these two settings (Bennett, 2004[34]; OECD, 2017[1]). Yet, aspects of pedagogy considered core in ECEC, such as warm and responsive staff-child interactions, as well as an effective balance between child-centred and teacher-directed activities (Schweinhart and Weikart, 1988[35]; Stipek and Byler, 2004[36]; Stipek and Byler, 2005[37]) are meaningful for children's daily experiences in primary education as well (OECD, 2015[38]). Once again, parental expectations may be central to understanding some of these differences between ECEC and primary school. Families' expectations of the appropriate pace and timing of learning in different areas (e.g. ICT, foreign languages) as well as the pedagogies

employed, can contribute to discontinuities between ECEC and primary school (Dockett and Perry, 2004[39]). Similarly, differences in training for ECEC and primary school staff and teachers are likely to contribute to these pedagogical differences across the two settings. Nonetheless, currently, there is a trend to recognise the importance of 21st-century skills and to promote them in curricula. Some of the skills and dispositions developed through play (e.g. exploration, curiosity, collaboration, critical thinking) are also represented in the competencies being foregrounded in school curricula as 21st-century skills, including curiosity, critical thinking, creative thinking, collaboration and problem solving.

Unfortunately, there is still limited research to identify the pedagogical practices or instructional approaches that should be aligned across different educational levels to best promote children's learning and development (Stipek et al., 2017[40]). Furthermore, the imprecision in the use of the terminology between curriculum and pedagogy mentioned above limits our understanding of good practices around curriculum (Slot, 2016[41]). Measurement issues (e.g. challenges around measuring global child outcomes versus specific knowledge sets, such as in numeracy or language skills), as well as differences between study samples and designs, limit the conclusions that can be drawn. Yet, research shows the importance of shared curriculum frameworks between ECEC and primary education and collaboration among the different actors that participate in both levels (Kagan et al., 2006[42]; Walsh et al., 2010[43]). Stipek et al. (2017[40]) have argued for the need to change both ECEC and primary education, placing a stronger emphasis on socio-emotional development in primary education and increasing learning opportunities in ECEC.

Transitions from ECEC to primary school

Transitions are recognised as important for children's lives as they represent a fundamental qualitative shift in experiences. Transitions can be horizontal, involving children's movements during their everyday lives between settings (e.g. from home to ECEC, from school to after-school care), or vertical, such as between ECEC and primary school (Kagan, 2010[44]). Increasingly, governments are addressing children's transitions as a priority in education policies (Dockett and Perry, 2004[45]). In Ireland, for example, the transition from preschool to primary school is a priority area in the National Council for Curriculum and Assessment (NCCA)'s Strategic Plan for 2015-2018. Aistear, Ireland's early childhood curriculum framework (covering birth to age 6) highlights the importance of transitions and Síolta, the National Quality Framework for Early Childhood Education has 'transitions' as one of its sixteen standards (NCCA, 2009[46]; Síolta: The National Quality Framework for Early Childhood Education, 2018[47]). In 2015, the Aistear Síolta Practice Guide (NCCA) was developed as a supplementary instrument to help ECEC settings in Ireland use the two frameworks together to improve children's experiences. The guide includes a section on "Supporting Transitions" with a particular focus on the transition to primary school, highlighting the need to transfer relevant information from preschool to primary school (O'Kane and Murphy, 2016[48]).

Although clear information on the success of policies to promote continuity for young children during transitions is often lacking, several areas demonstrate promise for promoting continuity for children while simultaneously supporting their educational progression. These promising areas include: developing systems to share information on children across educational settings; aligning standards and assessments across education levels; continuing an emphasis on both social-emotional and academic development across levels of schooling; providing shared professional development activities and opportunities

for collaboration among ECEC staff and primary school teachers; developing shared pedagogical frameworks; and building continuity into curricula (Stipek et al., 2017[40]).

The differences between ECEC and primary education can create challenges for building continuity in children's experiences and has contributed to a culture of 'schoolification' in ECEC in some jurisdictions. In other words, traditional primary school culture is sometimes extended downwards to ECEC, where curricula and pedagogical approaches increasingly are structured to prepare children for the requirements of school (Woodhead and Moss, 2007[49]), instead of bringing a stronger child-centred, play-based approach to primary education. The increasing attention to transitions highlights the role of creating dialogues that allow primary schools to be better prepared for young children, promoting two-way communication between ECEC and primary school (OECD, 2017[1]). For example, in Norway national regulations describe the responsibility of primary schools to be prepared to receive children and their parents, in addition to the responsibility of ECEC settings to prepare children and families for the transition to primary school (OECD, 2017[1]). In this line, the design and implementation of curriculum and pedagogical continuity play a crucial role in enabling better transitions for children by bridging the discontinuities in pedagogy between ECEC and primary education (OECD, 2017[1]).

In addition to historical differences in curricula and pedagogy between ECEC and primary school, myriad other differences contribute to divisions between these sectors. The overall organisation and governance of ECEC and primary schools can contribute to discontinuities when different ministries are responsible for different sectors. These differences between systems serving young children and their families may also add to the differences in the goals of ECEC and primary education. Furthermore, staff and teacher pre-service training, professional development and working conditions, which are pivotal for making transitions work well for children, also often differ from ECEC to primary school settings. This paper explores challenges for continuity in light of these factors, and the role curriculum can play in facilitating transitions by bridging discontinuities between ECEC and primary school.

Methodology and data sources

Data for the international insights included in this paper are drawn from two sources. First, cross-country practices focusing on curriculum, but also including additional education system policy levers (e.g. organisation and governance, workforce development, monitoring), are examined with regard to support for continuity and progression between ECEC and early primary education. These data are largely drawn from a 2015/16 OECD system-level survey on transitions between early childhood education and care and primary school (see Annex A). Additional data are drawn from other existing OECD sources, including *Education at a Glance 2018*, to further elaborate on the questions of interest (OECD, 2018[50]; OECD, 2017[16]; OECD, 2017[51]; OECD, 2016[52]; OECD, 2015[38]; OECD, 2011[15])

The second source of data for the international insights is a series of in-focus case studies undertaken expressly for the purpose of addressing the guiding questions noted in Box 1.1. Information on jurisdictions was collected from multiple sources. First, the policy and academic literature cited in the OECD documents and in publications from other agencies, such as Eurydice, were investigated. Next, official documents, white papers and reports were retrieved from the websites of the relevant ministries and other public organisations of the different jurisdictions. Simultaneously, inputs from experts and government officials in each of the jurisdictions were requested. Experts and policy makers in all of the

jurisdictions provided ongoing validation of the information included throughout the drafting of this paper.

The case studies

Seven jurisdictions were selected to provide insights to a range of approaches for integration and alignment of curricula: Japan, Luxembourg, New Jersey (United States), New Zealand, Norway, Scotland (United Kingdom) and Victoria (Australia). These selections were made collaboratively, drawing on expertise within the OECD as well as from external experts and the National Council for Curriculum and Assessment (NCCA) in Ireland. The jurisdictions were selected with a view to balanced geographical coverage as well as diversity in their respective efforts to ensure continuity and progression between ECEC and primary education. The diversity in approaches to aligning or integrating curricula was sought to provide insights on a range of possibilities for promoting continuity and progression.

Japan put in place specific measures to promote children's transitions between ECEC and primary school. Four different curricular guidelines co-exist for children aged 0 to 8 in Japan: three within ECEC and one for primary education. Each curricular guideline has specific goals, and local governments have the autonomy to develop curricular strategies to ease children's transitions. For instance, during the last months of ECEC, some local governments in Japan implement an "Approach" curriculum, where staff take a strengths-based approach to help children prepare for primary school. During the first months of primary school, local governments often use a "Start" curriculum where teachers attempt to ease children's transition by using teaching-learning strategies already familiar to the children, e.g. circle time or activities carried out while sitting on the floor and shorter class periods. The way schools implement the Approach and Start curricula is determined at the local level depending on the needs of the children and the community. At the national level, all curricular guidelines are reviewed simultaneously with one common, over-arching concept in mind. The latest revision of the guidelines in 2017 clarifies common competencies to develop from ECEC through secondary education, with a goal of smoothing transitions between education levels.

In **Luxembourg**, two different integrated curriculum frameworks co-exist; the *Plan d'études de l'école fondamentale* (Curriculum for formal education) for children ages 3 to 12 within the formal education system, and the *Bildungsrahmenplan für non-formale Bildung im Kindes* and *Jugendalter* (National Curriculum for non-formal education before and outside of school) for children from birth to age 12 in non-formal education. Non-formal education encompasses ECEC for young children who are not yet enrolled in the formal education system, as well as education and care for children of all ages provided outside of school hours (e.g. after-school care).

The *Plan d'études de l'école fondamentale* is divided into four cycles of two years each. It is structured according to the same principles and learning areas for all four cycles, ensuring content continuity and progression. The *Bildungsrahmenplan für non-formale Bildung im Kindes* and *Jugendalter* similarly provides continuity in learning areas, but for broader age groups than for the four cycles defined for the formal education system. The curricula for formal and non-formal education are seen as complementary and serving the needs of children of different ages both in and out of school, as well as prior to school entry.

The United States does not have a national education system; instead, individual states have authority for their education systems and authority is often further devolved to local levels, such as school districts. In **New Jersey (United States)**, state-funded pre-kindergarten education for 3 and 4 year-olds was implemented in selected areas (Abbott districts) in 2000, in response to a court order. For these districts, the US Supreme Court demanded high-quality standards for programmes such as maximum class size, educators with specialised training and developmentally appropriate curricula, to address unequal access to high-quality early learning in these districts (Ryan and Lobman, 2006[53]).

In early the 2000s, the New Jersey Department of Education (NJDOE) had two challenges: 1) to provide quality preschool education; and 2) to promote early literacy. These two challenges led to the Preschool-Grade Three (P-3) Strategy that has been implemented since 2002, which includes the alignment of learning standards as well as professional continuity (State of New Jersey Department of Education, 2018[54]). In 2010, the NJDOE created the New Jersey Council for Young Children, whose main purpose is to ensure alignment and co-ordination of early care and education systems to support quality services for children and families. To this end, the Council has fostered meaningful co-ordination among state systems of early education and care, which contributes to the well-being of New Jersey's children and families, in particular, those from the most vulnerable groups. The Birth-to-Eight Early Learning and Development Standards Committee of the Council has developed a coherent set of early learning and programme standards that address all areas of development from birth through 8 years.

New Zealand's early learning curriculum for children aged 0-5, *Te Whāriki*, is aligned with the school curriculum, The New Zealand Curriculum (for English-medium schools) and *Te Marautanga o Aotearoa* (for Māori-medium schools).[1] New Zealand seeks to align all levels of the curriculum and provide students with a clear sense of continuity and direction. The revision of the ECEC curriculum in 2017 reinforced the notion that the education system from the early learning level up to the tertiary level is considered as a single pathway. Curricula for both ECEC and schools focus on ongoing and lifelong learning. The curricula are not prescriptive but provide a framework that ECEC and schools are expected to use to develop a local curriculum to meet the needs of children, parents, extended families and community.

Norway has different curricula for ECEC and primary education. The Framework Plan for the Content and Tasks of Kindergarten covers ECEC provision from birth to 5 years, and the Knowledge Promotion Curriculum covers education from primary school up to 18 years. Norway was selected as an example of curricular alignment and support for transitions between ECEC and primary education, as it has made strides in aligning the curricular frameworks of the two settings. As a result, the two curricula now share purposes and values and the learning areas in the Framework Plan reflect the subjects that children will encounter in school. Furthermore, the last revision of the Framework Plan (2017) places emphasis on collaboration with parents and coherence in transition between kindergarten and primary school, explicitly including a section on transitions. Notably, the primary curriculum is currently being adjusted to facilitate alignment with the Framework Plan.

In **Scotland (United Kingdom)**, the Curriculum for Excellence (CfE) covers children aged 3 to 18, constituting a fully integrated curriculum. The education and care of children

1 Primary and secondary school students in New Zealand attend schools where either English or Māori is the primary language (or medium) of instruction.

from birth to the start of school is considered early learning and childcare, while primary education starts at age 5. Scotland's efforts in curriculum integration and alignment can be seen at different levels. Firstly, the capacities that the Curriculum for Excellence aims to develop in children and young people (successful learners, confident individuals, responsible citizens and effective contributors) and subject areas are maintained and addressed throughout all curricular levels. Secondly, and more importantly, the Curriculum for Excellence's early level considers the two years of early learning and childcare before school (3-4 years) to first primary level (5 years) as a unit, establishing the same curriculum organisation, learning experiences and expected outcomes (and associated benchmarks).

Finally, **Victoria (Australia)** has a unique approach, with two overlapping curricula that cover ECEC and primary school. The Victorian Early Years Learning and Development Framework (VEYLDF) covers from birth to 8 years, and the Victorian Curriculum F-10 covers children aged 5 to 17. In Australia, the states (e.g. Victoria) are primarily responsible for education policy, although the national, Commonwealth, government plays a role as well. Early learning also is a shared responsibility between the Commonwealth government and the states.

The Victorian Education system places a strong emphasis on supported transitions, continuity of learning and progression of learning. The Victorian Curriculum F–10, which incorporates the Australian Curriculum, is structured by levels of learning and supports developmental continuity and progression among different levels. The principal stage that is aligned between ECEC and primary school is the Foundational Stage and covers pre-primary through second grade in primary school, where both curricula can be used. This stage focuses on five curricular areas, and schools are able to choose to structure teaching and learning of these areas around the five outcomes promoted by the VEYLDF. In addition, the Victorian state government provides broad resources to support successful transition to school, curricular alignment processes and children's continuity of learning with pedagogies relevant to this stage of learning.

Box 1.3. Key terminology used in the case studies

Japan

- **Day care centres**: These serve children aged 0-5, focus on care and are governed by the Ministry of Health, Labour, and Welfare.
- **Integrated centres for ECEC**: These serve children aged 0-5, focus both on care and education, and are governed by the Cabinet Office.
- **Kindergartens**: These serve children aged 3-5, focus on education and are administered by the Ministry of Education, Culture, Sports, Science, and Technology.

Luxembourg

- ***Bildungsrahmenplan für non-formale Bildung im Kindes and Jugendalter***: This is the curriculum framework for non-formal education, serving children ages 0-12.
- ***Plan d'études de l´école fondamentale***: This is the curriculum for pre-primary and primary education.

New Jersey (United States)

- **Abbott Districts**: These are 31 school districts in New Jersey that provide high-quality preschool education in order to bridge the socio-economic achievement gap. These districts are the focus of the case-study material on New Jersey.
- **Pre-kindergarten**: ECEC for children aged 3 and 4 years old, used interchangeably with the terms "preschool" and ISCED 02.
- **P-3 Strategy**: A strategy to promote alignment from preschool to third grade.

New Zealand

- ***Te reo Māori***: One of New Zealand's three official languages along with English and sign language. Māori is the language spoken by the Māori people who are indigenous to New Zealand.
- ***Te Marautanga o Aotearoa***: This is the curriculum for Māori-medium primary and secondary schools, reflecting New Zealand's bi-cultural nationhood, along with The New Zealand Curriculum.
- ***Te Whāriki***: *Te Whāriki: He Whāriki Mātauranga mo ngā Mokopuna o Aotearoa* is New Zealand's early childhood education curriculum.
- ***Te Whāriki a te Kōhanga Reo***: This is a distinct curriculum pathway for *mokopuna* and their *whānau* in *kōhanga reo*. *Kōhanga reo* are licensed providers of Māori language immersion education and care services with a wider focus on *whānau* development. Te Whāriki a te Kōhanga Reo outlines the curriculum for children in *kōhanga reo*.
  - ***Mokopuna***: This is a Māori-language word meaning grandchild or young person.
  - ***Whānau***: This is a Māori-language word for extended family.
  - ***Kaiako***: This is a Māori-language word for staff, teachers, educators and parents that have the main responsibility for what happens in ECEC settings.

Norway

- **Framework Plan**: The Framework Plan for the Contents and Task of Kindergartens is the curriculum for ECEC, including both ISCED 01 and ISCED 02.
- **The Knowledge Promotion Curriculum**: This is the curriculum for compulsory school (primary and secondary education and training).
- ***Barnehager***: These are ordinary kindergartens that offer half-day or full-day ECEC services.
- ***Familiebarnehager***: This is family day care, where an assistant works in a private home are caring for a maximum of five children below school age, supervised and mentored by a qualified kindergarten teacher.
- ***Åpne barnehager***: These are open kindergartens, which are part-time drop-in centres led by a qualified kindergarten teacher.

Scotland (United Kingdom)

- **CfE**: Curriculum for Excellence.
- **ELC (early learning and childcare)**: The education and care of children from birth to the start of primary school (ISCED 0).
- **Early level**: Curriculum for Excellence's first curricular level, broadly comprising from pre-primary education (ISCED 02) to Primary 1, the first year of primary education. However, Curriculum for Excellence levels are not strictly aligned to specific years of schooling; rather, the levels are applied for children based on their individual progress.

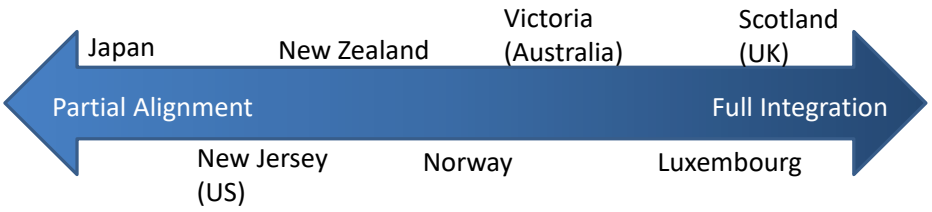
Victoria (Australia)

- **Victorian Curriculum F-10**: This is the curriculum for primary and secondary schools in Victoria, from the Foundation level through level 10. This curriculum incorporates the Australian Curriculum.
- **VEYLDF**: This is the Victorian Early Years Learning and Development Framework for children ages 0-8.

A continuum of curricular alignment and integration

There are different approaches to curricular alignment/integration that have been designed and implemented internationally. These approaches can be understood in a continuum from models of no explicit continuity, with completely different curriculum between ECEC and primary schools, to models of strong continuity, where ECEC and primary school curricula are integrated. Figure 1.1 presents a high-level view of how the seven case-study jurisdictions included in this paper fall along this continuum. The placement of each jurisdiction in the figure is informed by the age ranges covered and number of curriculum documents used, as well as by efforts to build continuity in specific aspects of curricula (e.g. learning areas) or through implementation of curricula (e.g. through common training of ECEC and primary teachers).

Figure 1.1. Degree of curricular alignment/integration in the seven case studies



Partial alignment reflects situations where underlying goals of curricula may be aligned, or where there are some co-ordination efforts between the ECEC and primary school curriculum frameworks, but where many distinctions between curricula at the different levels still exist.

In Japan and New Jersey (United States), different curriculum frameworks are used for ECEC and primary school. There are efforts being made in these jurisdictions, however, to align aspects of the curricula or learning standards, or otherwise provide continuity between ECEC and primary school. For instance, in Japan, the use of the "Start" curricula aims to

provide continuity from ECEC during the first months of primary school, and New Jersey promotes continuity in their learning standards and pre-service professional development from the pre-primary level through third grade in primary school.

Explicit alignment in curricula refers to situations where frameworks between settings are clearly connected in terms of content, pedagogy and/or developmental goals (e.g. the ECEC curriculum clearly refers to the primary school curriculum) (OECD, 2017[1]).

New Zealand and Norway have explicitly aligned models, with different curricula for ECEC and primary school. In these cases, there is an explicit connection between the frameworks either in content, pedagogy and/or developmental goals. For instance, in Norway, the Framework Plan for the Content and Tasks of Kindergartens defines learning areas in ways similar to those in the primary school curriculum in Norway.

Integrated curricula typically involve a single document that covers shared themes, goals and perspectives for a relatively broad age span, including (at least) the last year of ECEC and the first years of primary school, with separate contents to match each age group.

An example of a fully integrated curriculum is Scotland's Curriculum for Excellence, covering education for children aged 3 to 18. Luxembourg and Victoria (Australia) have integrated curricula as well, although these cover a narrower age range than in Scotland.

Curricular continuity can be a key driver in supporting children's transitions; however, successful transitions require the participation of all actors involved in children's early development, including children, parents, ECEC staff, primary school teachers, the community and other services linked to ECEC and early development (e.g. health professionals, psychologists, social workers, regulating authorities and before and after out-of-school services). Solid, responsive and reciprocal relationships among all these participants help ensure continuity for children when moving to a new learning environment (OECD, 2017[1]). Despite its potential positive effects, increased home-school co-operation can limit children's opportunities to speak for themselves, particularly if they are not actively included in conversations occurring across settings. The active inclusion of children in communication strategies is an area for greater consideration, for instance as part of initial and ongoing teacher training (Betz, 2015[55]).

Professional continuity, in particular, is central to facilitating transitions from ECEC to primary school through coherent pedagogical and child development practices. Teacher qualifications matter, but strong preparation in key transition-related competences makes an important difference. This requires that ECEC centre leaders, primary school principals, ECEC staff and elementary school teachers are prepared for collaboration and transitions in their pre-service and ongoing training and receive relevant and sufficient support (OECD, 2017[1]). Likewise, engaging families before, during and after transition is also relevant for developmental continuity; lack of knowledge and awareness of the importance of transition may, for example, hinder parental involvement. Therefore, some jurisdictions have developed and provided parents with support materials on transitions (e.g. Victoria [Australia], New Zealand).

It is important that curriculum approaches include these various dimensions, specifying different practices that facilitate young children's transitions across ECEC and into primary school (OECD, 2017[1]). Moreover, policies to support curricular alignment or integration must account for numerous other aspects of education systems, such as staff and teacher training, governance of different components of the system and approaches to monitoring and evaluation of curricula, in order to ensure that curricular continuity is implemented as intended.

2. International insights

This section provides insights from OECD cross-country data and seven in-focus case studies on policy approaches to support continuity and progression during transitions between early childhood education and care (ECEC) and primary school. Practices around curricular continuity are the focus, but the broader context of the education system and relevant policy levers, notably around governance, organisation, professional continuity and monitoring, are also taken into account. Insights are first presented with regard to strategies used by jurisdictions to support continuity and progression during children's transitions in general, before focusing more specifically on curriculum organisation. This section concludes with an examination of the curriculum implementation process and related monitoring strategies that contribute to children's experiences of continuity and progression as they move from ECEC settings into primary school.

Continuity and progression in transitions from early childhood education and care to primary school

Curriculum can play a central role in promoting continuity and smoothing transitions for children between ECEC and primary school; however, curricula are embedded in the broader structures of education systems. This section addresses these broader structures, including organisation and governance of education systems, over-arching goals of ECEC and primary school and the training and working conditions of teachers to address the question:

- ***Looking across jurisdictions and in the context of curriculum policy documentation: How are continuity and progression between early childhood education and care (ISCED 0) and early primary education (ISCED 1) supported?***

Jurisdictions' goals and objectives for transitions from ECEC to primary school set a framework for children's learning experiences. Across the jurisdictions participating in the OECD survey on transitions (see Annex A), there are largely three policy approaches to achieving the goals and objectives of transition: 1) setting broad goals to emphasise child well-being; 2) emphasising school readiness to ensure children develop the competencies necessary to successfully adapt to, and integrate into, compulsory education; and 3) embedding transition goals in other policies. With regard to the first approach, there are commonly shared goals across countries, such as supporting continuity in child development and learning; however, the scope and degree of specificity vary. Frequently, these broad goals are mentioned in curricula. In jurisdictions without explicit policy goals and objectives for transitions, programmes and initiatives nonetheless exist to support transitions. Table 2.1 provides illustrative jurisdiction examples of the three policy approaches, which are not necessarily mutually exclusive (OECD, 2017[1]).

Table 2.1. Scope and indication of transition goals in curricula

Scope of transition goals and indication in curricula	Objectives intended under transition goals	Additional jurisdiction examples
Broad transition goals, explicitly mentioned in curricula	• Child well-being and supporting prerequisites for growth and learning (Finland) • Supporting holistic education that ensures safety and continuity (Norway) • Ensuring all children and their parents experience practical and emotional support through transitions to facilitate continuity in their care; supporting progression in child development and learning; enhancing child well-being and positive experience of change (Wales, United Kingdom)	Finland Japan New Jersey (United States) New Zealand Norway Scotland (United Kingdom) Slovenia Sweden Victoria (Australia) Wales (United Kingdom)
Transition goals manifested through the policy goal of school readiness	• Japan's National Curriculum Standards for Kindergartens aim to cultivate the foundations for compulsory education and subsequent education for preschool children, providing an appropriate environment for their healthy growth and fostering their physical and mental development (Japan) • National Education Goals of the US asserts that "all children in America will start school ready to learn". Further attention to school readiness was given with the inception of the federal No Child Left Behind Act. This law was enacted to tackle the pervasive achievement gap between children from advantaged and disadvantaged backgrounds at the start of compulsory schooling (United States)	Japan Kazakhstan United Kingdom United States
Transition goals embedded in other policy goals	• More general goals for early learning across the country exist as opposed to explicit transition strategies or programmes • (Austria, Denmark) • The stimulation of language development – one of the country-wide policy interventions for early learning – is in place to prepare children for their future education and employment opportunities (Austria)	Austria Denmark Luxembourg Scotland (United Kingdom)

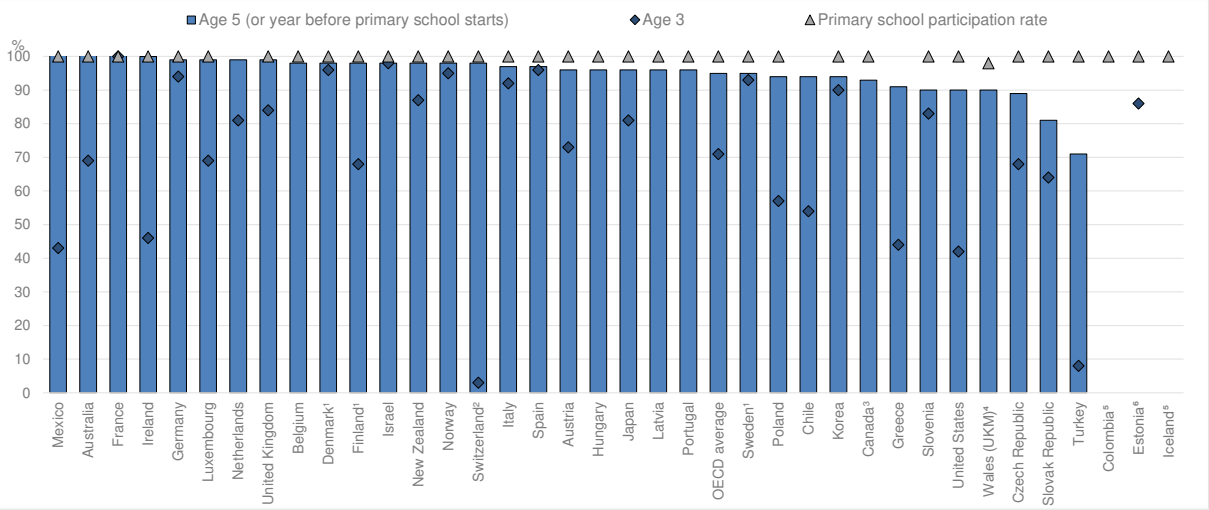
Note: The classification of jurisdictions across the three approaches is based on the characteristics of the systems, and the categories are not mutually exclusive.
Source: OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, https://doi.org/10.1787/9789264276253-en.

Almost all children are in ECEC in the year prior to primary school across countries

Considering the role of curriculum in promoting continuity across ECEC and primary school is important, in part, because of high enrolment rates in ECEC. At age 5, enrolment rates in ECEC are at or close to 100%; among the case-study jurisdictions the United States is an exception at 90%, which is below the OECD average of 95% (OECD, 2017, pp. 48-49[1]).On average, 71% of 3-year-olds across OECD countries attend some form of ECEC, although there is substantial variation among countries, including among jurisdictions included in the case studies and Ireland. In Norway, 95% of 3-year-olds were enrolled in pre-primary education in 2014, whereas participation was below the OECD average in Ireland (46%) and the United States (42%). Moreover, enrolment rates in pre-primary

education are lower than for compulsory primary education (Figure 2.1), although they are increasing in most OECD countries (OECD, 2016[52]).

Figure 2.1. Enrolment rates at age 3 in early childhood education and care (ECEC), age 5 in ECEC and primary education, and all ages in primary education (ISCED 1) (2014)



Note: Year of reference for data for enrolment in ISCED 1 is 2013.
Data for enrolment rates at age 3 refer to enrolment in all forms of ECEC (ISCED 0), including early childhood developmental programmes (ISCED 01)
and pre-primary education (ISCED 02).
Data for enrolment rates at age 5 include all forms of ECEC, i.e. ISCED 0 (pre-primary education and childcare) as well as enrolment in primary school
(ISCED 1).
Data for enrolment in primary education refer to enrolment in ISCED 1 in public and private settings.
1. For Denmark, Finland and Sweden, data for age 5 include data for children aged 6 as primary school starts at the age of 7 in both countries.
2. For Switzerland, data for 3-year-olds refer to enrolment in ISCED 02 only.
3. Year of reference for Canada is 2013 instead of 2014 for enrolment rates at ages 3 and 5 years; and 2012 for enrolment in primary education instead.
of 2013.
4. For Wales (UK), data for 5-year-olds refer to enrolment in ISCED 02 only.
5. Data are missing for enrolment rates at age 3 and 5 for Colombia and Iceland.
6. Data are missing for enrolment rates at age 5 in Estonia.
Source: OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Figure 2.1, https://doi.org/10.1787/9789264276253-en.

Compulsory education in a majority of OECD jurisdictions starts at the age of 6, including in Ireland, Japan, and Norway (OECD, 2018[50]). In most of the seven case-study jurisdictions, compulsory education starts with primary education at age 6, with the exception of Scotland, where it starts at age 5, and Luxembourg at age 4. Nevertheless, even when ECEC is not compulsory, pre-primary enrolment is often very high, with many countries providing legal entitlements to a place in ECEC services for at least one or two years before the start of compulsory schooling. The benefits of ECEC for parents' participation in the labour market and fertility rates as well as children's development, learning and well-being have prompted policy makers to enhance both access to, and the quality of, ECEC services (OECD, 2018[50]). As such, legal entitlements to ECEC are currently expanding in many countries, although there remains considerable variability in

both the ages at which children are entitled to ECEC and the number of hours covered by these entitlements.

The age at which compulsory school attendance begins is a topic of policy interest; however, there is little research evidence to indicate an optimum starting age. Furthermore, in order to understand the impact of lowering the age of compulsory school attendance, the quality of settings where children are most likely to spend time prior to compulsory school, as well as the quality of the early years of compulsory schooling, must be considered. Regardless of the age at which children begin compulsory schooling, the continuity of curricula between ECEC settings and compulsory schooling is likely to shape how children experience this transition as well as their subsequent educational outcomes (OECD, 2017[1]).

Organisation and governance of education systems

Across jurisdictions, ECEC services can be divided into split systems and integrated systems. Split systems refer to jurisdictions where policies for "care" and "early education" are typically considered separate services that are governed by different ministries or authorities. In general, "childcare" is provided to younger children, typically under the age of 3, while "early education" is provided for children ages 3 and older. In contrast, integrated systems are those where responsibility for ECEC services fall under one authority, whose responsibilities may range from curriculum development to standard setting, to monitoring or financing (see Table 2.2). In countries with integrated ECEC systems, learning objectives– also called learning areas or activities – are established for the entire period of ECEC; in split systems, they are typically set only for older children.

Responsibility for different aspects of education systems, such as curriculum development versus monitoring for quality and standards, can also fall under the purview of distinct government bodies. Among the case studies, most jurisdictions have one institution in charge of all provisions of ECEC, with the exception of Japan and New Jersey (United States), which have different institutions governing different types of provisions. In primary education, all case-study jurisdictions have one integrated governance structure, led by the Ministry of Education (or equivalent governing agency).

Furthermore, the case-study jurisdictions have different governance models, some highly centralised like Luxembourg while others more decentralised, like Japan, where three national authorities each have responsibility for some type of ECEC. In **Luxembourg**, a single authority, the Ministry of National Education, Childhood and Youth (*Ministère de l'Éducation Nationale, de l'Enfance et de la Jeunesse*, MENJE), is responsible for funding, standard setting, curriculum development, co-ordination, accreditation and monitoring of ECEC and primary schools (OECD, 2015[38]; OECD, 2016[52]). The national curriculum frameworks for formal and non-formal education are designed at the national level by the ministry and then adapted at the local level to meet the specific needs of settings and children (OECD, 2015[38]). In addition, collaboration between non-formal and formal education is encouraged. Governance of both sectors is under the authority of the Ministry of National Education, Childhood and Youth, enabling efforts to develop co-ordinated policies across the two sectors. A goal of this governance structure is to facilitate horizontal transitions for children between non-formal and formal settings.

Table 2.2. Split systems vs. integrated systems of early childhood education and care services

	Principles of governance	Jurisdiction examples
Split systems	● ECEC services are governed by different ministries or authorities at the national/ regional level. ● In many countries with a split system, policies for "care" and "early education" have developed separately and fall under the responsibility of different authorities. Childcare and early education is provided as two different services and for different age groups.	Canada Colombia Czech Republic Flemish Community (Belgium) Greece Ireland Italy Japan Netherlands New Jersey (United States) Poland Portugal Slovak Republic Switzerland Turkey Wales (United Kingdom)
Integrated systems	● Responsibilities for ECEC services are under one (leading) authority (at the national and/or regional level), e.g. the education ministry, ministry of social welfare or another authority. ● Those responsibilities may stretch from curriculum development to standard setting, monitoring or financing.	Austria Chile Croatia Denmark Finland Germany Kazakhstan Luxembourg Mexico New Zealand Norway Scotland (United Kingdom) Slovenia Sweden Victoria (Australia)

Source: OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, https://doi.org/10.1787/9789264276253-en.

Luxembourg's early childhood education programmes and compulsory preschools are each monitored by their own national-level inspectors, under the same ministry: the Ministry of National Education, Childhood and Youth (OECD, 2015[38]). The national government is also responsible for the registration and licensing of ECEC and education settings (OECD, 2015[38]). However, municipalities must provide infrastructure and equipment to ensure preschool and primary education to children aged 3 and above as a service to their inhabitants. Responsibility for daily administration relies on regional governing bodies (*directions de région*) and school committees (*comités d'école*). In contrast, secondary schools are not managed by municipalities, but by principals under the direct responsibility of the Ministry of Education (EACEA National Policies Platform, 2018[56]).

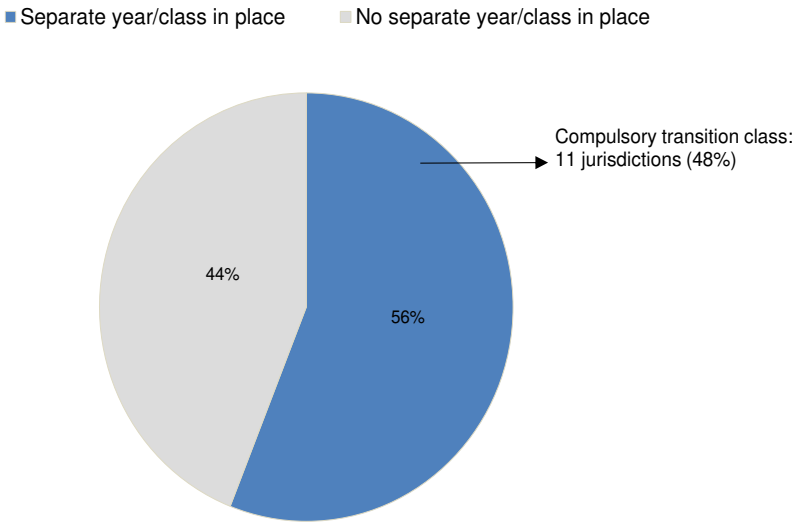
In contrast, **Japan** is an example of a split governance system in ECEC. Day care centres fall under the auspices of the Ministry of Health, Labour, and Welfare; integrated centres for ECEC are governed by the Cabinet Office; kindergartens, as well as primary schools, are administered by the Ministry of Education, Culture, Sports, Science, and Technology (OECD, 2017[57]) (OECD, 2017[1]). These three authorities collaborate closely with each other with regard to reviewing curriculum standards and setting teacher and staff certification programmes.

Programme management for ECEC programmes and schools in Japan is decentralised and falls under the control of local governments. Each prefecture and municipality has a board of education that co-ordinates the education services in each specific geographic unit. They are also responsible for implementing the continuity and transition strategies in their territories (Ministry of Education, Culture, Sports, Science and Technology, Japan, 2014[58]).

In general across the seven case studies, however, a central governing institution is in charge of setting standards, defining policies as well as drafting the curricular guidelines or a national curriculum. Programme administration, as well as programme monitoring, on the other hand, tend to be the charge of local authorities, at the regional or municipal level. Designing and implementing transition and continuity strategies also tend to be the responsibility of regional and local authorities or providers, as is the case in Norway and Japan.

Some jurisdictions organise a separate year, class or group for the final year of ECEC or the year before primary school. The goal of this separate stage is to support children's transition from ECEC into primary education. Among the 47 jurisdictions that responded to the policy questionnaire on this topic in 2016, a majority (56% or 23 jurisdictions) reported having a separate group, class or year (Figure 2.2). For 48% of these jurisdictions (11 out of 23), this year or class is compulsory (OECD, 2017[1]).

Figure 2.2. Many jurisdictions offer a separate year or class/group the year before compulsory primary school (2016)



Note: Based on data for the 41 jurisdictions: Austria, Flemish Community of Belgium, Alberta (Canada), British Columbia (Canada), Manitoba (Canada), New Brunswick (Canada), Newfoundland and Labrador (Canada), Northwest Territories (Canada), Nova Scotia (Canada), Nunavut (Canada), Ontario (Canada), Prince Edward Island (Canada), Québec (Canada), Saskatchewan (Canada), Yukon (Canada), Chile, Colombia, Croatia, Czech Republic, Denmark, Finland, Greece, Hungary, Ireland, Italy, Japan, Kazakhstan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey and Wales (United Kingdom). Germany is excluded from this figure as some Länder have a separate group or class and others do not. Hence, both options are possible.
Source: Adapted from OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education,* Figure 2.4, https://doi.org/10.1787/9789264276253-en,.

The seven jurisdictions included in the case studies take different approaches to organising their education systems, notably with different types of ECEC and different ages of entry to primary school. In all seven jurisdictions, education systems are divided into different levels, where ECEC covers either the first or the first two levels. Jurisdictions with two ECEC levels usually make the distinction between ages 0 to 3 and 3 to 5.

The **Scottish** education system, for instance, has four levels, two prior to school entry, and two in the school system. The education and care of children from birth to age 3 is referred to as *early learning and childcare* (Scottish Government, 2014[59]). Funded places for 0-3 year-olds are available to certain eligible children. Pre-primary education, which is also known as early learning and childcare, serves children ages 3 and 4 and is subject to universal funding. Primary education starts around the age of 5 and finishes around age 12. Subsequently, secondary education starts around age 12 and finishes around age 18 (Scottish Government, 2015[60]; OECD, 2015[61]).

Japan considers ECEC as the first education level. Its education system is divided into four levels: early childhood education and care (ECEC) from 0 to 5 years, primary education from 6-12 years, lower secondary school from 13-15 years and upper secondary school from 16-18 years.

In terms of the type of provisions, the seven case-study jurisdictions all offer a wider range of programme types in ECEC than in primary education and a higher proportion of private or non-formal programmes at the ECEC level than at the school levels. ECEC provision includes day care programmes, education programmes and care and education programmes led by educators, parents or community members. In most jurisdictions, these are provided through a variety of public, private and privately subsidised programmes. Primary school provision tends to be more homogeneous among jurisdictions and mostly publicly funded. Furthermore, all jurisdictions invest more funding in primary education than in ECEC. Universal access to free ECEC services is not always guaranteed, especially for very young children, but all jurisdictions offer universal free access to all compulsory schooling, including primary education. Norway, Victoria (Australia), Japan and Scotland (United Kingdom) demonstrate the some of the many different ways jurisdictions fund and organise various stages of ECEC and primary education.

In **Norway,** ECEC refers to three types of services: *Barnehager* (kindergartens), *Familiebarnehager* (family day care) and *Åpne barnehager* (open kindergartens). The first two types offer regular half-day or full-day service, while open kindergartens are drop-in centres where parents participate with their children (Engel et al., 2015[62]).

The Norwegian ECEC level has a mixed provision in terms of ownership. Public kindergartens account for approximately 50% of the provision and are owned by municipalities. Private ECEC provision is also administered and monitored by municipalities. The decentralised administration and local autonomy seek to represent the variety of families' interests and needs. Private provision is highly diverse, ranging from very small settings with a single owner promoting alternative pedagogies to kindergarten companies owning several different settings (Engel et al., 2015[62]). A maximum parental fee was introduced in 2004 and accounts for 15% of the cost on average. Norway provides ECEC free of charge for targeted groups of children: 20 hours free per week for children aged 3-5 from low-income families. In addition, no household is allowed to pay more than 6% of their income for a place in kindergarten.

In contrast, in primary education, Norway municipalities own public schools. Private sector schools must be approved by the government; there is only a small minority of independent

schools that are fully private, i.e. entirely financed by parents' fees. Independent schools approved under the Independent School Act are grant-aided. The private sector represents only 3% of the provision (Eurydice, 2018[63]).

Victoria (Australia) also has a variety of types of ECEC services, with programmes available for children from birth to school entry in approved services. These programmes include: long day care (for children from birth to school entry [at approximately age 5]); sessional kindergarten services (primarily for children in the year before school [at approximately age 4]); and, family day care services (typically for children from birth to school entry). Preschool education in Victoria, referred to as kindergarten, is subsidised by the Victorian and national governments and can be accessed either in long day care or sessional kindergarten and is led by a Bachelor qualified early childhood teacher. Fifteen hours per week of kindergarten is offered to all children in the year before school. Victoria also offers free preschool education to eligible 3-year-old children, through the Early Start Kindergarten programme.

Similarly, programme funding for ECEC and primary education differ in **Japan**. Over half (56%) of ECEC programmes are privately funded, and many families pay fees. Children from low-income families currently have free access to 20 hours of kindergarten and 55 hours of care per week (OECD, 2017[57]). From October 2019, the government will expand free access to ECEC centres for all children aged from 3 to 5. In terms of equity, different prefectures spend different amounts per child in ECEC, resulting in different levels of programme quality (Sakaue and Ogawa, 2016[64]). Primary education, in contrast, is funded by the national, municipal and prefectural governments and is universally free of charge for families (NCEE, 2018[65]) .

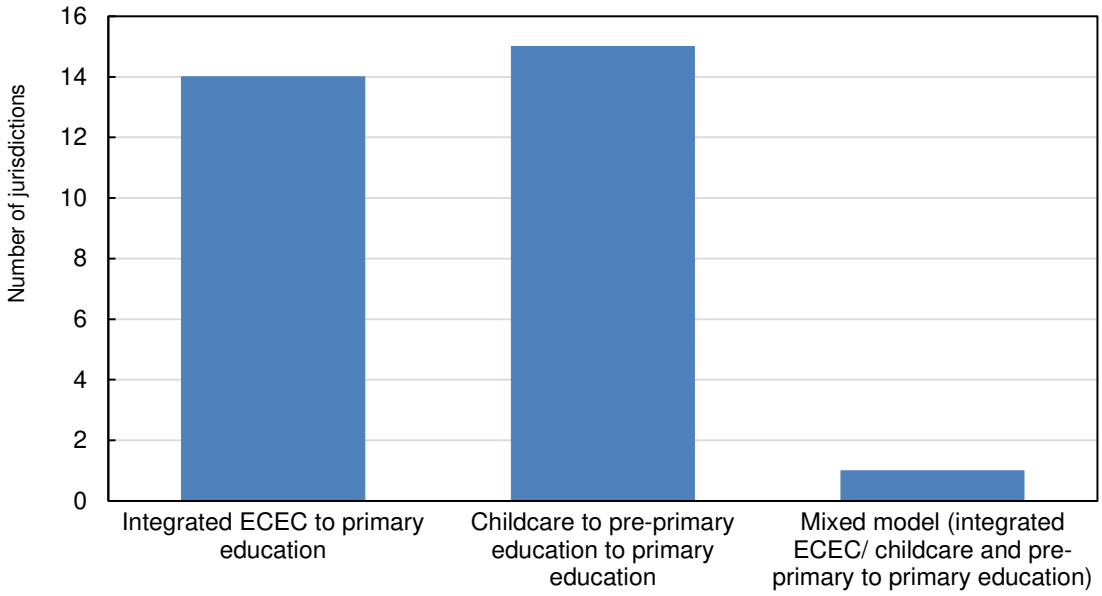
Scotland (United Kingdom) uses different funding policies for ECEC and primary education as well. Up to 600 free hours of early learning and childcare for children ages 3 and 4 and for certain eligible 2 year-olds is available, while parents can also purchase additional early learning and childcare hours. The entitlement for free early learning and childcare in this age group will increase to 1 140 hours per year from August 2020. Scotland provides free universal access to primary education starting at between ages 4 and 5. All compulsory education levels are free and available to all children (Education Scotland, 2018[66]).

The different approaches to the organisation for ECEC services and primary school mean that children can experience transitions at different ages and settings across jurisdictions. As most children across OECD countries attend some form of ECEC, they experience their first vertical transition from home to ECEC. In jurisdictions with integrated ECEC systems, the transition between ECEC and primary school will be children's second major vertical transition. However, for children in jurisdictions with split ECEC systems, many have additional vertical transitions before they reach primary school (see Figure 2.3); horizontal transitions across settings are also common (OECD, 2017[1]).

Across jurisdictions, variation exists in terms of the governing structure for transitions between ECEC and primary education. In about 80% of the jurisdictions participating in the survey on transitions (23 out of 29), national authorities are involved in transition policies, often in collaboration with another level of governance. In about one-third of the jurisdictions (34%, 10 out of 29), national authorities alone are responsible for this role, while in 31% of the cases (9 out of 29), national or federal governments collaborate with local authorities (mainly municipalities) in governing transitions. On the other hand, in a few jurisdictions such as Germany, the Netherlands and New Zealand, ECEC settings and schools have autonomy for managing transitions. For example, in New Zealand, school

leaders and ECEC services develop and implement transition policies that are in line with the needs of individual communities. Local autonomy does not preclude authorities at different levels from engaging in shared efforts to improve the experience of transitions, as demonstrated in a co-operative project between the German federal government and the governments in several *Länder,* e.g. Liebers and Scheib (2012[67]). Participation of diverse actors is also observed in several countries in support of children's transitions from ECEC to primary school: Besides governments and providers, additional agencies such as inspectorates, curriculum development agencies or early development agencies take part in the efforts to support transitions (OECD, 2017[1]).

Figure 2.3. In the majority of jurisdictions, children experience at least two transitions before primary school (2016)

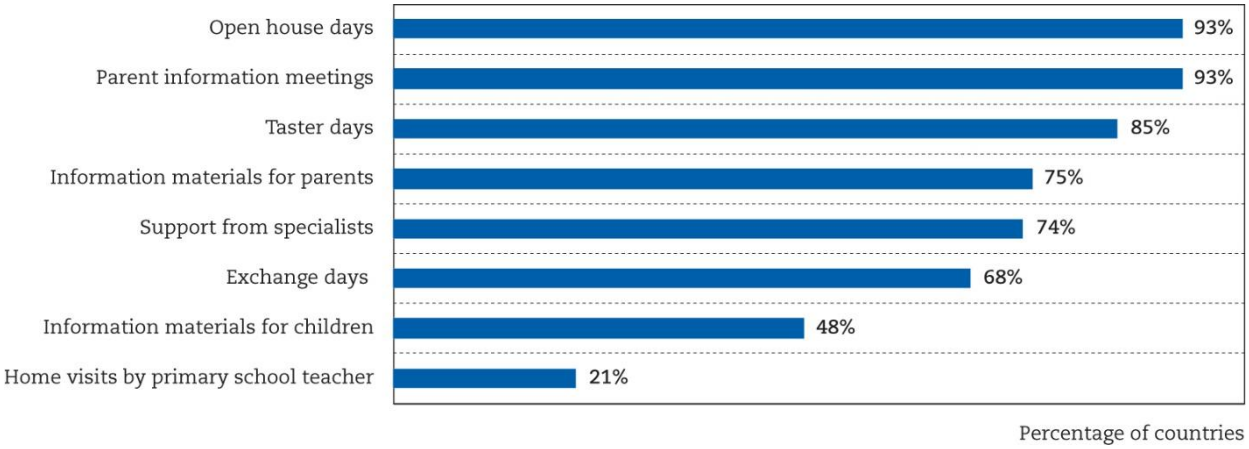


Note:
Information is based on data for the following 30 countries: Austria, Flemish Community of Belgium, Canada, Chile, Colombia, Croatia, Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Ireland, Italy, Japan, Kazakhstan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey and Wales (United Kingdom).
The mixed model refers to Japan, where some children attend integrated ECEC settings serving ages 0-5 and other children attend separate settings for day care and pre-primary education.
Source: OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Figure 2.3, https://doi.org/10.1787/9789264276253-en.

Nonetheless, a majority of jurisdictions report having strategies in place to prepare children for transitions during the final year of ECEC, to ensure the benefits of high-quality ECEC are carried forward to the primary school years and beyond. Figure 2.4 presents the most common activities reported to prepare children for transitions, which require, to varying degrees, the engagement of teachers, staff, specialists and families. Most of the 28 jurisdictions participating in the survey on transitions reported offering open house days, referring to ECEC children's visits to primary schools, as well as parent information meetings. A majority also offer taster days where ECEC children can participate in primary school activities for one or more days. Other common strategies include offering

information materials for parents, offering support for transitions from specialists, mainly for children with special learning needs and "exchange days" when primary school teachers or ECEC staff and teachers can learn about each other's work and the environments in which children learn and play. To a lesser extent, jurisdictions reported providing information materials for children (e.g. books, booklets, TV programmes or videos) and offering home visits to by primary school teachers to targeted ECEC families. These types of orientation events can be valuable in easing transitions but must be considered in the context of ongoing engagement between educational settings and families (OECD, 2017[1]).

Figure 2.4. Practices to prepare children for transitions (2016)



Note: Information on transition activities is based on 2016 data from 28 countries.
Source: OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Figure 1.4, https://doi.org/10.1787/9789264276253-en.

In some cases, pre-primary education settings and primary schools use the same physical premises so that children do not have to move to different locations when they start primary school (Table 2.3). For example, in some schools in Austria, the last year of ECEC and the first two years of primary education are grouped to constitute a period called "joint-school-entry phase". This three-year phase facilitates continuity by creating a structure for co-operation between ECEC and primary school. Physical integration of ECEC and primary schools can also facilitate collaboration among staff and teachers from the two different levels, giving them opportunities to share information about specific children and about more general pedagogical approaches. Having shared physical settings also simplifies the provision of joint training courses for staff and teachers from ECEC and primary school, creating explicit structures for sharing knowledge between the two (OECD, 2018[5]; OECD, 2017[1]).

The physical integration between preschools and primary schools can also increase the process quality in preschool settings. Research indicates that higher process quality was observed in preschools that are physically integrated with schools compared to preschools situated outside school grounds or in independently functioning centres (OECD, 2018[5]). Integrating settings in this manner does not require a shared curriculum: even in the schools in Austria where physical integration occurs, separate curricula are maintained for ECEC and primary school (OECD, 2017[1]).

Table 2.3. Jurisdictions where early childhood education and care and primary schools are physically integrated[1] (2016)

Jurisdiction	Provision	
	ECEC and primary education are usually not integrated	Pre-primary education (preschool, nursery education, kindergarten) is commonly integrated with schools
Austria[2]	X	
Belgium - Flemish Community		X
Canada		X
Chile		X (nivel de transición 1 y 2)
Colombia		X (transition grade)
Croatia[3]	X	
Czech Republic	X	
Denmark		X (kindergarten class)
Finland	X (for pre-primary education in 80% of cases)	
Germany	X	
Greece		X
Hungary	X	
Ireland[4]		X (junior and senior infants)
Italy		X
Japan	X	
Kazakhstan		X (pre-primary classes)
Luxembourg[7]		X
Mexico	X	
Netherlands		X (*groep* 1 and 2)
New Zealand	X	
New Jersey (United States)[7]		X
Norway	X	
Poland	X	
Portugal[5]		X
Slovak Republic	X	
Slovenia	X (in around 48% of cases)	X (preschool education part of primary education in around 52% of cases)
Spain		X
Sweden		X (preschool class)
Switzerland[6]		X
Turkey		X
Wales (United Kingdom)-		X (maintained settings such as school-based nurseries)

Note:
1. Integration of ECEC and schools refers to physical integration, in which ECEC and primary schools are on the same premises or provided in the same building.
2. In Austria, pre-primary education for six-year-olds who are not ready for school yet is part of primary school.
3. In Croatia, preschool programmes are only integrated with school in areas without kindergartens.
4. In Ireland, junior and senior infant classes for four- and five-year-olds are part of primary school. The preschool ECCE scheme from birth until 5 years are not part of primary school. 4-year-olds can participate in junior infant class or in the preschool ECCE scheme.
5. In Portugal, it is most common that schools and pre-primary education are integrated, however schools and pre-primary education can be completely separate too (not integrated) or pre-primary, primary and secondary education can be integrated.
6. In Switzerland, kindergarten (*école enfantine*) is, from an institutional point of view, an integrated part of primary school but is not always provided on the same ground or in the same building.
7. Year of reference 2018.
Source: Adapted from (OECD, 2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Table 2.2, https://doi.org/10.1787/9789264276253-en.

Box 2.1. Physical integration of early childhood education and care and primary schools

Physical integration of ECEC and primary schools may facilitate transitions as children do not have to change buildings and are already familiar with the surroundings and staff. Co-location of ECEC settings and primary schools can also contribute to collaboration between ECEC staff and primary school teachers by facilitating communication and common leadership among the two settings (OECD, 2017[1]). This can, in turn, facilitate monitoring of child development and information sharing across the two settings. Moreover, findings from multiple countries suggests that the quality of staff-child interactions may be higher in ECEC settings that are co-located in schools; ECEC staff working in classrooms that were part of schools also tended to have higher education levels and were paid more relative to staff working in independently run ECEC settings (OECD, 2018[5]).

In **Wales** (United Kingdom), ECEC centres are physically integrated with primary schools, and a single curriculum called the Foundation Phase (revised in 2015) covers the education of children aged 3 to 7. The government is using integrated school buildings to improve the collaboration between primary schools and ECEC providers. This approach to integration even includes centres where everything from maternity services to ECEC settings are located within the local primary school. This integration eases the transition of children from ECEC to primary school and provides opportunities for monitoring children's progress. For instance, the Early Years Development and Assessment Framework aims to align the various development assessments carried out with children aged 0-7.

In **Denmark**, kindergarten classes (ages 3-5) and primary settings are also physically integrated and placed under the supervision of a single local authority. The single governance system makes it easier to govern transitions between ECEC and primary schools, and most municipalities have developed transition guidelines for the settings they oversee. Physical integration of settings in Denmark also provides local authorities with opportunities to improve the monitoring of children's development. Municipalities are notably in charge of performing language assessment on children who are not in ECEC and those who display difficulties in language acquisition at age 5, providing 15-30 hours of language development support a month to children who can benefit from this type of early intervention.

Integrated settings do not, however, guarantee the alignment of curriculum and practices between ECEC and primary schools. In **Slovenia**, about half of ECEC centres are physically integrated with primary schools, but curricula remain differentiated between the two levels. Nevertheless, the Framework of Curriculum Reform (1996) states that education programmes and curricula must be aligned, while clearly emphasising that kindergarten should not become 'schoolified'.

The advantages notwithstanding, physical integration of ECEC and primary settings does not address all of the challenges associated with supporting children's successful transitions. Counselling services in Slovenia noted that problems experienced by the schools were treated as "more important" than problems reported by ECEC centres in integrated settings. Staff in Slovenia highlighted a lack of shared culture between ECEC and primary schools but reported that communication issues between ECEC centres and primary schools are less prevalent when both settings are integrated on a single site.

Goals often differ between ECEC and primary education

As discussed in the Introduction, the goals of ECEC and primary school are often different; these differences have implications for how jurisdictions write and structure curricula for the two settings. Moreover, the goals of ECEC and primary education vary widely among the case-study jurisdictions. Goals may refer to skills that the education system should promote for children (e.g. Norway, Scotland [United Kingdom]) or how the system should provide adequate learning environments for children (e.g. Luxembourg). Goals can also focus on child outcomes for the future (e.g. Japan, New Zealand, Scotland [United Kingdom]), such as developing life skills or preparing to become active members of society.

There are jurisdictions that have shared goals for ECEC and primary education (e.g. Norway, Scotland [United Kingdom]), while others have differentiated goals for different education levels (e.g. Japan, Victoria [Australia]). For example, goals in **Norway** education in both ECEC and primary education aims to promote children's creativity, sense of wonder and search for knowledge while being based on shared values of democracy, respect, inclusion and gender equality. Furthermore, supporting families in the care and upbringing of their children is emphasised (Norwegian Ministry of Education and Research, 2013[68]).

In contrast, in **Japan**, where goals are differentiated across ECEC and primary education, the Basic Education Act (2006[69]) states the goals of early childhood education are "to form the foundations for one's character" as well as "to nurture the basic skills of learning". Within the different types of ECEC in Japan, different goals exist as well. Day care programmes, for instance, aim to support parents whose children are in care and to connect them with their communities (Shishido, 2008[70]). Kindergarten goals include nurturing basic skills for learning, as well as preparing children for primary education. Specifically, kindergartens are: "to function as a place for cultivating the foundations for compulsory education and subsequent education, providing an appropriate environment for the healthy growth of preschool children, and fostering their physical and mental development" (OECD, 2017[71]). In this regard, it is expected that kindergartens prepare children for primary education in a developmentally appropriate learning environment, delivering comprehensive, child-centred education with an emphasis on play.

The Basic Education Act (2006[69]) states the goals of compulsory education as "to develop the abilities of each individual so that he/she can live an independent life within society, and to foster the basic qualities necessary for citizens of our state and society." The transition from ECEC to primary school is regarded as the passage from a "period of awakening learning" to a "period of self-conscious learning" (OECD, 2017[71]; Ministry of Education, Culture, Sports, Science and Technology, Japan, 2016[72]). Thus, both ECEC and primary education goals include the development of children's skills. Furthermore, ECEC goals refer to the preparation of children for compulsory education while primary education goals refer to the preparation of children for society.

Victoria (Australia) also has differentiated goals across ECEC and primary education, although the goal of ECEC is to "set the course for successful lifelong learning" (Victoria State Government, Department of Education and Training, 2017[73]). The Victorian State Government released the *Education State Early Childhood Reform Plan* in 2017, outlining a vision for early childhood and a suite of reforms "to create a higher quality, more equitable and inclusive early childhood system" (Victoria State Government, Department of Education and Training, 2017[73]). In 2015, the Victorian Government set four Education State Targets for school education to drive significant improvement over the next ten years.

These are: Learning for life, more students achieving excelling in reading, maths, science and the arts, Happy, healthy and resilient kids, building the resilience of our children and encouraging them to be more physically active; Breaking the link, ensuring more students to stay in school and breaking the link between disadvantage and outcomes for students and; Pride and confidence in our s making sure every community has access to excellence, in every government school and classroom (Victoria State Government, 2018[74])

Aligning teacher qualifications across ECEC and primary school can support continuity for children

Despite the limitations of research on pedagogical continuity, it is clear that the qualifications of staff and teachers are essential for children's well-being, development and learning. The pre-service education and ongoing training of ECEC professionals are associated with the provision of high-quality ECEC and healthy child development (OECD, 2018[5]). Similarly, there is a wide consensus about the importance of primary school teachers' qualifications as a predictor for student performance. Although the duration of teacher training is more variable for pre-primary versus primary education across countries, Table 2.4 demonstrates that in many jurisdictions (17 out of 31), both pre-primary and primary education teachers complete their pre-service education with a Bachelor's degree (OECD, 2017[1]).

Table 2.4. Qualifications of pre-primary and primary teachers (2013)

Both pre-primary and primary education teachers complete education with at least a Bachelor's degree	Both pre-primary and primary education teachers complete education with at least a Master's degree	Pre-primary and primary education teachers complete education with different degree requirements
Victoria (Australia), Chile, Greece, Hungary,[1] Israel, Japan[2], Korea, Luxembourg, Mexico, Netherlands, Poland, Scotland (United Kingdom), Spain, Switzerland, Turkey, New Jersey (United States)	France, Iceland, Italy, Poland, Portugal	Austria, Czech Republic, Estonia, Finland, Germany, Norway, Slovak Republic, Slovenia, Sweden

1. Year of reference 2014, except Norway where the year of reference is 2017.
2. In the case of Japan, pre-primary teacher qualifications requirements reflect only kindergartens and not day care centres.

Source: Adapted from OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, https://doi.org/10.1787/9789264276253-en.

Aligning qualifications between pre-primary and primary teachers can be a means to create greater synergy between training for staff and teachers at the two levels. Furthermore, aligned qualifications can help encourage co-operation between ECEC staff and primary school teachers during transition periods. Efforts to align the level of education required for staff and teachers in the two sectors are underway in several jurisdictions. For example, authorities in the French Community in Belgium revised the initial education level of pre-primary teachers to align it with the level of primary school teachers (OECD, 2011[15]). Similarly, Finland raised the level of education required for kindergarten staff to match the level of primary school teacher requirements, which is university level. In Portugal, preschool and primary teachers have to follow the same programme during the first three years of education before specialising in one level in the fourth year, and teachers have an option to study a fifth year to obtain certification for both levels (OECD, 2011[15]).

In most case-study jurisdictions, there are more stringent requirements to work as a primary school teacher than to work in the ECEC sector. In the ECEC sector, there are often several pathways to become a teacher or caregiver, ranging from on-site training to formal education. To become a primary school teacher, there are fewer pathways, involving formal education in all cases.

Among the seven case studies, **Luxembourg** and **Norway** have the most alignment between teacher qualifications for ECEC and primary settings. Since 2009, teachers in **Luxembourg** are recruited into the formal education system as generalists who are able to guide children ages 3 to 12 years and are qualified to teach throughout the four cycles of ECEC and primary education (Ministère de l'Éducation nationale de l'Enfance et de la Jeunesse, 2009[75]). Similarly, in **Norway,** it is necessary to obtain a teaching qualification to work in a permanent teaching position. The minimum requirement for ECEC teachers is a three-year Bachelor's degree from a university/university college whereas since 2017 the minimum requirement for primary school teachers is a Master's degree. (Norwegian Ministry of Education and Research, 2016[76]).

In **Japan,** there are two certification types for ECEC: one for day care centres, authorised by the Ministry of Health, Labour, and Welfare and one for kindergartens authorised by the Ministry of Education, Culture, Sports, Science, and Technology. In both cases, initial education can range from a two-year training programme to a four-year college degree. In order to teach in the integrated ECEC centres, teachers require both certifications. Both ECEC certifications have fewer requirements than primary school teacher certification.

Although there are different formal education requirements for ECEC educators and primary school teachers in Japan, the government has adjusted prerequisites to support teachers who obtain qualifications to teach in kindergarten and primary schools. To promote continuity between ECEC and primary education, most college credits are aligned between kindergarten and primary school teacher programmes (OECD, 2017[71]; OECD, 2017[57]).

In preschool programmes funded by the State of **New Jersey** (United States) in Abbot Districts, preschool teachers must complete a pre-service P-3 certification. This certification allows educators to teach at any grade from preschool through third grade in primary school. The rationale for this requirement is to raise the qualifications of preschool teachers and to promote continuity and collaboration with primary school teachers (Ryan and Lobman, 2006[53]). In parallel, there is a K-5 certification which allows teachers to teach grades from kindergarten (available to children at age 5) to fifth grade in primary school. State policy also requires in-service P-3 training for preschool and primary school teachers already working with young children (Frede, 2018[77]).

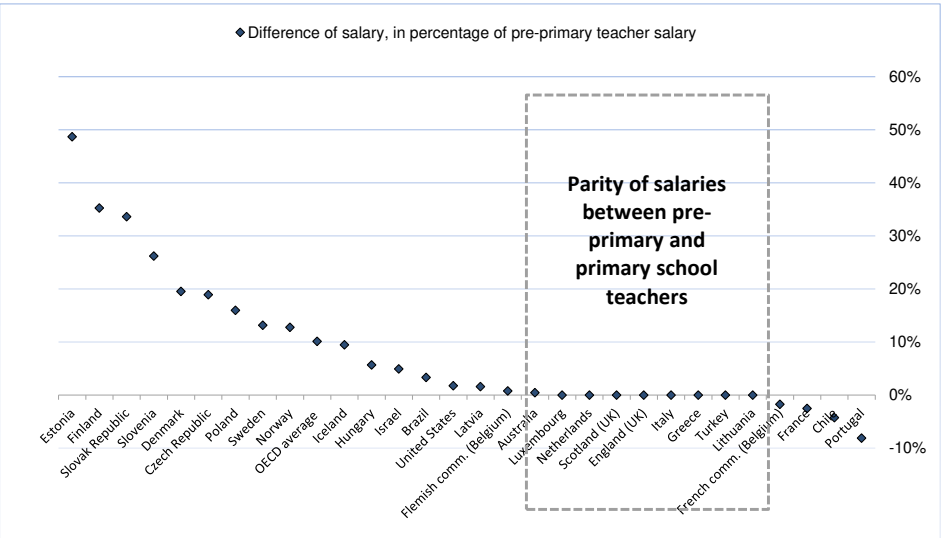
Scotland (United Kingdom) is an example of a mixed and diverse labour force in ECEC. Since 2006, all teachers working in ECEC and school-age childcare are considered part of the early learning and care workforce. The workforce, however, remains divided between a small number of qualified teachers in the early learning and care sector, and a much larger number of practitioners without formal teaching qualifications (Cohen et al., 2018, p. 8[78]). The decrease in the number of teachers in early learning and childcare relates to the abolition in 2002 of the Schools Code requirement of employing a full-time teacher in every nursery; and to the creation in 2009 of the Bachelor of Arts in Childhood Practice, a non-teaching pathway to a graduate-level qualification. As such, the different qualifications and training routes for practitioners and teachers do not reflect the new conception of *early learning and care* as a joint educational level.

Regardless of the level of qualifications and duration of pre-service training, ongoing professional development can fill knowledge and skills gaps for staff and teachers in both ECEC and primary schools. Professional development is linked to higher process quality among teachers, which can facilitate child well-being and development across the two education levels. Also, in-service training is one of the few aspects of structural quality standards that is associated both with higher quality staff interactions with children in ECEC settings and with stronger outcomes for children themselves (OECD, 2018[5]). Moreover, ongoing professional development is key to ensuring that all staff are aware of best practices for successful transitions (OECD, 2017[1]).

Working conditions tend to differ between ECEC and primary school

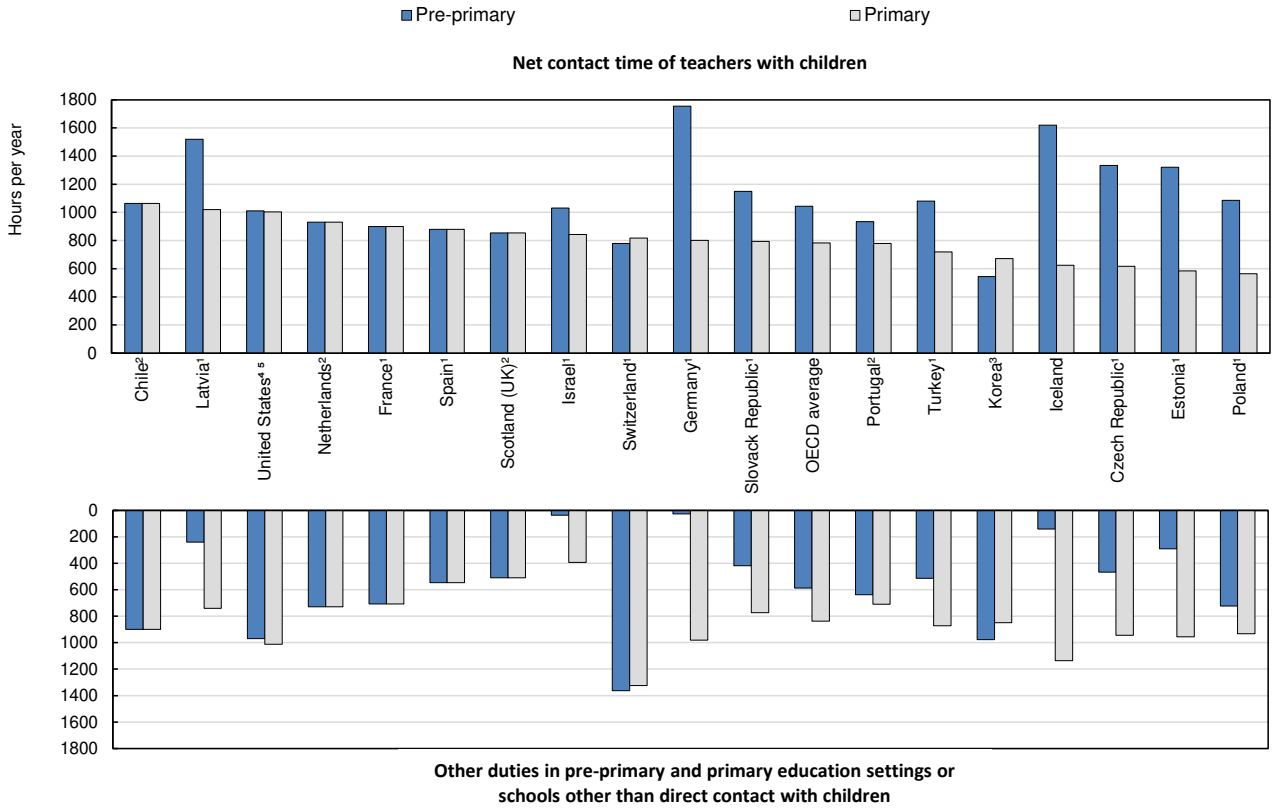
Working conditions matter for continuity between ECEC and primary school as they can play an important role in retaining qualified staff and teachers and ensuring high-quality learning environments for children. Working conditions are also linked with the relative status of professionals across ECEC and primary schools and, when aligned, can enable co-operation between the two. However, working conditions often differ for ECEC staff and primary school teachers. In about 50% of economies with available data, 15 out of 29 from *Education at a Glance 2018: OECD Indicators*, primary education teachers' salaries are higher than pre-primary education teachers' salaries; while in about 30% of the countries (9 out of 29), teacher salaries between the two education settings are aligned. Pre-primary education teachers earn slightly more than primary education teachers in only four jurisdictions (Figure 2.5).

Figure 2.5. In almost half of OECD countries, primary education teachers' salaries are higher than pre-primary education staff and teachers' salaries (2016)



Note: Countries are ranked in descending order by the gap in statutory salary between pre-primary and primary school staff and teachers, i.e. primary schoolteachers in countries on the left-hand side earn more than pre-primary teachers. Data from the United States reflect salaries of pre-primary teachers working in public schools and are not specific to New Jersey.
Source: Adapted from OECD (2018[50]), *Education at a Glance 2018: OECD Indicators*, https://doi.org/10.1787/eag-2018-en.

Figure 2.6. In most OECD countries pre-primary teachers spend more hours in direct contact with children than primary teachers (2017)



Notes:
1. Typical teaching time (teaching time required from most teachers when no specific circumstances apply to teachers).
2. Maximum teaching time.
3. Minimum teaching time.
4. Actual teaching time.
5. Year of reference 2016.
Countries are ranked in descending order according to the net teaching time in hours for teachers in primary schools. Only countries with available data for both pre-primary and primary level were included. Contact time refers to statutory teaching or contact time in public institutions. Non-contact or non-teaching time covers tasks such as assessing students, preparing lessons, correcting students' work, professional development and staff meetings.
Source: Adapted from OECD (2018[50]), *Education at a Glance 2018: OECD Indicators*, https://doi.org/10.1787/eag-2018-en.

Although aligning requirements for pre-service training between ECEC staff and primary school teachers can help build mutual understanding between the two settings, budget constraints mean some governments may be reluctant to do so. When the duration of pre-service training is aligned, salaries are also frequently aligned (OECD, 2017[1]). Thus, higher qualification levels for ECEC staff tend to mean higher wages for this group, which can raise the costs of providing ECEC services.

Working hours also vary between ECEC settings and primary schools across OECD countries. Most pre-primary staff and teachers spend more hours in direct contact with children than primary teachers. Figure 2.6 shows that there are differences in how teachers

spend their time – and how much time is available for activities other than direct contact with children, e.g. to co-operate with other institutions on transitions. In 85% of jurisdictions (11 out of 19), pre-primary staff and teachers spend more time in direct contact with children (229 hours a year on average) than in primary schools (OECD, 2017[1]).

As in the OECD cross-country data, the seven case studies show that ECEC teachers often have lower wages than primary school teachers. In addition, in many cases there are also important differences between conditions in the private and public sectors.

In **Luxembourg**, ECEC teachers working in the formal sector have the highest salaries of ECEC teachers in all OECD countries. Yet, differences between salaries for the formal and non-formal sectors are considerable (Honig and Bock, 2017[79]). In the formal education sector, the professional profiles of teachers and educators are regulated by law. The core practitioner with responsibility for the class is a pre-primary and primary school teacher. Educators (*éducatrices diplômées*) are employed as support staff, or teachers' assistants (Honig and Bock, 2017[79]), although teachers, including newly qualified teachers, can also fill this role. One teacher and one educator work in each preschool class (Honig and Bock, 2017[79]).

In contrast, in the non-formal education sector, staffing is regulated by means of a percentage system that defines which category of staff may work in which function for how many hours. Centre directors are required to have undergone initial professional studies in the psycho-social or socio-educational field and to have three years of work experience. Furthermore, 60% of the total hours of childcare must be provided by staff with a recognised professional qualification in a psycho-social, educational or socio-pedagogical domain awarded by a state-recognised vocational college or university. Up to 40% of the total childcare hours may be provided by staff without qualification in the above-mentioned domains (20% with a qualification in other domains, 20% without any qualification but with minimum initial training of 100 hours) (Honig and Bock, 2017[79]).

In **Japan**, the largest differences in working conditions are, in most prefectures, between teachers who work in private and public programmes. Teachers who work in public kindergartens often earn significantly more than those who work in private day care programmes. Kindergarten teachers also earn less than primary school teachers, but their working conditions are in most cases more alike compared with teachers working in the private sector.

In **Scotland** (United Kingdom), a government review estimated that 80% of practitioners and 50% of supervisors in private childcare settings receive remuneration that is below the Scottish living wage (Cohen et al., 2018[78]). However, the Scottish government is taking measures to enable payment of at least the "real" living wage to all childcare workers delivering the funded early learning and childcare entitlement (The Scottish Government, 2018[80]).

Curriculum organisation from birth to 8 years of age

Curricula guide learning and development areas for children in ECEC and primary education settings. Curricular alignment between ECEC and primary education can, therefore, support the degree to which children experience continuity as they transition from ECEC to primary school (OECD, 2017[1]). This section provides an overview of how curricula are organised across jurisdictions from ECEC to primary school including the type of curriculum, number of stages and age coverage. Two guiding questions are addressed in this section:

- ***In the case of the selected jurisdictions, how is the curriculum organised from birth to 8 years? For example, how many stages are there during this period? What age range does each stage encompass and why?***
- ***Which jurisdictions have a single curriculum stage that incorporates experiences in preschool education (ISCED 02) and the early years of primary education (ISCED 1)? What are the defining features of this stage that distinguish it from earlier ECEC experiences (ISCED 01) and later stages in children's primary education?***

Curriculum organisation

Curricula commonly follow the organisation of education systems within respective jurisdictions. Looking across the 63 jurisdictions that participated in the OECD's survey on transitions as well as the 7 case studies, curriculum frameworks appear to be the rule for ISCED 1 and ISCED 02, but curricula for children under age 3 are not as common (see Table 2.5 and Annex B). Furthermore, it is often the case that there is a clear distinction between the curricula in place for ISCED 02 and ISCED 1. However, in several jurisdictions, there is a shared curriculum for at least the last year of ECEC (ISCED 02) and the first year of primary education (ISCED 1). For example, in New Brunswick (Canada), the last year of ECEC is compulsory and is covered by the same curriculum as primary education. In many of the jurisdictions, there are several curriculum documents for ECEC and primary education, at least one of which covers the transition from ECEC to primary school. This approach is typical in German *Länder*, such as in Thuringia (Germany) where a general education plan exists for children from birth to age 18, and a specific curriculum for primary school (starting at age 6) is in place alongside the general plan (OECD, 2017[1]).

These data reflect the great variation across jurisdictions in how the early years of education systems are organised (see the section above on "Organisation and governance of education systems "). Annex B provides further detail on the curricula in place in ECEC and primary education across all participating jurisdictions in the OECD survey on transitions, demonstrating the variation in terms of the age range of compulsory education and the age groups covered by each stage of the curriculum.

Curricular alignment refers to explicit connections in curricula to promote coherence and continuity among different education levels in terms of content, pedagogy and/or developmental goals during transitions. Integrated curricula refer to a single document that provides common themes, goals and perspectives for at least the last year of ECEC, and the first years of primary education, with separate contents to match each age group. Examples of integrated curricula include Italy, where the same curriculum covers the education of children between 3 and 14 years of age. In contrast, Wales (United Kingdom) has an integrated curriculum that covers a narrower time span but still covers both ECEC and the beginning of primary, for children aged 3 to 7. As shown in Figure 2.7, 78% of jurisdictions (46 out of 59) report having curricula aligned between the last year of ECEC and the first year of primary school. In 24% of the jurisdictions (14 out of 59), the curriculum framework for the last year of ECEC was also fully integrated with the primary school curriculum (OECD, 2017[1]).

Table 2.5. Comparison across jurisdictions of curriculum frameworks in place for early childhood education and care (ISCED 01 and ISCED 02) and for primary education (ISCED 1)

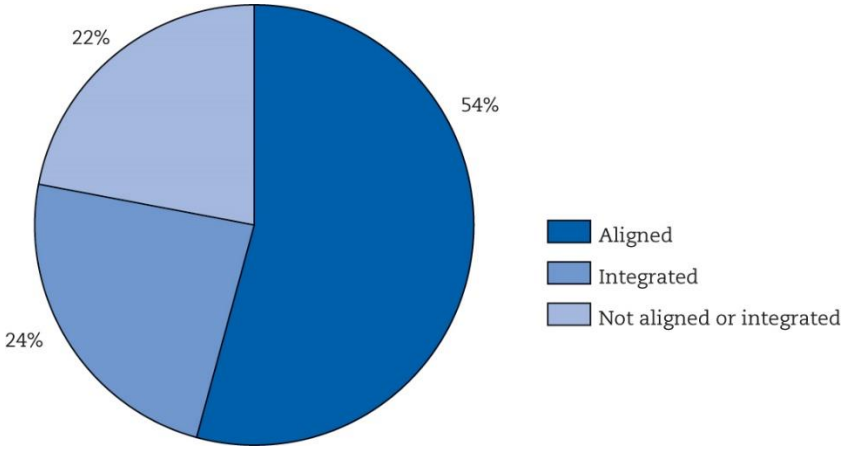
Type of curriculum frameworks in place in jurisdictions in ECEC and in primary education	ISCED 01 Early childhood educational development and care	ISCED 02 Pre-primary education	ISCED 1 Primary education	Jurisdictions
No curriculum in place for ISCED 01, but curriculum for integrated care and education in place for ISCED 02	No ECEC curriculum	ECEC curriculum for childcare and education	Curriculum for primary education	Czech Republic Greece Portugal Slovak Republic Spain
Curriculum in ECEC split into different curricula for ISCED 01 and ISCED 02	ECEC curriculum for childcare only	ECEC curriculum for childcare and early education	Curriculum for primary education	Belgium: Flemish Community Canada: Saskatchewan and Quebec[1] Japan Korea Turkey
Curriculum for early childhood education and/or integrated early childhood education in place for ISCED 01 and 02 (either one or several documents)	ECEC curriculum for childcare and education	ECEC curriculum for childcare and education	Curriculum for primary education	Austria Belgium: French Community Chile Colombia Denmark Finland Germany: Berlin, Bremen, Lower Saxony, and Saarland Hungary Mexico New Zealand Norway Slovenia United Kingdom): England
One single curriculum document covers at least the last year of ISCED 02 and the first year of ISCED 1	Large variety in curricula for childcare/care and education framework for ISCED 01 or no curriculum in place at all	Curriculum for at least the last year of ECEC and the first year of primary education		Australia: Victoria Canada :New Brunswick and Prince Edward Island Italy Netherlands Sweden Switzerland United Kingdom[2]: Wales and Scotland United States: New Jersey
Several curriculum frameworks/documents exist, one of which covers at least the transition from ISCED 02 to primary school ISCED 1	Curriculum for ECEC and primary education (childcare/care and education)			Canada: Alberta, British Columbia, Manitoba, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Ontario and Yukon Croatia Germany: Baden-Württemberg, Bavaria, Brandenburg, Hamburg, Hesse, Mecklenburg-Western Pomerania, North Rhine-Westphalia, Rhineland-Palatinate, Saxony, Saxony-Anhalt, Schleswig-Holstein, and Thüringen Ireland[3] Luxembourg Poland
	Additional curricula or appendices (childcare/care and education) in place from 0 or from 3/4/5 onwards in place in some jurisdictions		Curriculum for primary education	

Notes: Information on curriculum frameworks is based on the responses from 62 countries and jurisdictions to the OECD survey on transitions as well as information from the 7 case-studies developed for this paper. Curriculum refers here to the national core curriculum, curricular framework documents, educational standards or other official guiding documents in place in jurisdictions.

1. In Québec, a childcare curriculum (Meeting Early Childhood Needs: Québec's Educational Program for Childcare Services) is not mandatory and the Preschool Education Program Full-day Kindergarten for 4-year-olds is only in use in disadvantaged areas.
2. In Scotland, there is curricular continuity from pre-primary education to primary education.
3. In Ireland, the primary school curriculum stretches across the transition (age 4 onwards).

Source: Adapted from OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Table 4.1, https://doi.org/10.1787/9789264276253-en.

Figure 2.7. In most jurisdictions early childhood education and care and primary curricula are aligned (2016)



Note: Information on curricula is based on 59 countries and jurisdictions.
Source: OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Figure 4.1, https://doi.org/10.1787/9789264276253-en.

In Ireland, the primary curriculum is being redeveloped, and as part of this process, it will be aligned with the principles and methodologies of Aistear, the early childhood curriculum framework. The first part of the primary curriculum to reflect this is the new Primary Language Curriculum (for English and Irish), published in late 2015. Malta also recently made revisions to its curricula to build alignment between ECEC and primary school and facilitate transitions for children, identifying five specific child outcomes to be achieved to ensure successful transitions (see Box 2.2).

Box 2.2. Curriculum alignment for transitions in Malta

A National Curriculum Framework for All (2012) was developed as part of Malta's first national attempt to have a separate early years cycle in its curriculum. It defines broad outcomes to be achieved during children's early years in order to support their transition from childcare centres (3 months to 2 years and 9 months) to kindergartens (2 years 9 months to 4 years 9 months) and then to compulsory education (Ministry of Education and Employment, Malta, 2012[81]). The curriculum framework is focused on the two years of education in kindergartens and the first two years in the compulsory education system (2-6 years of age). The five main outcomes sought to facilitate transitions are:

- **Children who develop a strong sense of identity**: They trust in their environment and are independent, autonomous and resilient in the face of challenges.
- **Children who have a positive self-image**: They are self-confident and have the ability to take risks and initiative.
- **Children who are socially adept**: They show empathy, respect, awareness of the notions of fairness and justice and are capable of developing relationships with others.
- **Children who are effective communicators**: They can use different types of media, are familiar with symbols and different language systems and show signs of digital literacy.
- **Children who nurture positive attitudes towards learning and become engaged and confident learners**: They develop a taste for learning and can retrieve information, as well as develop some specific cognitive skills.

In 2014, the Ministry for Education and Employment published a new vision for ECEC services in the country in its report, *Early Childhood Education and Care in Malta: The Way Forward* (Ministry of Education and Employment, Malta, 2014[82]). This vision includes a focus on integration of ECEC through:

- incorporating childcare and kindergarten settings under one ministry instead of two (Social Policy for Childcare and Education for Kindergarten) and eliminating the artificial separation between the two levels
- ensuring the same regulatory framework for practitioners in early years as proposed by the National Curriculum Framework (2012)
- addressing the need for a seamless transition between ECEC and compulsory education
- ensuring a high standard of professional training for all staff in ECEC.

Table 2.6 provides details on the approaches used by other jurisdictions with integrated or aligned curricula, as well as jurisdictions without alignment or integration.

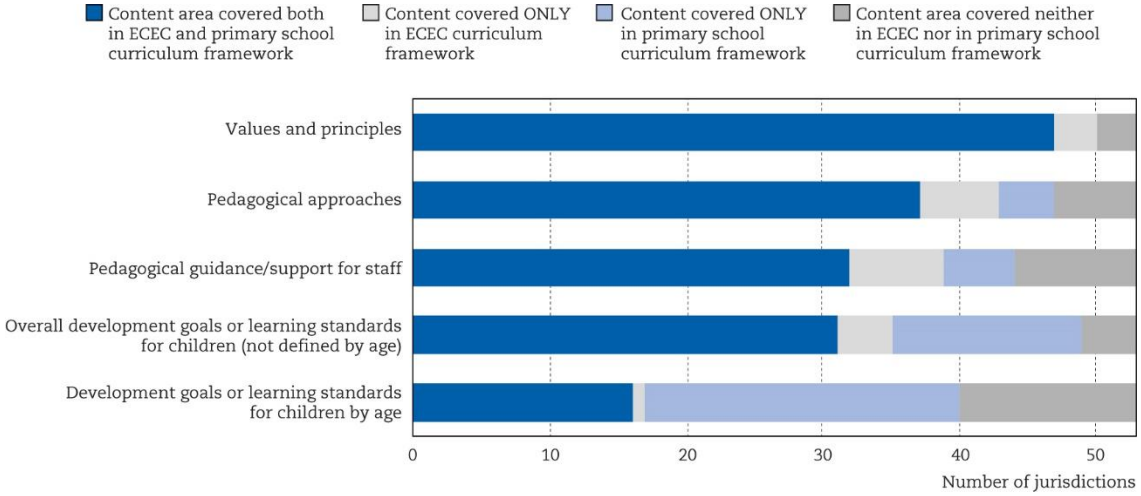
Table 2.6. Levels of curricular alignment between early childhood education and care and primary education

	Document	Jurisdiction examples
Integrated curricula	• Single document (with separate contents to match each age group) • Includes themes, goals and perspectives	• Croatia: National Strategy for Science, Education and Sports, 6 months–18 year-olds • Italy: National Curricular Guidelines for Preschool and for the First Cycle of Education, 3-14 year-olds • Luxembourg: Curriculum Framework for Pre-primary and Primary Education, 3-12 year-olds; National Framework for Non-formal Education of Children and Young People, 0-12 year-olds • Poland: Core Curriculum for Preschool and General Education in Individual Types of Schools, 3-18 year-olds • Scotland (United Kingdom): Curriculum for Excellence, 3-18 year-olds • Victoria (Australia): Victorian Early Years Learning and Development Framework (VEYLDF), 0-8 year-olds
Explicitly aligned curricula (thematic alignment)	• Separate documents for each level of education • Each level covers age-specific goals and perspectives that are thematically aligned to facilitate pedagogical continuity	• Japan: ECEC and primary education curricula are aligned through common goals and values • Ireland: The new primary curriculum will be aligned with the principles and methodologies of the early childhood curriculum framework (Aistear) • New Jersey (United States): A coherent set of early learning and programme standards address all areas of development from birth through 8 years old • New Zealand: Early learning curriculum, *Te Whāriki*, is aligned with the school curriculum, The New Zealand Curriculum (for English-medium schools) and *Te Marautanga o Aotearoa* (for Māori-medium schools) • Norway: Curricula of the two settings share purposes and values and learning areas in ECEC are aligned with subjects in primary school • Slovenia: Pedagogical continuity during the transition phase constructed on a national level through aligned structures for content areas in ECEC and primary education curricula, as well as through adding an explicit statement on the need for alignment between the two documents
Not aligned or integrated	• Separate documents for each level of education • Includes goals, guidelines, content structures that do not intentionally or explicitly consider the transition between ECEC and primary education	• Czech Republic • Denmark • Flemish Community (Belgium) • Turkey

Note:
1. Integrated curricula refer to a single curriculum framework that covers at least the last year of ECEC and the first years of primary education.
2. Explicitly aligned curricula (thematic alignment) refer to different curriculum frameworks for ECEC and primary education that share aspects such as content, pedagogy and/or developmental goals (e.g. the ECEC curriculum clearly refers to the primary school curriculum in its document).
Source: Adapted from OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, https://doi.org/10.1787/9789264276253-en.

Figure 2.8 presents the types of content in curriculum frameworks where jurisdictions report alignment between ECEC and primary school. Values and principles and pedagogical approaches are the most common areas of alignment between ECEC and primary school curricula (OECD, 2017[1]).

Figure 2.8. Values and principles are commonly aligned between early childhood education and care (ECEC) and primary curricula



Note: Information on values, pedagogical approaches and learning goals are based on information from 54 countries and jurisdictions. Jurisdictions reported the curricular contents of documents in place during the first year of ECEC and the first year of primary school. Three jurisdictions were excluded from the comparisons: For Canada (Nunavut): Curriculum Foundations does not cover specific areas or topics, but rather is an over-arching curriculum document. Elementary Teacher's Planning Guide does not cover specific areas. Canada (Québec): *Accueillir la petite enfance. Le programme éducatif des services de garde du Québec* does not cover specific subjects or areas but addresses the global development of a child. New Zealand: *Te Wha¯riki* does not prescribe individual subject areas. The curriculum contains a set of interwoven principles, goals and strands that serves as the basis for curriculum implementation.
Source: OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Figure 4.2, https://doi.org/10.1787/9789264276253-en.

With regard to pedagogical continuity, common challenges and a number of policy approaches exist to support children's transitions from ECEC to primary school (see Table 2.7). For instance, in Finland, in order to address a lack of pedagogical continuity, revisions were made to curricular documents for ECEC and primary education by transforming traditional primary school subjects into more general learning areas, especially during the first two years of primary education (OECD, 2017[1]). Unfortunately, as mentioned in the Introduction, existing research is limited in its ability to address questions of the role of pedagogical continuity across levels of the education system for young students' outcomes.

Table 2.7. Ensuring pedagogical continuity: Challenges and strategies

Challenges	Strategies
• Differences and inconsistencies in curricula: ○ Inconsistent attention to transition across curricular documents (Norway) ○ Differing emphases on goals and focus of education (care) in curricular documents (Slovenia) ○ Decentralised distribution of responsibility for ECEC and primary education (Austria and Finland)	• Develop an integrated curriculum framework and national guidelines (Austria, Ireland, Slovenia) • Invest in local knowledge and innovations (Sweden)
• Lack of shared pedagogical understanding between the two systems (Finland, Norway, Slovenia)	• Reform curricula to ensure greater pedagogical continuity (Japan, Finland, New Zealand, Portugal, Scotland [United Kingdom], Sweden) • Provide opportunities for staff collaboration across levels (Japan, New Jersey [United States], Norway, Portugal, Wales [United Kingdom]) • Emphasise the role of primary school in receiving children (Norway, Portugal, Sweden)
• Inconsistent delivery of pedagogy during the transition from ECEC to primary school (Denmark, Wales [United Kingdom])	• Ensure consistency in structures (Denmark) • Create collaborative learning strategies (Wales [United Kingdom])

Source: Adapted from OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Table 4.2, https://doi.org/10.1787/9789264276253-en.

Taking a closer look at the seven case-study jurisdictions, two have integrated curricula covering all of pre-primary and primary education - Luxembourg and Scotland - and one jurisdiction, Victoria (Australia), has an integrated curriculum for children aged 0-8. The other four jurisdictions (Japan, New Jersey [United States], New Zealand and Norway) have separate curriculum framework documents for ECEC and for primary education; however, in all four jurisdictions, there are explicit efforts to align the curriculum frameworks and to ease children's transitions from one level to the next. Table 2.8 provides a more detailed overview of the curriculum organisation in these seven jurisdictions.

Table 2.8. Curriculum organisation in the seven case-study jurisdictions

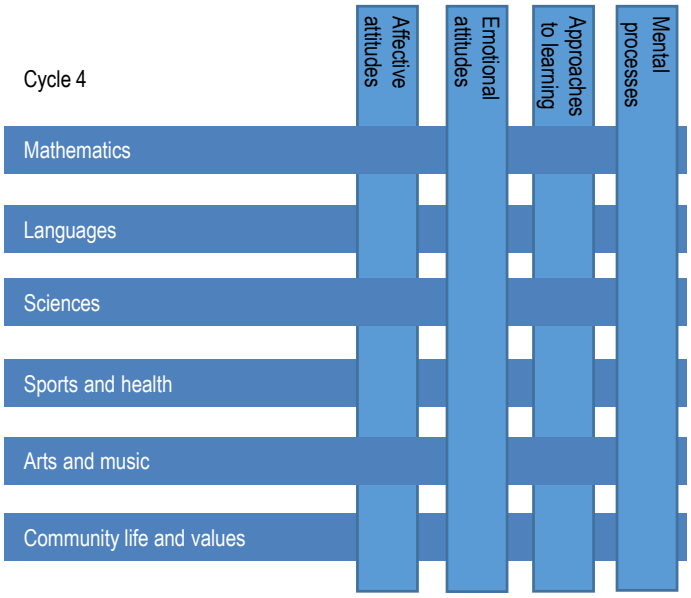
	Curriculum ISCED 01	Curriculum ISCED 02	Curriculum ISCED 1
Japan	National Curriculum Standards for Day care Centres (0- 5 years) National Curriculum Standards for Integrated Centres for ECEC (0- 5 years)		National Curriculum Standards for Elementary Schools (6-12 years)
		National Curriculum Standards for Kindergarten (3-5 years)	
Luxembourg		Curriculum Framework for Pre-primary and Primary Education (3-12 years)	
	National Framework for Non-formal Education of Children and Young People (0-12 years)		
New Jersey (United States)	New Jersey Early Learning Pathways (0-5 years) Preschool Implementation Guidelines Kindergarten Implementation Guidelines		New Jersey Student Learning Standards (5-18 years) 1st-3rd-grade Implementation Guide
New Zealand	*Te Whāriki* (Early childhood curriculum) (0-5 years)		New Zealand Curriculum and *Te Marautanga o Aotearoa.*(the national curriculum for Māori medium schooling) (6-18 years)
Norway	Framework Plan for the Content and Tasks of Kindergartens (0-5 years)		The Knowledge Promotion Curriculum (6- 18 years)
Scotland (United Kingdom)		Curriculum for Excellence (CfE) (3-18 years)	
Victoria (Australia)	Victorian Early Years Learning and Development Framework (VEYLDF) (0-8 years)		
			Victorian Curriculum F-10 (5-17 years)

In **Japan**, there are three sets of curriculum standards for ECEC, one for each of the three ECEC programme types: kindergartens, integrated centres for ECEC and day care centres. These curricula share a common structure and are aligned with each other in terms of learning content. Japan also has curriculum standards for primary education, covering children aged 6 to12. All of the curriculum guidelines explicitly mention the need for alignment among different education levels to ensure seamless transitions for children.

Luxembourg has an integrated curriculum - *Plan d'études de l'école fondamentale* - for formal education, covering from preschool (age 3) until age 12. The curriculum is divided into four cycles of two years, although the first cycle also has an optional year beginning at age 3 followed by two compulsory years of pre-primary education. Students have one teacher and the same group of classmates for each cycle. The goal of the two-year cycle is to allow children more time to develop key competencies and raise the skill levels of all students. The same competency-based curriculum applies from the first cycle to the end of the fourth cycle; however, a complementary framework also exists for the optional year of the first cycle to address age-specific goals, pedagogy and didactical approaches and encourage collaboration around transitions for these children.

The competency-based approach is an innovation of the curriculum and one that is expected to contribute to quality education. The curriculum has competences that should be transversal to all learning areas and across all cycles. These transversal competences are: affective attitudes; emotional attitudes; approaches to learning; and mental processes (see Figure 2.9).

Figure 2.9. Luxembourg's *Plan d'études de l'école fondamentale*: Transversal competences



Source: Ministère de l'Éducation Nationale de l'Enfance et de la Jeunesse (2011[83]) , "*Circulaire Ministérielle au Personnel de l'Enseignement Fondamental pour la Rentrée 2011/2012"* [Ministerial Circular to the Staff of Basic Education for Academic Year 2011/2012], http://www.men.public.lu/catalogue-publications/themes-transversaux/cen/cens/circulaire-peda-rentree-2011-2012/110906_circulaire_ped_2011.pdf.

Instead of having a state-wide curriculum for ECEC, **New Jersey** (United States) has learning standards, which are aligned from preschool to third grade, and are consistent through the end of secondary school (State of New Jersey Department of Education, 2018[54]). Although both the learning standards and implementation standards for preschool, kindergarten and first through third grades were developed separately, they are built with the same conceptual understanding of children and their learning process, and they are used as a coherent set of documents.

Regarding curriculum, each of the 31 school districts can choose their preferred preschool curriculum from among a set of recommended curriculum models. Preschool curricula are required to be developmentally appropriate and evidence-based (Ryan and Lobman, 2006[53]). The state recommends the following preschool curricula: The Creative Curriculum®, Curiosity Corner®, High Scope Preschool Curriculum and Tools of the Mind. New Jersey offers primary schools a model curriculum framework and guidelines, which aim to assist districts and schools with the implementation of the Common Core State Standards and the New Jersey Core Curriculum Content Standards by providing an example from which to work locally (State of New Jersey, 2018[84]). Although learning standards are aligned from preschool to third grade, discontinuity may exist in curricula, depending on the curricula selected by pre-primary and primary settings.

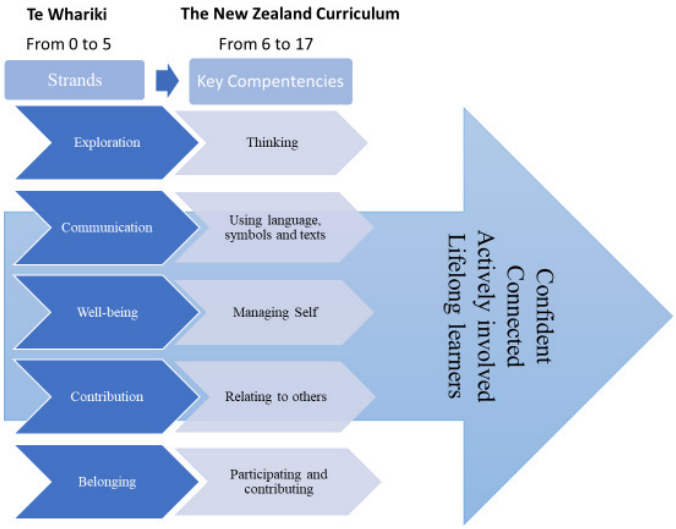
New Zealand has different curricula for ECEC and primary schools. The New Zealand national curriculum consists of the early childhood curriculum, *Te Whāriki: He whāriki mātauranga mo ngā mokopuna o Aotearoa* and *Te Whāriki a te Kōhanga Reo* (hereafter, "Te Whāriki"). For the primary and secondary level, there is The New Zealand Curriculum (English-medium schools) and *Te Marautanga o Aotearoa* (for Māori-medium schools). Although *Te Whāriki* and The New Zealand Curriculum are different, there is an explicit understanding that the curricula are aligned and have a focus on lifelong learning.

The curricula are not prescriptive but provide a framework that each early childhood service and school are expected to use to develop a local curriculum that meets the needs of the children, parents and community.

Te Whāriki is organised in terms of principles, strands, goals and learning outcomes. *Te Whāriki* explicates that every child has his/her own way to learn in his/her own time. It states that all children are different, and their learning trajectories are influenced by context; however it points out some characteristics and patterns that can be observed at different stages. It also establishes three stages of child development: infants (birth to 18 months), toddlers (aged 1 to 3) and young children (aged 3 to 5). The curriculum gives examples in each strand of what should be expected for every child to learn in each age group (New Zealand Ministry of Education, 2017[26])

The New Zealand Curriculum for primary and secondary education is organised in terms of directions of learning that include the Vision (cross-cutting), that encompasses Values, Key Competencies (capabilities for living and lifelong learning), and the Learning Areas (with achievement objectives). It has eight levels that go from year 1 (around age 6) through to year 13 (around age 18). Each level represents a learning stage in each of the eight learning areas.

Figure 2.10. Alignment between Te Whāriki and The New Zealand Curriculum



Source: New Zealand Ministry of Education (2007[85]), *New Zealand Curriculum,* http://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum

The strands from *Te Whāriki* correspond to the key competencies identified in The New Zealand Curriculum, as Figure 2.10 shows. In addition, principles in *Te Whāriki* (empowerment, holistic development, family and community, and relationships) are very similar to The New Zealand Curriculum's eight principles (high expectations, Treaty of Waitangi, cultural diversity, inclusion, learning to learn, community engagement, coherence, and future focus).

The 2017 revision of *Te Whāriki* was intended to reflect changes in society and educational policies and aimed to integrate recent research on curriculum, assessment and pedagogy. In addition, this new iteration presents two documents: *Te Whāriki: He whāriki mātauranga mō ngā mokopuna o Aotearoa* Early Childhood Curriculum; and *Te Whāriki*

a te Kōhanga Reo. These two documents reflect the importance of both English and Māori language educational paths in New Zealand.

Norway has different curricula for ECEC – the Framework Plan for the Content and Tasks of Kindergarten (hereafter, the "Framework Plan") – and primary education – the Knowledge Promotion Curriculum. The Framework Plan is designed for children ages 0 to 5 enrolled in kindergartens The Knowledge Promotion Curriculum covers primary and upper secondary education and training. The Knowledge Promotion Curriculum includes the core curriculum, the quality framework and subject curricula. Both the Framework Plan and the Knowledge Promotion Curriculum are built upon the same perspectives on values and humanity. Kindergartens and schools have different mandates, but the learning areas in kindergarten and subjects in schools are aligned to a large degree. Both curricula emphasise the importance of linguistic, social and cultural competences (Norwegian Directorate for Education and Training, 2017[86]).

In Scotland (United Kingdom), the Curriculum for Excellence (CfE) covers the widest age range among those included in the case studies: from age 3 to 18. The curriculum divides school education into two stages: broad general education and the senior phase. Broad general education covers 3-15 year-olds, and comprises four curricular levels:

1. Early: From age 3 in early learning and childcare to Primary 1
2. First: From Primary 2 to Primary 4
3. Second: From Primary 5 to Primary 7
4. Third and fourth: From Secondary 1 to Secondary 3.

Although the Curriculum for Excellence levels are generally associated with particular years of schooling (e.g. Primary 1), these associations are not strict: the levels of Curriculum for Excellence are applied for children based on their individual progress through the curriculum.

Curriculum for Excellence offers a fully integrated curriculum for the broad general education stage. Learning contents are the same throughout the broad general education's curricular levels. The learning experiences and outcomes described for each level address content in a progressively deep and complex manner.

The state of **Victoria** (Australia) presents a different type of integrated model from Luxembourg and Scotland (United Kingdom). The Victorian Early Years Learning and Development Framework (VEYLDF), covers children from birth to 8 years. The VEYLDF specifies a set of eight practice principles, five learning and development outcomes and a section dedicated to transition and continuity of learning. The VEYLDF is a multi-disciplinary framework that has been designed to extend beyond ECEC for use by all practitioners who work with children and their families. In addition, Victoria has another curriculum, the Victorian Curriculum F-10, covering from Foundation (5 years) until grade 10 (17 years).The VEYLDF deliberately overlaps with the first three years of school to actively support children's transitions, and in recognition of how children learn in the early years.

Curriculum goals/principles

The goals/principles of curricula refer specifically to the objectives of curriculum documents; they are not necessarily the same as those a jurisdiction may have for ECEC or primary school more generally. Goals can be specific to the ages and stages targeted or can

extend beyond any individual curriculum stage to bring alignment at this higher level. There are diverse forms of presenting curriculum goals and principles. Some jurisdictions define expectations in terms of development and learning outcomes for children while others present values or principles to guide practices.

Norway, for example, has two separate curricula for ECEC and primary school but with a shared set of values to guide educational practices in the two settings. The Framework Plan contains a set of objectives to be achieved for children's experiences and learning. The Framework Plan states that children must develop and learn and experience progress, and that this progression, in terms of kindergarten content must be clarified in detail in the kindergarten's annual plan (Norwegian Directorate for Education and Training, 2017[87]). The Knowledge Promotion Curriculum contains a list of competencies that pupils are supposed to have achieved after grades 2, 4, 7 and 10, and after each year of upper secondary education and training. The choice of the pedagogical content, organisation and assessment is developed at local levels (Norwegian Directorate for Education and Training, 2017[86]).

The purpose clauses of the Kindergarten Act demonstrate a holistic approach to children and childhood, play and learning. The Kindergarten Act stipulates that kindergartens should provide pedagogical undertakings to offer children opportunities for play, self-expression, learning of values and cultures as well as to ensure that "all children experience joy and the ability to cope in a social and cultural community, while also supporting families in the care and the upbringing of their children" (Norwegian Directorate for Education and Training, 2017, p. 9[86]).

The purpose clause of the Education Act – concerning primary and secondary education - emphasises a view of the child at the centre of learning and promotes the stimulation of pupils' curiosity and desire to learn. It also stresses that the need to develop pupils' knowledge, skills and attitudes is of great importance to their ability to master life skills and participate successfully in working and social life (Norwegian Ministry of Education and Research, 2007[88]).

The objectives of the kindergarten and primary school curricula of Norway are aligned, despite some differences. Values pursued are the same in both settings: respect, equality, democracy, formation and learning. Also, both share an emphasis on co-operation with families. However, while kindergartens attend to children's need for care and play, schools do not have this purpose clause included in their curriculum goals (Norwegian Directorate for Education and Training, 2017[86]).

The **Japanese** education system has over-arching goals for all curricula as well as specific goals for each age group. In 2008, curricular guidelines for all levels were revised to include a shared goal to encourage a zest for living, in order to promote in children the skills required to live in a rapidly evolving world. These skills include the ability to learn, think, make judgements, solve problems, as well as to have self-control and empathy, and co-operate with others while living healthy and active lives (Ministry of Education, Culture, Sports, Science and Technology, Japan, 2014[58]).

Although curriculum standards for day care centres and kindergartens share educational content, there are certain differentiated goals. The National Curriculum Standards for Day Care Centres aim to ensure that young children develop critical thinking and grow to be independent and autonomous. These guidelines also state the need for day care programmes to consider children's lifestyles and continuity of development, and to promote the transition to primary schools (Shishido, 2008[70]). The National Curriculum Standards for

Kindergarten goals are to "educate young children through their environment, taking into consideration their specific needs at this age", both physical and mental, as well as individual experiences and the developmental process. The curriculum standards explicitly state how kindergartens should lay the foundation for compulsory and further education.

The National Curriculum Standards for Elementary School aim for children to cultivate self-discipline while considering and co-operating with others. The standards further aim for children to be academically competent, independent learners, with the ability to problem solve and the desire to learn and think. Finally, the standards aim for children to be healthy and live an active life (Ministry of Education, Culture, Sports, Science and Technology Japan, 2009[89]).

The latest revision of the curriculum standards in 2017 clarifies that the competencies to foster in children are common for all educational levels and learning areas. In addition, the revised curriculum standards for ECEC clarify "how children should grow up by the end of early childhood" by describing specific characteristics of children, particularly at age 5. Sharing this notion with primary schools to encourage a smooth transition from ECEC is of central importance (Ministry of Education, Culture, Sports, Science and Technology, Japan, 2018[90]).

The Curriculum for Excellence in **Scotland** (United Kingdom) has over-arching goals for the whole education system that focus both on the present and the future. The Curriculum for Excellence aims for children to become successful learners, confident individuals, responsible citizens, and effective contributors by providing them with broad, deep and flexible education. The Curriculum for Excellence further aims for children to become adaptable people with the knowledge and skills to attain their best potential (Education Scotland, 2018[91]).

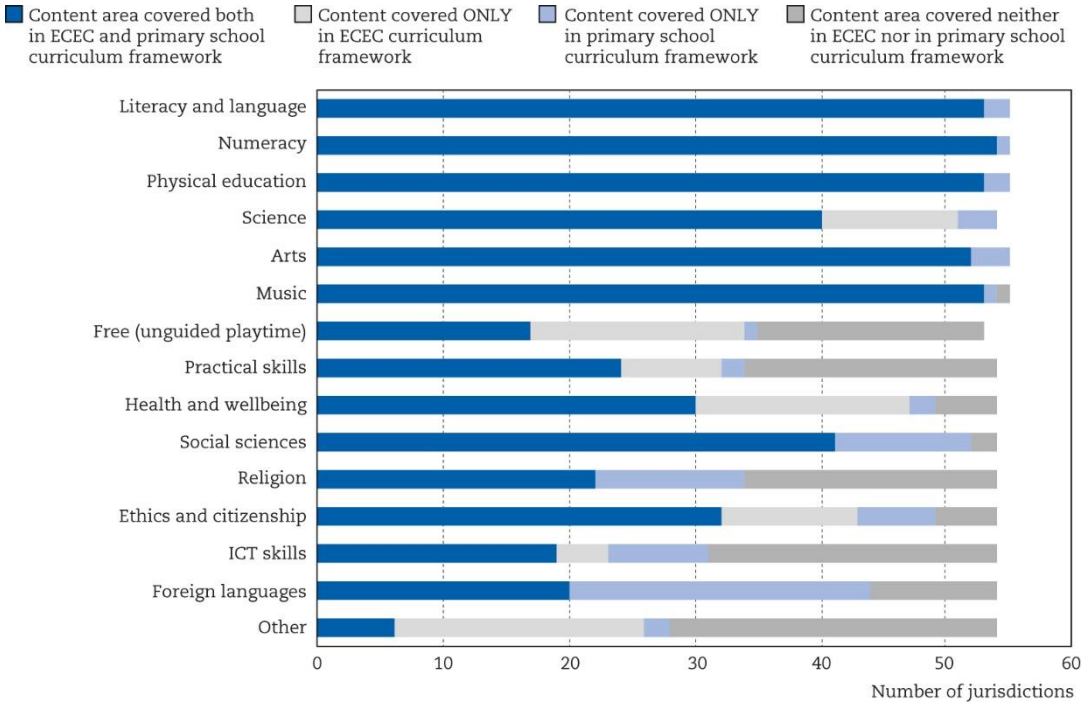
Learning areas in ECEC and primary school curricula

Based on the survey information from 54 jurisdictions, learning areas are generally aligned between ECEC and primary education areas such as literacy and language, numeracy, physical education, arts and music, in particular, are likely to be shared across ECEC and primary curricula (Figure 2.11).

A comparison of two transition surveys in 2011 and 2015 suggests a broadening of pre-primary (ISCED 02) curricula in 24 jurisdictions: a number of jurisdictions added health and well-being, social sciences, ethics and citizenship, information and communication technology (ICT) skills and foreign languages as learning areas during this period (Figure 2.12). Notable increases were seen in the number of jurisdictions covering ethics and citizenship, from 17% of jurisdictions (4 out of 24) to almost 80% (19 out of 24), ICT skills, from 8% (2 out of 24) to 42% (10 out of 24) and those covering foreign languages, from 4% (1 out of 24) to 38% (9 out of 24). This broadening of pre-primary curricula suggests increasing alignment between pre-primary and primary curricula (OECD, 2017[1]).

The seven case studies show that, in general, learning areas of ECEC relate more to child well-being and less to specific learning content, which is more commonly seen in primary school curricula. The two education levels share all or most learning areas in Luxembourg, New Jersey (United States), Norway and Scotland (United Kingdom), while some differences in learning areas are observed between the two settings in Japan, New Zealand, and Victoria (Australia).

Figure 2.11. Learning areas in early childhood education and care (ECEC) and primary schools (2016)



Note: Information on values, pedagogical approaches, and learning goals are based on responses from 54 countries and jurisdictions in 2016. Jurisdictions reported the curricular contents in documents in place during the first year of ECEC and the first year of primary school. For jurisdictions where only one curriculum exists for ECEC and primary education, content was counted as "content area covered both in ECEC and primary school curriculum framework".

"Other" includes individual contents named by the jurisdictions that fell outside the predetermined contents, e.g. social skills and media, media and external activities, and safety.

Three jurisdictions were excluded from the comparisons:

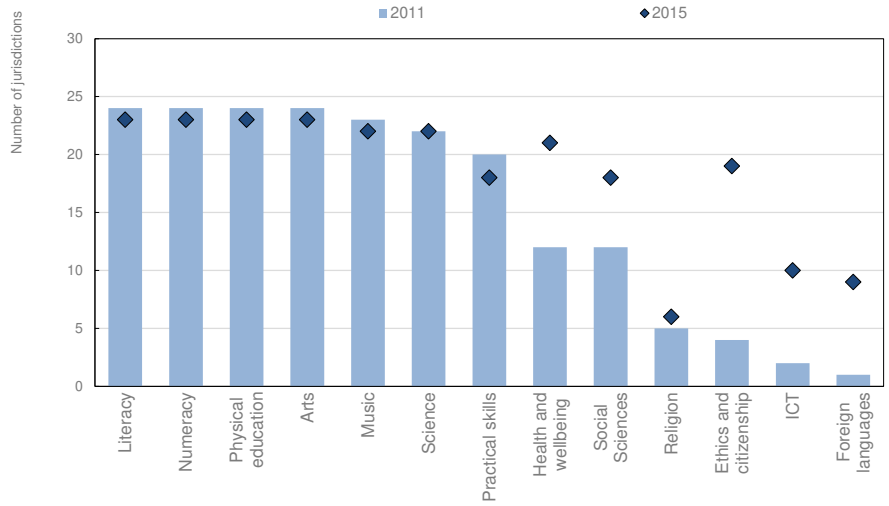
• Canada (Nunavut): Curriculum Foundations does not cover specific areas or topics, but rather is an over-arching curriculum document. The Elementary Teacher's Planning Guide does not cover specific areas.

• Canada (Québec): Acceuillir la petite enfance. Le programme éducatif des services de garde du Québec does not cover specific subjects or areas but addresses the global development of a child.

• New Zealand: *Te Wha¯riki* does not prescribe individual subject areas. The curriculum contains a set of interwoven principles, goals and strands that serve as the basis for curriculum implementation.

Source: OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Figure 4.3, https://doi.org/10.1787/9789264276253-en.

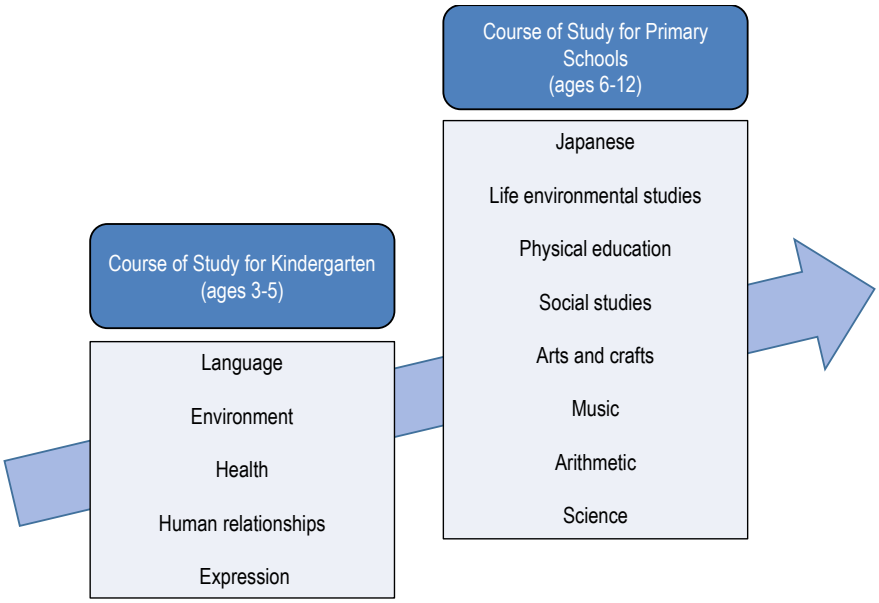
Figure 2.12. Jurisdictions are broadening their pre-primary curricula to include emerging learning areas (2011 and 2015)



Note: Information on content areas of the curriculum is drawn from 24 countries and jurisdictions that responded to a survey in both 2011 and 2015. Learning areas are ranked in descending order for the number of jurisdictions declaring that the learning areas were included in their ECEC curriculum framework in 2011. Respondents could list more than one content category.
• Belgium (Flemish Community): data for 2015 reflect the contents stated in the Developmental Objectives for 2.5 to 6-year-olds.
• Luxembourg: data for 2015 consist of the curriculum contents in two parallel curricula in place (*Bildungsrahmenplan für non-formale Bildung im Kindes und Jugendalter* [0-12] and *Plan d'Etudes de l'enseignement fondamental*).
• New Zealand: for 2015, curricula for the last year of ECEC are considered (The New Zealand Curriculum and *Te Marautanga o Aotearoa*).
• Poland: In 2015 foreign languages were obligatory only for 5-year-old children. Starting from September 2017, foreign languages are obligatory for children from 3 years old.
• Portugal: In 2015 kindergartens can provide foreign language (last year of ECEC).
• Slovenia: In 2015 settings can organise foreign languages. Data by jurisdiction can be found in Table 4.A.2.
Source: OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, https://doi.org/10.1787/9789264276253-en.

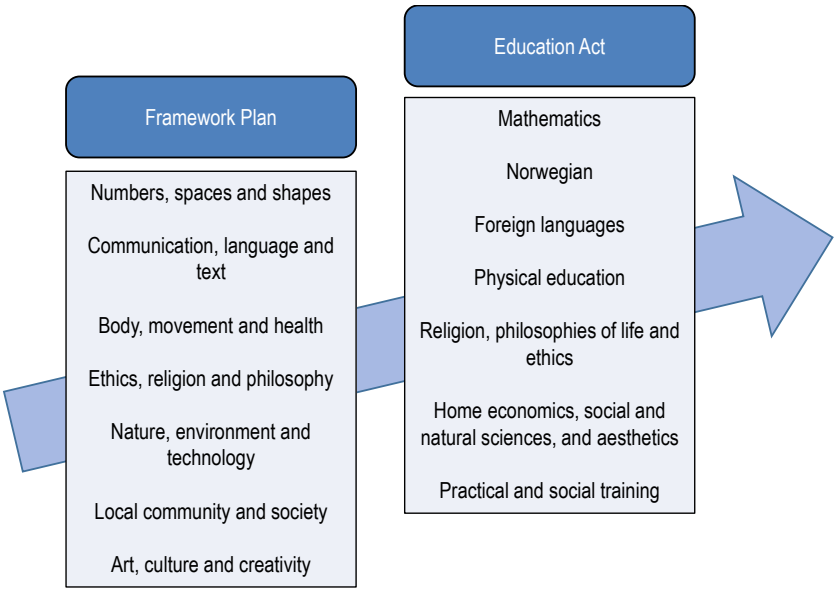
In **Japan,** learning areas between the National Curriculum Standards for Kindergarten (ages 3-5) and the National Curriculum Standards for Elementary Schools (ages 6-12) differ slightly and are not always aligned (see Figure 2.13). The kindergarten curriculum covers language (the process of language acquisition), environment (children's surroundings, and relationship to them), health (physical and mental health), human relationships (the relationship between the child and other people) and expression (feelings and expression) (Ministry of Education, Culture, Sports, Science and Technology, Japan, 2008[92])). The primary school curriculum includes Japanese, life environmental studies, physical education, social studies, arts and crafts, music, arithmetic, science and homemaking (Figure 2.13).

Figure 2.13. Learning areas of Japan's early childhood education and care and primary school curricula



In **Norway,** although two separate curricula (the Framework Plan and the Education Act) exist, most learning areas in ECEC are aligned with the subjects taught in primary schools (Figure 2.14). Furthermore, both the Framework Plan and the Knowledge Promotion Curriculum highlight the importance of language, social and cultural competence (Hansen and Alvestad, 2018[108]).

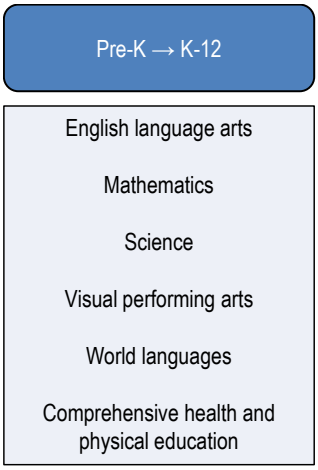
Figure 2.14. Learning areas of Norway's early childhood education and care and primary school curricula



In **New Zealand**, Te Whāriki and The New Zealand Curriculum share alignment at a high level (Figure 2.10). Furthermore, the 2017 update of *Te Whāriki* links the learning outcomes of *Te Whāriki* with the key competencies and learning areas in The New Zealand Curriculum and *Te Marautanga o Aotearoa* (Bell, 2017[100]). Learning goals and outcomes for young children are described more broadly, embedded in the five strands of *Te Whāriki* (well-being, belonging, contribution, communication and exploration), while learning areas for school-aged children are described through traditional academic disciplines: English; the Arts; Health and Physical Education; Learning Languages; Mathematics and Statistics; Science; Social Sciences; and Technology (New Zealand Ministry of Education, 2007[85])).

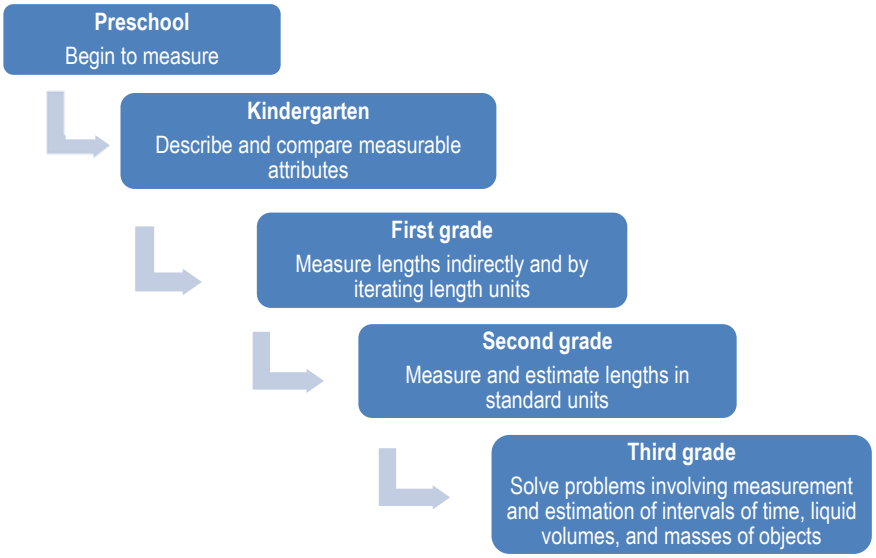
In **New Jersey** (United States), learning areas for pre-K and K-12 are explicitly aligned, covering English Language Arts, Mathematics, Science, Visual Performing Arts, World Languages and Comprehensive Health and Physical Education (Figure 2.15) (State of New Jersey Department of Education, 2018[54]).

Figure 2.15. Learning areas of New Jersey's early childhood education and care and primary school curricula



Furthermore, New Jersey (United States) has carefully aligned the learning standards in each learning area from pre-K to third grade. In mathematics, for example, curriculum documents identify four sub-areas: operations and algebraic thinking; number and operations; measurement and data; and geometry (Figure 2.16).

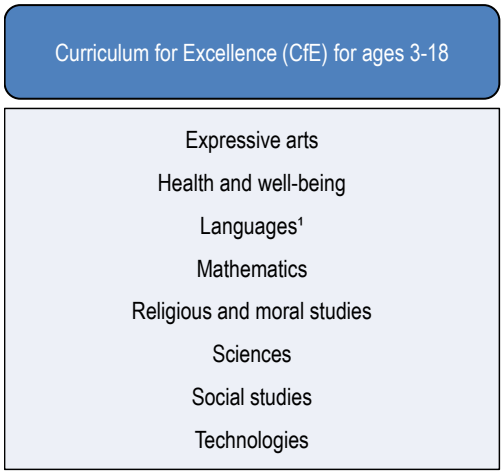
Figure 2.16. Example of Alignment in New Jersey Student Learning Standards



Source: Adapted from State of New Jersey Department of Education (2018[54]), "New Jersey Student Learning Standards", https://www.state.nj.us/education/cccs/.

In **Scotland** (United Kingdom), the Curriculum for Excellence covers eight common learning areas for ages 3 to 18: Expressive Arts, Health and Well-being, Languages, Mathematics, Religious and Moral Studies, Sciences, Social Studies and Technologies (Figure 2.17) (Education Scotland, 2018[91]). The depth and complexity of the learning experiences and expected learning outcomes progress with each level of the curriculum.

Figure 2.17. Learning areas of Scotland's early childhood education and care and primary school curricula



Note: 1. Languages include English, Gàidhlig and modern languages.

Table 2.9 shows how the progression of content and expected learning takes place in the area of art and design, for example. It shows how the expected experiences and outcomes described for each level become more complex as children progress to higher levels of the

curriculum. Curriculum for Excellence has recently made available benchmarks, which clearly state what learners need to know and be able to achieve at each level, across all curriculum areas. Benchmarks are described for the same curricular areas across every curricular level, with the goal of enabling continuity and progression between ECEC and primary education in the future.

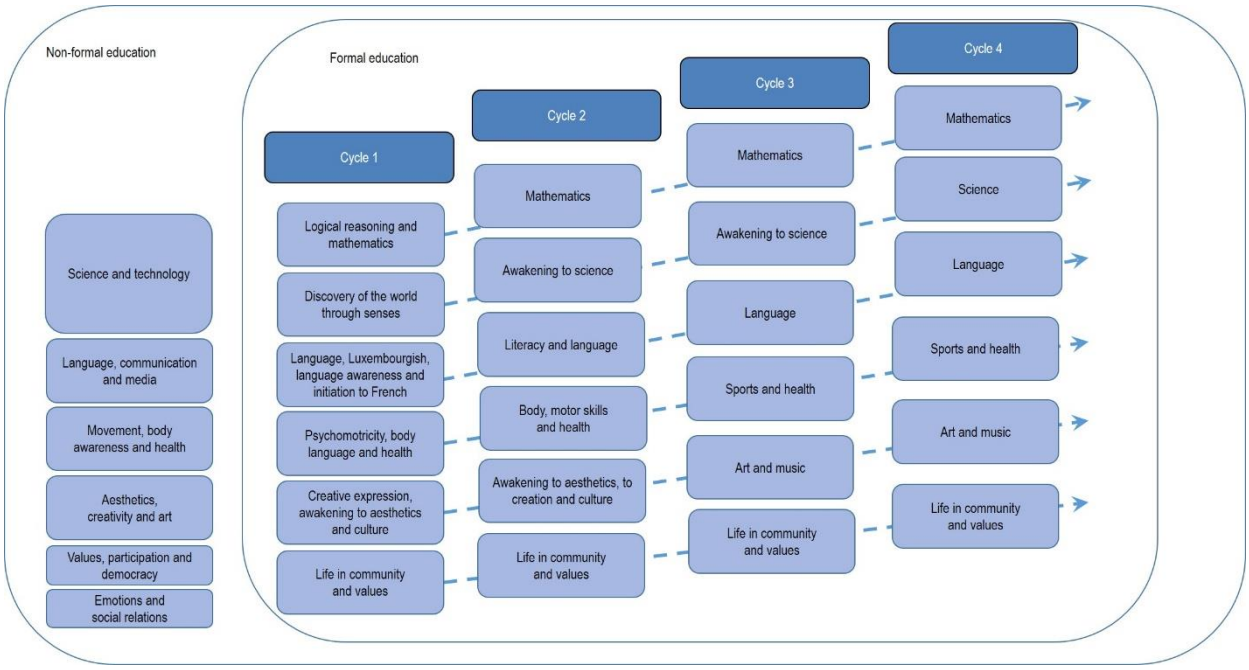
Table 2.9. Alignment and progression in art and design (Curriculum for Excellence)

Curriculum for Excellence Level				
Early	First	Second	Third	Fourth
Inspired by a range of stimuli, I can express and communicate my ideas, thoughts and feelings through activities within art and design.				Having chosen personal themes and developed my own ideas from a range of stimuli, I can express and communicate my ideas, thoughts and feelings through 2D and 3D work.
Working on my own and with others, I use my curiosity and imagination to solve design problems.	I can use exploration and imagination to solve design problems related to real-life situations.	I can develop and communicate my ideas, demonstrating imagination and presenting at least one possible solution to a design problem.	While working through a design process in response to a design brief, I can develop and communicate imaginative design solutions.	By working through a design process in response to a design brief, I can develop and communicate imaginative and original design solutions.
I can respond to the work of artists and designers by discussing my thoughts and feelings. I can give and accept constructive comment on my work and others' work.				I can analyse art and design techniques, processes and concepts, make informed judgements and express considered opinions on my own and others' work.

Source: The Curriculum for Excellence (Education Scotland, 2017[93]), p. 4 https://education.gov.scot/Documents/expressive-arts-eo.pdf.

Luxembourg's formal curriculum framework (*Plan d'études de l'école fondamentale*) includes six learning areas designed to promote the skills to be acquired during preschool and primary school. Although these learning areas may be indicated under different titles depending on the cycle, all areas are aligned (Figure 2.18). The non-formal curriculum includes six learning areas for children, which are complementary to the learning areas of the formal curriculum: Science and Technology; Language, Communication and Media; Movement, Body Awareness and Health; Aesthetics, Creativity and Art; Values, Participation and Democracy; and Emotions and Social Relations.

Figure 2.18. Learning areas of Luxembourg's early childhood education and care and primary school curricula



Note: In Cycle 2 Literacy and languages and in Cycle 3 and 4 Languages, the learning area includes German, French, Luxembourgish and Language Awareness
Source: Adapted from Ministère de l'Éducation nationale et de la Formation professionnelle (2011[83]), "*Circulaire Ministérielle au Personnel de l'Enseignement Fondamental pour la Rentrée 2011/2012*" [Ministerial Circular to the Staff of Basic Education for Academic Year 2011/2012], http://www.men.public.lu/catalogue-publications/themes-transversaux/cen/cens/circulaire-peda-rentree-2011-2012/110906_circulaire_ped_2011.pdf.

The Foundation Stage of the **Victorian** Curriculum F-10 includes five learning areas: English; Mathematics; the Arts; Health and Physical Education; and Personal and Social Capability. In addition, four capabilities are specified: Critical and Creative Thinking; Ethical; Intercultural; and Personal and Social. The Victorian Early Years Learning and Development Framework, on the other hand, does not specify learning areas or disciplines, only learning outcomes. These outcomes are:

- Children have a strong sense of identity.
- Children are connected with and contribute to their world.
- Children have a strong sense of well-being.
- Children are confident and involved learners.
- Children are effective communicators.

During the Foundation Stage, schools can structure learning areas around these five outcomes.

Continuity and progression in curricular content

Each of the seven case-study jurisdictions takes a unique approach to ensure continuity and progression in curricular content from ECEC to early primary school. All case-study

jurisdictions were chosen for having made significant efforts in continuity and progression in curricular content or pedagogy; however, the jurisdictions use different strategies to achieve the shared goal of promoting continuity of learning. Some jurisdictions use specific transitions guidelines to support local authorities' efforts to provide continuity for children. Other jurisdictions have multiple specific strategies in place to facilitate vertical transitions for both children and their families. Japan, New Jersey (United States), New Zealand, and Norway have unique approaches to promoting continuity and progression for young children.

Japan is addressing the continuity issue at different levels; on the one hand, partial alignment of curricula between ECEC and primary school is intentional, despite the many different governing bodies for various types of ECEC provision. On the other hand, specific efforts are in place to prepare children and families for transitions. Japan used to have a so-called "first-grade problem" as children had difficulties adapting and transitioning from early childhood to primary schools. To address this problem, the curricular standards for all three types of ECEC provisions and for primary education now include concrete ways to bridge the gaps between the two education levels.

Early childhood teachers are instructed to help children's transition to primary school life. In 2015, about 80% of kindergarten and integrated centres for ECEC had opportunities for child-student interactions. For example, children enrolled in ECEC centres are invited to meet primary school teachers and students and to experience attending a class. Families of children from ECEC centres can also observe primary school lessons (Ministry of Education, Culture, Sports, Science and Technology, Japan, 2016[72]).

The primary school standards suggest the need for schools to develop a "Start" curriculum for children entering primary school. This Start curriculum provides intentional opportunities to share activities between ECEC and primary school, for example by reducing classes to shorter periods (10-15 minutes) as well as conducting group lessons sitting on the floor, instead of using tables and chairs. The primary school standards state that during first-grade, teachers should make connections with content learnt in the early childhood years, giving children opportunities to demonstrate the skills they have developed.

Although **New Zealand** has two separate curricula for ECEC and primary school, every stage of each curriculum is designed to prepare students for the following level. It is expected that all children and young people have a clear sense of continuity and direction. Moreover, both curricula are founded on principles of ongoing and lifelong learning (see Figure 2.10) (New Zealand Ministry of Education, 2017[26]). To attain this continuity in learning, The New Zealand Curriculum states the importance of transitions from the early childhood level to primary: it emphasises the relevance of supporting children through their transitions in their relationship with educators, by welcoming their families, and by building connections with their previous learning and experiences (New Zealand Ministry of Education, 2007[85]).

Early childhood services and schools are encouraged to collaborate in New Zealand, and both are expected to know and understand each sector's curriculum. Communication about children's learning between the different stages is also expected to be ongoing (Ministry of Education, 2018[94]). To meet this goal, portfolios are used to document and assess children's early learning. Primary teachers use the portfolios to learn more about a child's strengths and interests. While this approach requires a mutual understanding from both ECEC and primary school teachers of this method for documenting learning, portfolios

allow children's voices to be heard in a meaningful way as they make the transition to primary school (Education Review Office, 2015[95]).

New Jersey (United States) is a good example of concrete strategies, implemented locally, to facilitate transitions. New Jersey (United States) proposes a transition policy, which was written in the State Code. School district preschool programmes are required to develop a five-year plan for managing transitions, including:

- how they will collaborate with other preschools, as well as with schools in the district
- methods for communicating information about individual children to the schools, and in particular the results of comprehensive performance-based assessments
- the process for communicating curricular and pedagogical information about preschool programmes to kindergarten and primary school teachers
- the process for providing information to parents about transition plans from preschool through grade three.

The New Jersey Department of Education also requests that districts provide a narrative for the school year on the district's preschool through grade three transition plan, addressing the points below:

- how collaboration among preschool administrators and other offices (e.g. special education, bilingual) will be achieved
- the methods the district will use to communicate to receiving staff and teachers about children with disabilities transitioning from early intervention programmes to preschool and all children from preschool to kindergarten
- the district positions that will make up the transition team
- how the alignment of curriculum, standards, assessment, and professional development for preschool through grade three will be achieved.

The New Jersey Department of Education further proposes a list of transition goals and activities for teaching staff, children and families, which are included in the State Code (Table 2.10 provides examples).

Although all guidelines cover the topic of transitions, the Kindergarten Implementation Guidelines are more oriented to implementing transition practices. They require school districts to:

- include a process for collaborating with families, early learning providers, and local public and private agencies to gather information about children and families prior to school entry
- establish goals to ensure seamless support for all children as they move through each year, including summer, and create transition activities based on those goals
- provide information for families on the transition process including registration, placement options, teacher expectations, and health and nutrition information
- generate a timeline for implementing the transition plan
- revisit and update the transition plan annually.

Table 2.10. Transition goals and activities proposed by the New Jersey Department of Education

	Teaching staff	Families	Children
From home to preschool	Home visits for teachers to meet families	Open house for families Parent meetings focused on child and family expectations and characteristics of services in the preschool setting	Child orientation at the preschool prior to attending
From preschool to primary school	Primary school teachers visit preschools to give presentations to children and parents Preschool teachers visit participating primary school classrooms. These visits can promote the sharing of curriculum information, early childhood strategies, philosophies, and special needs of specific children Workshops for both preschool and elementary school teachers to discuss and co-ordinate curricula and teaching practices	Home-learning activities, including summer book lists and other literacy activities for the summer months prior to kindergarten entry Partnerships with the local parent-teacher association to inform parents about how they can be involved in their child's setting and connect new families with families currently enrolled in the school Early registration to provide families with time to prepare	Field trips to participating elementary schools and kindergarten classrooms to increase children's familiarity with the new environment

Source: Adapted from New Jersey Department of Education (2015[96]), "Preschool Programme Implementation Guidelines", https://www.nj.gov/education/ece/guide/impguidelines.pdf.

Norway has made efforts to generate alignment at the policy level, specifically between the Framework Plan and the Knowledge Promotion Curriculum. The Framework Plan explicitly states that kindergartens shall, in collaboration with schools, facilitate children's transition to school in co-operation with parents. In this line, the plans for the transition should be specified in kindergartens' annual plans. Collaboration between ECEC and primary schools is also included within the revised Framework Plan (Norwegian Directorate for Education and Training, 2017[86]).

Curriculum development

Jurisdictions take a variety of approaches to updating and revising curricula, including involving various stakeholders and utilising research findings. Curriculum frameworks are in place in all seven of the case-study jurisdictions and were developed or reviewed in the last ten years. In some jurisdictions, periodic reviews of curriculum frameworks are planned, such as in Japan where curricula are revised approximately every ten years. In most other case-study jurisdictions, curricula are revised when society or the government decide there is a need for review.

There is no one common process for curriculum development. In some jurisdictions, curriculum revisions involve a participatory process (e.g. New Zealand, Scotland [United Kingdom]), whereas in other jurisdictions expert panels or steering committees are formed (e.g. Japan, Luxembourg). Universities can also play a leading role in curriculum revisions (e.g. New Zealand).

Notably, in the last revisions of most curricula, there was an explicit emphasis on smoothing children's transitions and creating pedagogical alignment between ECEC and primary education. Three curriculum development processes (Japan, New Zealand and

Scotland [United Kingdom]) demonstrate the variety of possibilities and the complexities of these processes.

In **Japan**, national curriculum standards are revised approximately every ten years. The revision process is conducted by the national government that appoints a council of experts to review standards and propose changes. A draft version is shared with national experts as well as the general population for validation and comments. As all standards are reviewed together in each revision, a common understanding or underlying theory can be identified or reached across educational levels. For these periodic revisions, the government conducts pilot projects at all educational levels to examine curriculum content and pedagogy. The results of these projects are used to inform the revision process.

New Zealand's early childhood curriculum, *Te Whāriki,* was published by the Ministry of Education in 1996 following an extensive collaborative process. In 2017, *Te Whāriki* was updated. The revision "recognises and reflects societal changes, shifts in policy and considerable research around curriculum, assessment, pedagogy and practice" (New Zealand Ministry of Education, 2017[26]). The curriculum framework comprises principles, strands, goals and learning outcomes. The principles and strands are mandated in legislation, and no changes were made to these.

The updated version mainly includes stronger links to The New Zealand Curriculum, reduces the number of learning outcomes from 118 to 20 and places a stronger focus on bi-cultural practice and assessment, progression and continuity in early learning (McLachlan, 2018[97]). Evidence collected by the Education Review Office (ERO) on the implementation of *Te Whāriki* also contributed to the revisions (McLachlan, 2018[97]). In addition, The Early Group Report, which was commissioned by the Minister of Education to recommend improvements to *Te Whāriki*, found that *Te Whāriki* needed more alignment with the key competencies included in The New Zealand Curriculum in order to support children's transitions and facilitate their educational progress (New Zealand Ministry of Education, 2015[98]).

In the case of The New Zealand Curriculum, it was first implemented in 1992. The first revision was made between 2000 and 2002, and it was updated again in 2007. A widely representative advisory group oversaw the development process, which included trials in schools, collaborative working parties, online discussions, and an inquiry into relevant national and international research (New Zealand Ministry of Education, 2007[85]). By 2010, full implementation of the curriculum was required. It is important to note that The New Zealand Curriculum was not updated to include more alignment with *Te Whāriki*.

Norway's Framework Plan was revised after the Kindergarten Act of 2005, and again more recently in 2017. The new Framework Plan takes into account the growth in the percentage of 1-2 year-olds in kindergarten from 54% to 81% in the period 2005–15. A number of stakeholders representing professionals from kindergartens, research environments and organisations were invited to provide input to the draft plan. The plan was circulated for a three-month period of consultative review, with accompanying conferences held throughout the country. The last revision put special emphasis on the youngest children as well as on co-operation, including with parents, and coherence in transitions from ECEC to primary school (Norwegian Directorate for Education and Training, 2017[86]).

Norway's National Curriculum for Compulsory Education is now undergoing revision, and a revised curriculum is to be implemented in August 2020.

In **Scotland**, the Curriculum for Excellence's origins date back to 2003, when a curriculum review group was established as a result of the National Debate on Education 2002

consultation (Scottish Executive, 2004[99]). The National Debate on Education was a three-month-long comprehensive participatory process, which gathered over 1 500 responses from diverse participants within and beyond the scope of education (e.g. pupils, teachers, parents, organisations) (Munn et al., 2004[100]). Participants were specifically consulted about what children and young people should learn at school, for example, what particular subjects, skills and attitudes should be addressed (Education Scotland, 2002[101]). A first version of the Curriculum for Excellence was published in 2004, and its first implementation in schools took place in 2010-11 (Education Scotland, 2016[102]). After its first version, the Curriculum for Excellence's different components have been periodically updated (Education Scotland, 2018[91]). Education Scotland jointly reviews the curriculum with stakeholders and partners, in order to reflect the changing needs of children, considering emergent approaches and recent research on children's learning (Education Scotland, 2015[103]).

In addition, the Education Scotland website also includes information about transitions, what parents can expect and how they can support their children. For instance, it advises parents to talk to their child about the transition, involve their child in getting ready for school, communicate with the school and support staff in getting to know their child (Education Scotland, 2018[104]).

Towards successful implementation of continuity and progression

Several practices implemented across jurisdictions can be considered promising approaches to ensure curricular continuity and progression. Given the research challenges noted throughout this paper, however, limited data exist to evaluate success with regard to the implementation of curricular continuity and progression. More specifically, the time required to reach full implementation of a specific curriculum contributes to difficulties in tracking cohorts of children who experience that curriculum, while also addressing the numerous other factors that shape educational trajectories for cohorts of students. Nonetheless, some data are available to inform the process of curriculum implementation and to suggest curricular strategies that can be beneficial to children in terms of supporting transitions. These data are used to address the question:

- ***To what extent has the curriculum in the jurisdictions been successful in promoting/achieving continuity and progression between early childhood education and care and early primary education?***

Understanding the curriculum implementation process

Understanding the process jurisdictions use to implement curricula can shed light on the ways that staff, teachers and settings are supported to use curricula as intended, creating coherence between curriculum frameworks (the intended curriculum) and children's daily experiences of the implemented curriculum. Observing aspects of the implementation process can provide early indicators of promising approaches for supporting continuity for children through curricula.

The implementation process of the curricula and strategies to promote continuity and progression vary widely among the seven case-study jurisdictions. Some jurisdictions provide highly scripted instructions for curriculum implementation (e.g. Luxembourg), while in others, the implementation is more flexible and left to local authorities and providers (e.g. Japan, New Jersey [United States], Norway). Nonetheless, common

strategies exist to help implement curricula, such as booklets, guidelines, professional development strategies and the use of web pages to update information.

Luxembourg is an example of a closely scripted implementation process. The curriculum of formal education specifies a set of skills to be attained by all students, the programme to be taught and the number of lessons to be devoted, for each of the different areas of development and learning. For each cycle, the core of the programme consists of the skills to be developed in each area of development and learning. These skills are embodied in a series of descriptors. For teachers, the skills and descriptors support the planning of learning situations according to identified objectives. In this way, learning stays focused on essential skills rather than on isolated content (Ministère de l'Éducation nationale et de la Formation professionnelle, 2011[83]).

Together with the organisation of school by cycles of learning, this specificity in the curriculum influences teaching methods, learning, schedules and evaluation practices. By allowing schools to focus on the essentials, and not lose sight of what remains important, the curriculum aims to raise the competency levels of all students. However, this competency-based approach is a major innovation for Luxembourg. As such, it is expected that the curriculum documents will need to undergo adjustments as they are applied in the context of schools (Ministère de l'Éducation nationale de l'Enfance et de la Jeunesse, 2009[75]). Implementation is understood as a process, and the curricular documents are expected to be redefined through their use in ECEC and schools (Hartmann, Bäck and Gorgi, 2018[105]).

In **Japan**, authority for curriculum implementation is at the local level, but national guidelines provide concrete strategies. After the Education Act was revised in 2006, revisions were also made to all curricula to explicitly state the importance of transitions (OECD, 2017[71]). The revision in 2017 further enhanced the focus on transitions between ECEC and primary school by identifying ten specific ways in which children should grow by the end of early childhood. After revisions, the national government presented the new curriculum to all stakeholders at the local level; brief meetings were held all over the country. Explanatory guidelines were developed so that all staff and teachers could easily understand the new curricula. Prefectures and municipalities provided professional development sessions to train staff and teachers on the new curriculum and developed their own implementation strategies in light of the explanatory guidelines (Ministry of Education, Culture, Sports, Science and Technology, Japan, 2018[90]).

In addition, a "Comprehensive Support System for Children and Child-Rearing" was developed in 2015 to encourage schools and ECEC to develop transition activities. Prefectures and municipalities promote the development of the "Start" curriculum in primary schools and the "Approach" curriculum in ECEC to facilitate children's transitions. Also, principals of ECEC centres are obliged to pass on to primary school principals a Cumulative Guidance Record for each child. This record entails "a record of each child's enrolment, instruction process and a summary of their outcomes" (Ministry of Education, Culture, Sports, Science and Technology, Japan, 2016[72]).

In **Victoria** (Australia), the Victorian Early Years Learning and Development Framework (VEYLDF) and the Victorian Curriculum F-10 offer guidance for implementation and for ensuring the continuity of learning across the different learning stages. This guidance includes information for the implementation and development of essential resources and materials, such as the illustrative "Maps" and best practice resources. The Victorian State Government provides the "Transition: A Positive Start to School Resource Kit" and additional resources for early childhood and school professionals to support successful

transitions to school, children's continuity of learning and pedagogies relevant to this stage of learning. A web-based resource to support the implementation of the VEYLDF and the Victorian Curriculum F-10 is also available. The content ranges from birth to Level 6 of the Victorian Curriculum F-10.The illustrative maps were designed to support teachers' design of learning experiences so that they are consistent with both the Victorian Curriculum F–10 and the VEYLDF, enhancing alignment between the curriculum as intended and as implemented (Victoria State Government, Victorian Curriculum and Assessment Authority, 2018[106]). Table 2.11 shows the illustrative map for the learning outcome of "Identity".

Table 2.11. Example of an illustrative map from Victoria (Australia)

VEYLDF	Victorian curriculum: Levels F-2
Children feel safe, secure and supported	
This is evident, for example, when children: • build a secure attachment with one and then more familiar educators • use effective routines to help make predicted transitions smoothly • sense and respond to a feeling of belonging • communicate their needs for comfort and assistance • establish and maintain respectful, trusting relationships with other children and educators • openly express their feelings and ideas in their interactions with others • respond to ideas and suggestions from others • initiate interactions and conversations with trusted educators • confidently explore and engage with social and physical environments through relationships and play • initiate and join in play • explore aspects of identity through role play.	This develops, for example, when students: • develop a vocabulary and practise the expression of emotions to describe how they feel in different familiar situations. Personal and Social Capability: Self-awareness and Management (F). • practise the skills required to include others and make friends with peers, teachers and other adults. Personal and Social Capability: Social Awareness and Management. • identify rules and fair play when creating and participating in physical activities. Health and Physical Education: Movement and Physical Activity (L1-L2). • explore roles, characters and dramatic action in dramatic play, improvisation and process drama. Drama: Explore and Express Ideas (L1-L2). • explore ideas for characters and situations through dramatic play. Drama: Explore and Express Ideas (F). • explore ideas, experiences, observations and imagination to create visual artworks. Visual Arts: Explore and Express Ideas (F).

Source: Victorian Curriculum and Assessment Authority (VCAA) (2018[106]), "Illustrative Maps from the VEYLDF to the Victorian Curriculum F–10", https://www.vcaa.vic.edu.au/Pages/earlyyears/vfldoutcomes/index.aspx#. Reproduced by permission of VCAA.

New Jersey (United States) also uses implementation guidelines for their curriculum frameworks. The guidelines are available for each stage or group between birth and 8 years old, starting with the Preschool Program Implementation Guidelines (State of New Jersey Department of Education, 2015[107]), followed by the New Jersey Kindergarten Implementation Guidelines (State of New Jersey Department of Education, 2011[108]), and finally the First to Third Grade Implementation Guide (State of New Jersey Department of Education, 2015[109]).

In **New Zealand**, curriculum implementation materials include parents and families as well as teachers, making the goal of continuity for children a shared responsibility. Both *Te Whāriki* and The New Zealand Curriculum provide guidance on implementation and for the continuity of learning within the different learning stages. The Ministry of Education provides relevant information on their website for implementation and develops workshops with materials and videos. The *Te Whāriki* online site provides information,

resources, and support for early childhood staff and teachers, educators, and families working with *Te Whāriki*.

Monitoring and evaluation of curriculum implementation, continuity and progression

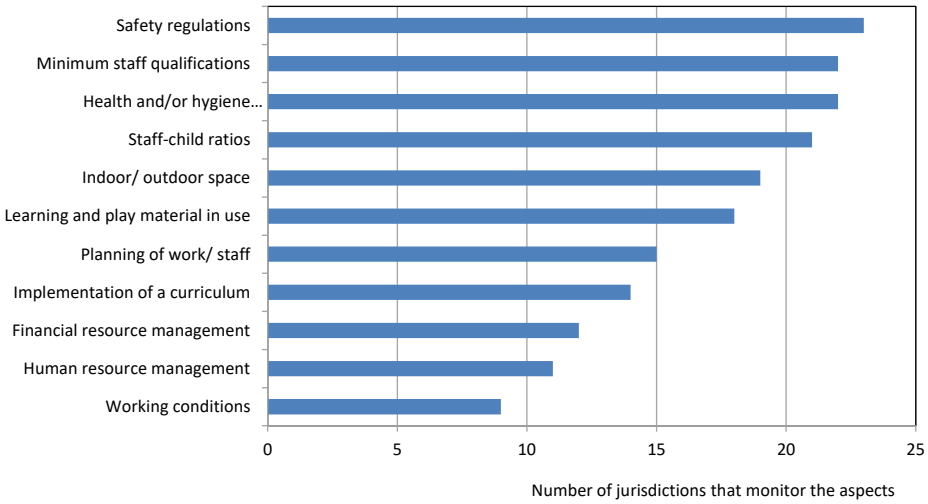
The monitoring of curriculum implementation can help assess and strengthen the role of curricula in promoting continuity and progression between ECEC and primary school. Monitoring that is designed for quality improvement and provides feedback to ECEC centres and staff and that supports them in improving their practices can help ensure successful implementation of curriculum frameworks (Resa, E, Ereky-Stevens, K, Wieduwilt, N, Penderi, E, Anders, Y, Petrogiannis, K, Melhuish, 2016[110]). Monitoring can be either external (i.e. conducted by someone who is not part of the setting being monitored) or internal (i.e. conducted by someone is part of the setting being monitored).

In some jurisdictions, the monitoring of service quality, staff quality and child learning and development is integrated between ECEC and primary school in order to ensure a more continuous view of early child development—this approach also brings alignment between the curriculum as intended and as achieved. Of the 24 jurisdictions that responded to the survey on monitoring ECEC quality, 14 reported aligned monitoring of ECEC and primary schools to ensure smooth transitions (OECD, 2015[38]). Some jurisdictions (Czech Republic, Hungary, Japan, Slovenia, Spain, Sweden, Switzerland and some provinces of Canada) reported including monitoring of transitions in broader quality monitoring.

Curriculum implementation is monitored across jurisdictions through both external and internal evaluations (OECD, 2015[38]). While inspections (external monitoring) most commonly focus on structural and regulatory factors, curriculum implementation was also reported as a common aspect of ECEC quality monitored by jurisdictions (Figure 2.19). These inspections monitor whether a curriculum is implemented in line with its purpose and expected outcomes (OECD, 2015[38]).

Furthermore, 75% of jurisdictions reported that implementation of curriculum is part of internal monitoring, via self-evaluations, in ECEC settings. For example, in Slovenia, a self-evaluation survey for staff covers curriculum planning and implementation of the curriculum (OECD, 2015[38]). For more than 15 years, the State of Berlin in Germany has been monitoring curriculum implementation in ECEC through both internal and external evaluations. The system offers targeted support to ECEC centres to establish good practices. External evaluations take place every five years, and ECEC centres and staff receive face-to-face and written feedback that informs them of the level of quality achieved and on areas where improvement is needed. For internal monitoring, ECEC centres and staff are free to choose the methods and tools that best reflect the relevant quality criteria of the curriculum (OECD, 2015[38]).

Figure 2.19. Service quality aspects inspected in childcare and nursery settings (or integrated settings for countries with an integrated system)



Note: Aspects of service quality monitored are ranked in descending order of the number of jurisdictions monitoring these aspects.
Source: OECD (2015[38]), *Starting Strong IV: Monitoring Quality in Early Childhood Education and Care*, Figure 3.2, https://doi.org/10.1787/9789264233515-en.

Although evaluations of curriculum implementation are not straightforward to conduct, Scotland (United Kingdom), Japan and New Zealand provide examples of efforts to evaluate aspects of curriculum implementation.

In **Scotland** (United Kingdom), several studies assessing curriculum implementation exist. Although they do not refer explicitly to continuity and transition issues, they provide background on the strengths and weakness of this integrated curriculum. Furthermore, although the Curriculum for Excellence aims to offer a unique, distinctive curriculum for Scotland, it also resonates on a wider scale with worldwide curricular trends (Priestley and Sinnema, 2014[111]; Priestley and Minty, 2013[112]).

Curriculum for Excellence's four core capacities (successful learners, confident individuals, responsible citizens and effective contributors) have been regarded as one of the most challenging aspects for implementation. On the one hand, a lack of specificity around implementation strategies leaves room for creativity and innovation, encouraging school-based curriculum development and teachers' professional agency. On the other hand, this flexibility can contribute to a lack of clarity around how the four capacities relate to knowledge and associated difficulties aligning the capacities to other elements of the curriculum; some argue this ambiguity stems from a lack of a clear theoretical underpinning for the Curriculum for Excellence (Hedge and MacKenzie, 2016[113]; Priestley and Sinnema, 2014[111]).

At the early years level, small-scale research has shown that teachers' understanding of active play-based pedagogy can differ, especially when describing their classroom practices. For example, some teachers describe whole-class teaching as active learning (Martlew, Stephen and Ellis, 2011[114]; Stephen and Martlew, 2010[115]). According to Martlew et al. (2011[114]), this could be partly rooted in the lack of an explicit definition of

active learning, and of a rationale for including it in the curriculum, beyond the call to teachers to implement it.

In Japan and New Zealand, there have been evaluations or studies on continuity or transition strategies. These studies demonstrate the importance of curriculum continuity, teachers' communication and work with families in facilitating transitions. Results also show how effective transition plans or strategies can generate positive outcomes.

In 2010, the **Japanese** government published a "Report on the Seamless Connection between Early Childhood Education and Primary Education" to promote transition activities and strategies. This report provides guidelines to ease the transition and facilitate alignment between kindergarten and primary schools. The guidelines present five levels (steps), starting from no co-operation between levels, moving to an aligned curriculum, described as followed (OECD, 2017[71]):

- Step 0: Plans for co-operation are not yet in place.
- Step 1: Wants to make a start on co-operation/connection, but is still at the review stage.
- Step 2: Several classes, events, study meetings or other forms of interaction are carried out each year, but curricula that allow for transitions have not yet been organised and implemented.
- Step 3: There is a substantial number of classes, events, study meetings or other forms of interaction, and curricula that anticipate that transitions have been organised and implemented.
- Step 4: Based on the results of the organisation and implementation of the curricula, reviews are being conducted to make further improvements.

The Japanese Ministry of Education, Culture, Sports, Science and Technology describes the characteristics of an aligned transitional curriculum (representing Step 4 above) as:

- The curriculum leads to well-articulated, desired developmental outcomes.
- The "Start" and "Approach" curricula are aligned.
- The curriculum considers co-ordination between ECEC centres and primary schools.
- There is co-operation with families.
- The curriculum includes innovative, effective measures to help facilitate alignment.

Since the release of the report, the Japanese government conducted surveys with municipal government officials every two years to evaluate the implementation of the transition strategies according to the five levels (or steps) (Ministry of Education, Culture, Sports, Science and Technology, Japan, 2015[116]). Compared to 2012, results in 2016 show that the percentage of municipalities at the lower steps (0 or 1) has decreased from 19.4% to 16.9% whereas those at the higher steps (3 or 4) has increased from 17% to 24.8%. This means that more and more municipalities have been developing and implementing the "Approach" curricula in ECEC centres and the "Start" curricula in primary schools.

In **New Zealand**, the Education Review Office (ERO) is responsible for the external evaluation of licensed early learning services and schools. A 2015 evaluation showed that there was wide variability across the different ECEC services and schools in efforts to

support children's transition to primary school (Education Review Office, 2015[95]). The report stated that success for children's transitions would be achieved if:

- Teachers from both levels understood the links between both curricula.
- Primary teachers recognised and used children's existing interests and knowledge to develop relevant and responsive learning for children and to contribute to their sense of self as confident learners.
- Teachers developed strong partnerships with parents and families to support children in their transition to school.

ERO found that in the least supportive early learning services, children were not well supported to develop the strong learning foundations crucial to successful transitions. Furthermore, the curriculum was not sufficiently focused on developing dispositions and social competence and was not connected to children's language, culture and identity. The quality of assessment information was poor and not focused on children's learning.

In the least supportive schools, ERO found a mismatch between the school curriculum and the learning valued in the early learning service. Communication with parents and families tended to be one way, and there were no opportunities for parents to share their aspirations for their child or talk about their child in relation to his/her strengths, interests and culture. Children were expected to "fit the school" rather than the school was expected to "fit the child".

Another study that speaks to transitions between ECEC and primary school is "Growing Up in New Zealand". It is a longitudinal study that aims to document what it is like to be a child growing up in New Zealand in the 21st century. It began in 2008 and followed 7 000 children and their families. The study shows that "approximately two-thirds of mothers reported that they were aware of an existing relationship between their own child's ECEC and their child's primary school, e.g. regular ECEC-organised visits to school or provision of a portfolio from ECEC to the school" (Morton et al., 2018, p. 14[117]). Moreover, most mothers (97%) stated that they visited the school or their child's class before their child started school. However, 20% of children and their families experienced difficulties six months after the transition to primary school.

3. Lessons learnt

The insights throughout this paper highlight the potential for curriculum to facilitate transitions and promote progression as children move from early childhood education and care (ECEC) to primary school. Curriculum is intertwined with other aspects of education systems, notably organisation and governance, professional continuity and the goals for both ECEC and primary education. Key insights from the cross-country data and in-depth case studies reflect the intersection of curriculum with these other aspects of education systems. Implementation strategies, including materials for schools, ECEC centres and families related to the curriculum, are central for understanding children's experience of continuity regardless of the degree to which curricula are aligned. Despite trends towards alignment in content between ECEC and primary school settings, alignment of assessment and monitoring across the two settings is less evident, which also has implications for children's experiences of curricular alignment.

Governance and organisation of education systems can facilitate curricular continuity across ECEC and primary school, as curriculum organisation often follows the organisation of the education system. The facilitation of continuity through governance is evident in jurisdictions such as Luxembourg where responsibility for education, including ECEC that is provided within the formal education system, is highly centralised. This model of governance simplifies implementation of an integrated curriculum by reducing organisational barriers and increasing the ease of co-ordination among parties responsible for the design and implementation of curriculum.

However, **centralised governance is not a prerequisite for curricular continuity** across ECEC and primary school. In jurisdictions such as Japan, partial alignment occurs in curricula, through shared over-arching goals and implementation strategies, despite the involvement of three government offices in the oversight of ECEC and primary education. The process for alignment or integration can be adapted to the demands of the governance system. While Japan's alignment of curricula occurred in stages, with steps towards alignment in each revision of the different curricula, alignment in Scotland (United Kingdom) occurred all at once through the process of developing an integrated curriculum.

Despite great variation in curriculum organisation across jurisdictions, **alignment in learning areas can be ensured without introducing traditional academic disciplines in ECEC curricula**. Rather, learning areas in ECEC curricula can be defined at a more general and age-appropriate levels, and learning through play can be emphasised in both ECEC and primary school. Jurisdictions like Norway and Victoria (Australia) are notable in the ways in which they encourage ECEC curricula to inform primary school curricula, rather than simply extending primary school content areas into ECEC. However, there is relatively little information available on how or if expansion of learning areas in ECEC curricula affects the pedagogical approaches employed.

It is not just ECEC and primary schools that are concerned with curricular continuity: **before and after-school services can help create curriculum continuity for children**

throughout ECEC and primary school. Staff working in these settings need ways to be involved in sharing the pedagogical responsibility of ECEC and primary teachers. As children do not necessarily move in cohorts between the same ECEC and primary school settings, before and after-school settings offer a unique opportunity to provide continuity for children during school transitions. Yet, few jurisdictions have strategies to include this sector in facilitating continuity and progress for children. Luxembourg addresses this possibility through its curriculum for non-formal education, which is aligned with the integrated curriculum used for ECEC and primary school.

Across jurisdictions, **curricular alignment does not stand on its own, but is accompanied by other measures to promote continuity**. Even within integrated curricula, different levels or cycles exist, and continuity across these different curricular stages can vary. To support alignment across levels with their integrated curriculum, Scotland (United Kingdom) includes design principles for teachers and staff to use when creating specific learning experiences. These principles allow flexibility at the level of ECEC programmes and schools that can promote or limit continuity, depending on their implementation.

The **flexibility of ECEC and primary education settings to implement elements of curricula** and plan for transitions at the local level is another emerging theme from the case studies and OECD data. All of the case-study jurisdictions emphasise the importance of workforce development or supports to staff and teachers to ensure smooth transitions and align the intended and implemented curricula across levels. Nonetheless, local autonomy creates many challenges for monitoring curriculum implementation and drawing conclusions about the success of efforts to promote continuity.

Monitoring is a key area for further research, as highlighted by the **limited evidence to determine successful implementation of continuity**. The insights presented in this paper underscore the distinct conditions for monitoring curriculum implementation in ECEC and in primary school. Given that primary school is compulsory and as a result consistently funded through public resources, there are often greater accountability demands. In other words, ECEC settings may have fewer pressures to demonstrate that children meet specific learning objectives (i.e. the achieved curriculum) than is the case in primary school settings — this distinction can contribute to differences in pedagogy, curriculum, assessment and monitoring. Furthermore, differences in support mechanisms associated with stricter monitoring protocols for primary school compared to ECEC can create divisions between the views and practices of the workforce in the respective settings.

As such, **to foster alignment of curriculum across levels, alignment between curriculum and monitoring/assessment needs to be considered**. Children must be at the centre of such efforts and monitoring and assessment should not be a simple downward extension of the approaches typically used in primary school settings. Rather, bidirectional consideration of the needs of children and goals at each level is required. In this way, curricular continuity can be supported by continuity in assessment and monitoring. Shared learning goals and principles across ECEC and primary school can serve as a foundation of efforts for greater alignment of achieved curricula: A holistic and continuous approach to assessment and monitoring, rather than a too narrow focus on testing academic skills, can facilitate continuity and also support children's progression through ECEC and primary school.

Finally, **professional continuity can support curriculum alignment in practice, bridging gaps between intended and implemented curricula**. Having similar qualification requirements, aligned pre-service training programmes and comparable

working conditions can help ECEC staff and teachers to work together more easily as well as to see each other as peers. One obstacle for implementing curricular alignment is the limited understanding the workforce (both in ECEC and in primary school) has of the pedagogical work done within the other level. For example, some primary school teachers may be resistant to include play as a valid pedagogical tool as they believe children should be doing "school work", whereas many ECEC educators fear "schoolification" and may, therefore, be reluctant to focus on specific academic content areas. Jurisdictions like New Jersey (United States) are making important strides to provide both pre-service and in-service training opportunities that support public school teachers across ECEC and primary school to implement curricular continuity.

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Annex A. Methodological considerations

Starting Strong V: Transitions from early childhood education and care to primary education

Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education provides cross-country comparative data collected through country background reports (CBRs) from eight OECD countries and one partner economy as well as a survey on transitions between ECEC and primary education conducted in 2015/16. The survey on transitions was conducted with members of the OECD Network on ECEC, which was established in 2007 to facilitate peer-policy learning through a network of international policy makers and researchers, as well as international entities such as United Nations Educational, Scientific and Cultural Organization (UNESCO) and the European Commission.

Among the OECD Network on ECEC members, a total of 27 OECD countries and 3 partner economies (Colombia, Croatia and Kazakhstan) completed the questionnaire. Some countries (Austria, Canada, Germany and Switzerland) provided information disaggregated by jurisdictions (*Länders*, provinces and territories or regions), for some indicators. Hence**,** information from the survey covers data of up to 63 jurisdictions.

Table A A.1. Countries and jurisdictions that completed the transitions questionnaire

Austria (9 *Länder*)	Ireland	Slovak Republic
Belgium (Flanders)	Italy	**Slovenia**
Canada (10 provinces and 3 territories)	**Japan**	Spain
Chile	Luxembourg	**Sweden**
Czech Republic	Mexico	Switzerland (3 regions)
Denmark	Netherlands	Turkey
Finland	New Zealand	**United Kingdom (Wales)**
Germany (16 *Länder*)	**Norway**	Colombia
Greece	Poland	Croatia
Hungary	Portugal	**Kazakhstan**

Note: Countries in bold also completed a country background report (CBR).

Source: OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, http://dx.doi.org/10.1787/9789264276253-en.

Annex B. Curricula in place in early childhood education and care and primary education across 63 jurisdictions

Table A B.1. Curricula in place in early childhood education and care and primary education

Child care only
Early childhood education and/or integrated early childhood education and care
No standard curriculum is in place for the specified age group
Compulsory ECEC
Compulsory primary schooling

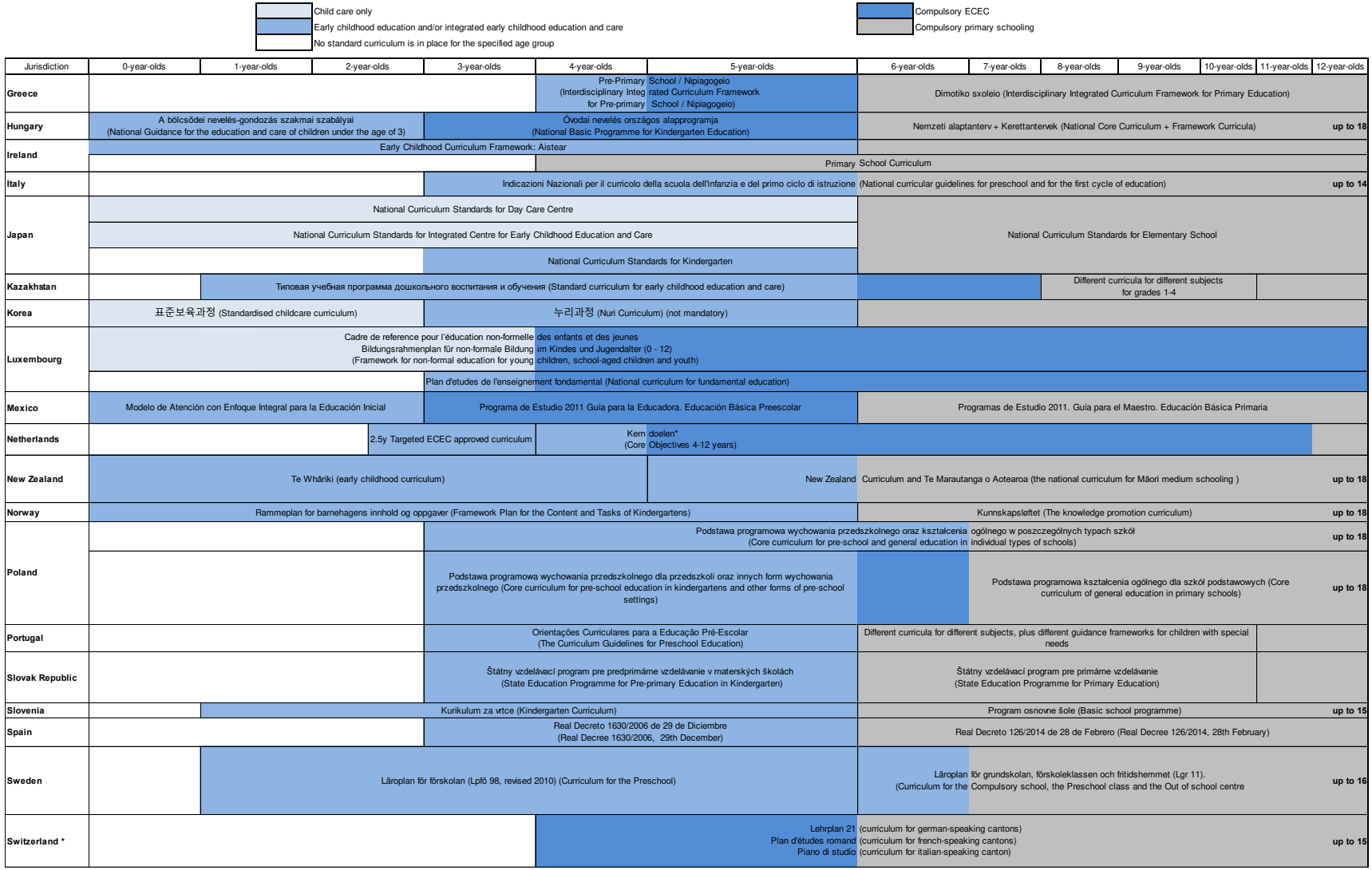
Jurisdiction	0-year-olds	1-year-olds	2-year-olds	3-year-olds	4-year-olds	5-year-olds	6-year-olds	7-year-olds	8-year-olds	9-year-olds	10-year-olds	11-year-olds	12-year-olds
Australia	Belonging, Being, Becoming - Early Years Learning Framework for Australia or equivalent state-based approved learning framework						The Australian Curriculum						
Austria	Bundesländerübergreifender BildungsRahmenPlan für elementare Bildungseinrichtungen in Österreich (Statewide Framework curriculum for ECEC institutions in Austria)					Modul für das letzte Jahr in Bildungseinrichtungen. Vertiefende Ausführungen zum bundesländerübergreifenden BildungsRahmenPlan (Statewide Framework curriculum for ECEC institutions in Austria; Addition to the Austrian Framework Curriculum for ECEC institutions in Austria (an addition to the Statewide Framework)	Lehrplan der Volksschule (Curriculum of Primary School)					
Belgium - Flemish Community	Het pedagogische raamwerk voor de kinderopvang van baby's en peuters (Pedagogical framework for childcare for babies and toddlers)			2,5 y Ontwikkelingsdoelen (developmental objectives for 2,5-6 years)			Eindtermen (attainment targets for 6-12 years)						
Belgium-French Community	Code de qualité (Oser/viser la qualité)												
				Le décret mission, le programme du réseau de l'école et le programme de l'école									
Canada - Alberta						Kindergarten program statement							
					Alberta Program of		Studies						up to 18
			Standards for the Provision of Early Childhood Special Education										
	The Alberta Early Learning and Childcare Curriculum Framework: Play, Participation and Possibilities												
Canada - British Columbia	British Columbia Early Learning Framework (Optional)						BC Ministry of Education Curriculum						up to 18
						BC Ministry of Education Curriculum (Kindergarten - Optional)							
Canada - Manitoba	Starting Early, Starting Strong: A Guide for Play-Based Early Learning in Manitoba Birth to Six												
	Early Returns: Manitoba's Early Learning and Child Care Curriculum Framework for Infant Programs		Early Returns: Manitoba's Early Learning and Child Care Curriculum Framework for Preschool Centres and Nursery Schools				Language arts curriculum; mathematics curriculum; science curriculum; social studies curriculum; arts education curriculum; physical education/health education curriculum; English as an additional language curriculum; literacy with information and communication technology						up to 18
						A Time for Learning, a Time for Joy: A Resource for Kindergarten Teachers							
Canada - New Brunswick	Early Learning and Child Care Curriculum Framework (English) and Curriculum Educatif Services de Garde (French)					Curriculum for compulsory school K- 2							

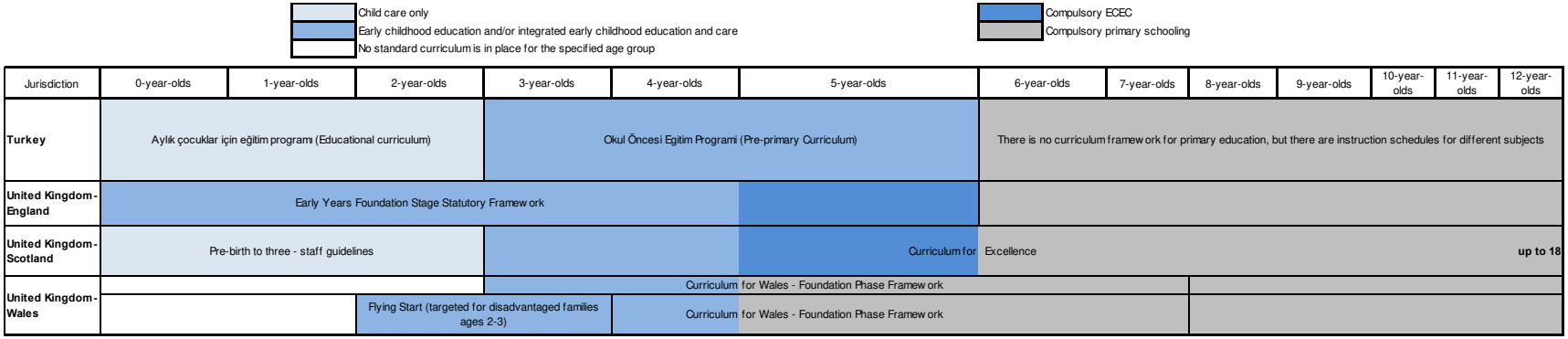
Child care only
Early childhood education and/or integrated early childhood education and care
No standard curriculum is in place for the specified age group
Compulsory ECEC
Compulsory primary schooling

Jurisdiction	0-year-olds	1-year-olds	2-year-olds	3-year-olds	4-year-olds	5-year-olds	6-year-olds	7-year-olds	8-year-olds	9-year-olds	10-year-olds	11-year-olds	12-year-olds
Canada - Newfoundland and Labrador	Provincial Early Childhood Learning (ECL) Curriculum Framework												
	Regulated Child Care Program Standards (Birth to age 12.11 years)												
					KinderStart Program Guide 3.9 years - 5 years	Completely Kindergarten Guide (2010) 4.9 years - 5.9 years	Curriulum for Compulsary school Grades 1-12 (students with exceptionalities may continue to age 21 yrs)						up to 18
Canada - Northwest Territories					Integrated Kindergarten Curriculum		Each curricular area currently has a separate curricular document						
Canada - Nova Scotia					Specifically for Grade Primary teased out as a Public School		component of the Program	Nova Scotia Public School Program					up to 18
Canada - Nunavut						Elementary	Teachers Planning Guide						up to 18
						Curriculum	Foundations						up to 18
						1996 IQ	Curriculum Framework						up to 18
						Subject	Curriculums						up to 18
Canada - Ontario					The Kindergarten Program 2016		The Ontario Curriculum Grades 1-8						
	How Does Learning Happen? Ontario's Pedagogy for Early Years (2014). Birth to age 8.												
Canada - Prince Edward Island	PEI Early Learning Framework					Curriculum for	compulsory school K- 12 (Integrated by subject)						up to 18
Canada - Quebec	Acceuillir la petite enfance. Le programme éducatif des services de garde du Québec (Meeting Early Childhood Needs: Québec's Educational Program for Childcare Services) (not mandatory)					Un programme d'éducation préscolaire 5 ans (Preschool Education Program) (mandatory)	Programme de formation de l'école québécoise (Québec Education Program) (4-12 years)						
					Des programmes à demi-temps et à temps plein pour les enfants de 4 ans en milieu défavorisé (Preschool Education Program Full-day Kindergarten for 4 years old in Disadvantaged Areas) (Pre-K)								
Canada - Saskatchewan	Play and Exploration: Early Learning program Guide for Infants and Toddlers (suggested curriculum)			Play and Exploration: Early Learning Program Guide and Essential Learning Experiences (suggested curriculum)		Kindergarten - Children First: A Resource for Kindergarten and Kindergarten Curriculum (mandatory curriculum); French Immersion Kindergarten; Fransaskois Kindergarten - Maternelle, Education fransaskois	Saskatchewan Core Curriculum Grades 1,2,3						
Canada - Yukon	British Columbia Early Learning Framework (Optional)												
						BC Ministry of Education Curriculum (Kindergarten - Optional)	BC Ministry of Education Curriculum						up to 18
Chile	Bases Curriculares de Educación Pavularia (Early Childhood Education Curricular Bases)						Bases Curriculares para la Educación Básica (Curricular Bases for Primary Education)						
Colombia	National curriculum for early childhood educationand and the transition year are in construction at this time. It is planned to be released in 2016.						Estándares básicos de competencias y derechos básicos de aprendizaje (Basic standards for competencies and basic learning rights)						
Croatia	Strategija obrazovanja, znanosti i tehnologije (National Strategy for Science, Education and Sports (covers all children from 6 months to 18 years))												up to 18
	Nacionalni kurikulum za rani i predškolski odgoj i obrazovanje (National Curriculum for Early Childhood and Preschool Education)						Strategija obrazovanja, znanosti i tehnologije (National Strategy for Science, Education and Sports (covers all children from 6 months to 18 years))						up to 18
Czech Republic				Framework Educational Programme for Preschool Education (FEP PE)			Framework Educational Programme for Basic Education (FEP BE)						up to 15
Denmark	Pædagogiske læreplaner (pedagogical curriculum)						Fælles Mål (Common Objectives) for each grade in primary school, including preschool class						up to 16

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Compulsory primary schooling

Jurisdiction	0-year-olds	1-year-olds	2-year-olds	3-year-olds	4-year-olds	5-year-olds	6-year-olds	7-year-olds	8-year-olds	9-year-olds	10-year-olds	11-year-olds	12-year-olds
Finland	Varhaiskasvatusuunnitelman Perusteet (National curriculum guidelines on early childhood education and care)						Esiopetuksen Opetussuunnitelman Perusteet (National Core Curriculum for Pre-primary education)	Perusopetuksen Opetussuunnitelman Perusteet (National Core Curriculum for Basic Education)					up to 16
France	Orientations code de la santé publique et projets d'établissements (Code of Public Health Guidelines and Project Settings)			L'école maternelle : un cycle unique, fondamental pour la réussite de tous (Preschool: a unique cycle, fundamental for the success of all)			Programmes d'enseignement du cycle des apprentissages fondamentaux (cycle 2, 6 à 8 ans), du cycle de consolidation (cycle 3, 9 à 11 ans) et du cycle des approfondissements (cycle 4, à partir de 12 ans) . (Curriculum of the fundamental learning cycle [cycle 2, 6 to 8 years old], the cycle of consolidation [cycle 3, 9 to 11 years old] and the cycle of deepening [cycle 4, from 12 years old])						
Germany (Baden-Württemberg)	Orientierungsplan für Bildung und Erziehung für die baden-württembergischen Kinder (Orientation plan for education and care of kindergartens						gärten und weiteren Kindertageseinrichtungen and other ECEC settings in Baden-Württemberg)						
							Bildungsplan für die Grundschule (Curriculum for primary education)						
Germany (Bavaria)	Gemeinsam Verantwortung tragen - Bayerische Leitlinien für die Bildung und Erziehung von Kindern bis zum Ende der Grundschulzeit (Share responsibility – Bavarian guidelines for education and care						Erziehung von Kindern bis zum Ende der Grundschulzeit of children until the end of primary school)						
							LehrplanPLUS Grundschule (Curriculum plus for primary education)						
Germany (Berlin)	Berliner Bildungsprogramm für Kitas und Kindertagespflege (Berlin educational programme for ECEC centres and family daycare)						Rahmenlehrpläne (Framework Curriculum)						
Germany (Brandenburg)	Grundsätze elementarer Bildung in Einrichtungen der Kindertagesbetreuung im Land Brandenburg (principles of elementary education in ECEC centres in Brandenburg)												
							Rahmenlehrpläne (Framework Curriculum)						
Germany (Bremen)	Rahmenplan für Bildung und Erziehung im Elementarbereich - Bremen (Framework curriculum for education and care in the elementary sector – Bremen)						Rahmenlehrpläne (Framework Curriculum)						
Germany (Hamburg)	Hamburger Bildungsempfehlungen für die Bildung (Recommendations on education for education and care						und Erziehung von Kindern in Tages Einrichtungen of children in daycare settings in Hamburg)						up to 15
							Bildungsplan der Grundschule in Hamburg (Curriculum for primary education in Hamburg)						
Germany (Hesse)	Bildung von Anfang an. Bildungs- und Erziehungsplan für Kinder von 0 bis 10 Jahren in Hessen (Education from the beginning. Curriculum for children from 0 to 10 years in Hesse)												
							Rahmenplan Grundschule (Framework curriculum for primary education)						
Germany (Mecklenburg-Western Pomerania)	Bildungskonzeption für 0- bis 10-jährige Kinder in Mecklenburg-Vorpommern. Zur Arbeit in Kindertageseinrichtungen und Kindertagespflege (Educational concept for children 0 to 10 in Mecklenburg-Vorpommern. For working in ECEC settings and family daycare)												
							Rahmenlehrpläne (Framework Curriculum)						
Germany (Lower Saxony)	Orientierungsplan für Bildung und Erziehung im Elementarbereich niedersächsischer Tageseinrichtungen für Kinder (Orientation plan for education and care in elementary education in lower saxonian daycare centres for children)						Rahmenrichtlinien für die Grundschule in Niedersachsen (Framework curriculum for primary education in Lower Saxony)						
Germany (North Rhine-Westphalia)	Mehr Chancen durch Bildung von Anfang an - Grundsätze zur Bildungsförderung für Kinder von 0 bis 10 Jahren in Kindertageseinrichtungen (More chances through education from the beginning. Principles for educational support for children 0 to 10 in ECEC centres						und Schulen im Primarbereich in Nordrhein-Westfalen and primary schools in North Rhine-Westphalia)						
							Rahmenplan Grundschule (Framework curriculum for primary education)						
Germany (Rhineland-Palatinate)	Bildungs- und Erziehungsempfehlungen für Kindertagesstätten in Rheinland-Pfalz (Recommendations on education and care in ECEC settings in Rhineland-Palatinate)												up to 15
							Rahmenplan Grundschule (Framework curriculum for primary education)						
Germany (Saarland)	Bildungsprogramm für saarländische Kindergärten (educational programme for kindergartens in Saarland)						Rahmenplan für die Grundschule (Framework curriculum for primary education)						
Germany (Saxony)	Sächsischer Bildungsplan - ein Leitfaden für pädagogische Fachkräfte in Krippen, (Saxonian curriculum – a guideline for ECEC staff in crèches, kindergartens						Kindergärten und Horten sowie für Kindertagespflege and day care centres, as well as family day care)						
							Lehrpläne Primarstufe						
Germany (Saxony-Anhalt)	Bildungsprogramm für Kindertageseinrichtungen in Sachsen-Anhalt. Bildung: elementar – Bildung von Anfang an (educational programme for ECEC settings in Saxony-Anhalt. Education: elementary – Education from the beginning)												up to 15
							Lehrplan Grundschule - Grundsatzband						
Germany (Schleswig-Holstein)	Erfolgreich starten: Leitlinien zum Bildungsauftrag von Kindertageseinrichtungen in Schleswig-Holstein (Starting successfully: guidelines on the educational task of ECEC settings in Schleswig-Holstein)												up to 15
							Lehrpläne für die Primarstufe (Curriculum for primary education)						
Germany (Thuringia)	Thüringer Bildungsplan bis 18 Jahre. Bildungsansprüche von Kindern und Jugendlichen (Thuringian curriculum upto 18 years. Educational demands of children and adolescents)												up to 18
							Thüringer Lehrpläne für die Grundschule (Curriculum for primary education in Thuringia)						


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Jurisdiction
0-year-olds
1-year-olds
2-year-olds
3-year-olds
4-year-olds
5-year-olds
6-year-olds
7-year-olds
8-year-olds
9-year-olds
10-year-olds
11-year-olds
12-year-olds
Greece
Pre-Primary School / Nipiagogeio
(Interdisciplinary Integrated Curriculum Framework for Pre-primary School / Nipiagogeio)
Dimotiko sxoleio (Interdisciplinary Integrated Curriculum Framework for Primary Education)
Hungary
A bölcsődei nevelés-gondozás szakmai szabályai
(National Guidance for the education and care of children under the age of 3)
Óvodai nevelés országos alapprogramja
(National Basic Programme for Kindergarten Education)
Nemzeti alaptanterv + Kerettantervek (National Core Curriculum + Framework Curricula)
up to 18
Ireland
Early Childhood Curriculum Framework: Aistear
Primary School Curriculum
Italy
Indicazioni Nazionali per il curricolo della scuola dell'infanzia e del primo ciclo di istruzione
(National curricular guidelines for preschool and for the first cycle of education)
up to 14
Japan
National Curriculum Standards for Day Care Centre
National Curriculum Standards for Integrated Centre for Early Childhood Education and Care
National Curriculum Standards for Kindergarten
National Curriculum Standards for Elementary School
Kazakhstan
Типовая учебная программа дошкольного воспитания и обучения (Standard curriculum for early childhood education and care)
Different curricula for different subjects for grades 1-4
Korea
표준보육과정 (Standardised childcare curriculum)
누리과정 (Nuri Curriculum) (not mandatory)
Luxembourg
Cadre de reference pour l'éducation non-formelle des enfants et des jeunes
Bildungsrahmenplan für non-formale Bildung im Kindes und Jugendalter (0 - 12)
(Framework for non-formal education for young children, school-aged children and youth)
Plan d'etudes de l'enseignement fondamental (National curriculum for fundamental education)
Mexico
Modelo de Atención con Enfoque Integral para la Educación Inicial
Programa de Estudio 2011 Guía para la Educadora. Educación Básica Preescolar
Programas de Estudio 2011. Guía para el Maestro. Educación Básica Primaria
Netherlands
2.5y Targeted ECEC approved curriculum
Kern doelen*
(Core Objectives 4-12 years)
New Zealand
Te Whāriki (early childhood curriculum)
New Zealand Curriculum and Te Marautanga o Aotearoa (the national curriculum for Māori medium schooling)
up to 18
Norway
Rammeplan for barnehagens innhold og oppgaver (Framework Plan for the Content and Tasks of Kindergartens)
Kunnskapsløftet (The knowledge promotion curriculum)
up to 18
Poland
Podstawa programowa wychowania przedszkolnego oraz kształcenia ogólnego w poszczególnych typach szkół
(Core curriculum for pre-school and general education in individual types of schools)
up to 18
Podstawa programowa wychowania przedszkolnego dla przedszkoli oraz innych form wychowania przedszkolnego (Core curriculum for pre-school education in kindergartens and other forms of pre-school settings)
Podstawa programowa kształcenia ogólnego dla szkół podstawowych (Core curriculum of general education in primary schools)
up to 18
Portugal
Orientações Curriculares para a Educação Pré-Escolar
(The Curriculum Guidelines for Preschool Education)
Different curricula for different subjects, plus different guidance frameworks for children with special needs
Slovak Republic
Štátny vzdelávací program pre predprimárne vzdelávanie v materských školách
(State Education Programme for Pre-primary Education in Kindergarten)
Štátny vzdelávací program pre primárne vzdelávanie
(State Education Programme for Primary Education)
Slovenia
Kurikulum za vrtce (Kindergarten Curriculum)
Program osnovne šole (Basic school programme)
up to 15
Spain
Real Decreto 1630/2006 de 29 de Diciembre
(Real Decree 1630/2006, 29th December)
Real Decreto 126/2014 de 28 de Febrero (Real Decree 126/2014, 28th February)
Sweden
Läroplan för förskolan (Lpfö 98, revised 2010) (Curriculum for the Preschool)
Läroplan för grundskolan, förskoleklassen och fritidshemmet (Lgr 11).
(Curriculum for the Compulsory school, the Preschool class and the Out of school centre
up to 16
Switzerland *
Lehrplan 21 (curriculum for german-speaking cantons)
Plan d'études romand (curriculum for french-speaking cantons)
Piano di studio (curriculum for italian-speaking canton)
up to 15



Notes: In Newfoundland and Labrador (Canada), provincial ECL Curriculum Framework is currently being piloted as a draft in select locations in the following settings - in home, in regulated childcare, in the community and in school (KinderStart, kindergarten and primary); for further information, please see http://www.ed.gov.nl.ca/edu/earlychildhood/initiatives.html#frame.

In the Netherlands, the *kerndoelen* are not a curriculum; they are age-appropriate goals for student learning.

"Information on curricula in Japan corrected as of 2018.

Source: Adapted from OECD (2017[1]), *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Table 4.A.6 http://dx.doi.org/10.1787/9789264276253-en.