2.3 Early childhood education and care (ECEC)

Key findings

The number of children participating in early childhood education and care (ECEC) has been steadily rising for the last decade. The EU-27 average of children in ECEC from 4 years-old to the compulsory primary school age[63] Figure 67 – ECEC summary table 1: Legal framework, 2019/20 remains just below the target of 95%: from 94.9% in 2016 and 2017 to 94.8% in 2018. The EU-27 average is 92.2% for children aged 3 and upwards and 57.1% for all children under the compulsory primary school age.

We cannot discern from administrative data how far vulnerable children are participating in ECEC with a minimum educational component. Survey data shows that children from socially disadvantaged groups participate in the wider formal ECEC sphere – including services both with and without a minimum educational component – to a lesser extent.

Recognising the importance of all children having access to basic services, many countries have taken action to improve affordability and availability of ECEC.

2.3.1 Evolution of the early childhood education and care target

Promoting social integration of children and levelling educational opportunities through ECEC remain key objectives of the European policy agenda, and European policymakers have set several objectives to increase participation. In 2002, the Barcelona European Council[64] set two targets on the availability of high quality and affordable childcare facilities for pre-school children, i.e. 90% of children from the age of 3 until compulsory (primary) school age and 33% of children under 3 years-old. In 2009, the strategic framework for European cooperation in education and training set the scene for the ECEC target, aiming at participation of 'at least 95% of children between 4 years-old and the age for starting compulsory primary education'[65]. To be classified as early childhood education for the ECEC target, early childhood education and care services must include a certain minimum level of instruction activity – they cannot simply be formal childcare facilities as specified by the Barcelona target.

The ECEC target comprises participation in any childcare provision for children from the age of 4 through to compulsory primary education that falls within a national regulatory framework, classified as ISCED level 0[66] and included in reporting[67]. Many differences apply to the age when education becomes compulsory[68] in different Member States; the compulsory starting age for primary education is generally around the age of 6 in Europe[69].

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63 This definition has its limitations as in many EU Member States compulsory education starts at 4. See Figure 67.

64 European Council (2002). Presidency conclusions. Barcelona European Council, 15-16 March 2002.

65 Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training (ET2020).

66 There are two categories of ISCED level 0 programmes: early childhood educational development (ISCED 01) and pre-primary education (ISCED 02). The former has educational content designed for younger children (in the age range of 0 to 2 years), while the latter is designed for children from the age of 3 to the start of primary education. For the specifics of the definitions, see 'International Standard Classification of Education ISCED 2011'; for further details on the characteristics of the programme content of ISCED 0, see section 9.

67 It is, however, worth noting that there is not always a perfect overlap between ISCED 0 and the definition of ECEC used in the ECEC target. ISCED 0 covers children up to the start of primary education, while the target takes into account children up to the start of compulsory primary education. These concepts overlap in all EU target except Ireland, where primary education starts before compulsory education, and therefore the calculation of the target includes levels ISCED 0 and 1.

68 In France and Hungary for example, education is mandatory from the age of 3 since 2019. Another example is Belgium, where education has become mandatory from the age of 5 since September 2020. For more examples, cf. Eurydice, Key

Box 13 – Policies to provide access for minority and disadvantaged children to quality early education in Germany

The German Federal Ministry of Family Affairs, Senior Citizens, Women and Youth has launched several initiatives to tackle the inequalities between children from minority backgrounds regarding early childhood education enrolment, which is lower than for more advantaged children. Two programmes have been initiated for this purpose. The first one, the 'Language Day Care' federal programme, targets kindergartens where many children need language support. It promotes inclusion in pedagogy and includes families. It also funds staff in expert services who mentor ECE teams regarding language promotion. Between 2017 and 2020, about 7 000 additional part-time positions have been created. The second one is the 'Access to Day Care Programme', which targets families who have recently arrived or are socio-economically disadvantaged. Between 2017 and 2019, it provided coordination, staff and additional financial supplements to support about 1 000 different activities in around 150 locations.

Source: OECD (2019). Providing Quality Early Childhood Education and Care: Results from the Starting Strong Survey 2018, TALIS.

2016 marks the year in which the ECEC target was officially reached: 95.3% (94.9% in the EU without the United Kingdom) of children between the age of 4 and the age of starting compulsory primary education participated in ECE[70]. From 95.4% in 2017, the EU-28 percentage dropped very slightly to 95.3% in 2018. Post-Brexit, the EU-27 average is similar, even though the numbers remain just below 95%: from 94.9% in 2016 and 2017 to 94.8% in 2018.

In 2018, 15 Member States had reached the target. In descending order, these were Denmark, Ireland, France, the United Kingdom (still a Member of the EU at that time), Belgium, Spain, the Netherlands, Luxembourg, Germany, Latvia, Austria, Sweden, Hungary, Cyprus and Malta. Of the countries with a participation rate below 95%, Finland, Poland, Slovakia and Slovenia saw an increase compared to 2017 of between 1 and 4 pps. While the decrease of most of the others remained below 2 pps, two countries took a bigger step backwards: Greece (6.3 pps; this is due to a break in the time series) and Romania (3.3 pps). Seven countries were close to the target, with rates between 91% and 95%: in ascending order, these were Lithuania, Czechia, Estonia, Poland, Slovenia, Portugal and Italy (which, having had a participation rate above 95% in the past few years, slipped just below the target in 2018). Greece (because of breaks in the data)[71], Croatia, Slovakia and Bulgaria have the lowest participation rates among EU countries.

Of the countries with an attendance rate above 95%, Denmark, Ireland, France and the United Kingdom had a full participation rate, while participation among children from 4 years of age upwards is also close to 100% in Belgium and Spain. Most other Member States above 95% showed slight changes in the percentage from 2016 to 2018 (around 1 percentage point or less). Cyprus stands out, with a participation rate that went from 89.7% in 2016 to over 92% in 2017 and 95.3% in 2018[72], as does Croatia, where the percentage of children participating in early childhood education increased from 75.1 (2016) to 81.0% (2018).

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indicators 2019, p. 66. Cf. also European Commission/EACEA/Eurydice (2020). Structural indicators, 2020, p. 9 on the legal framework.

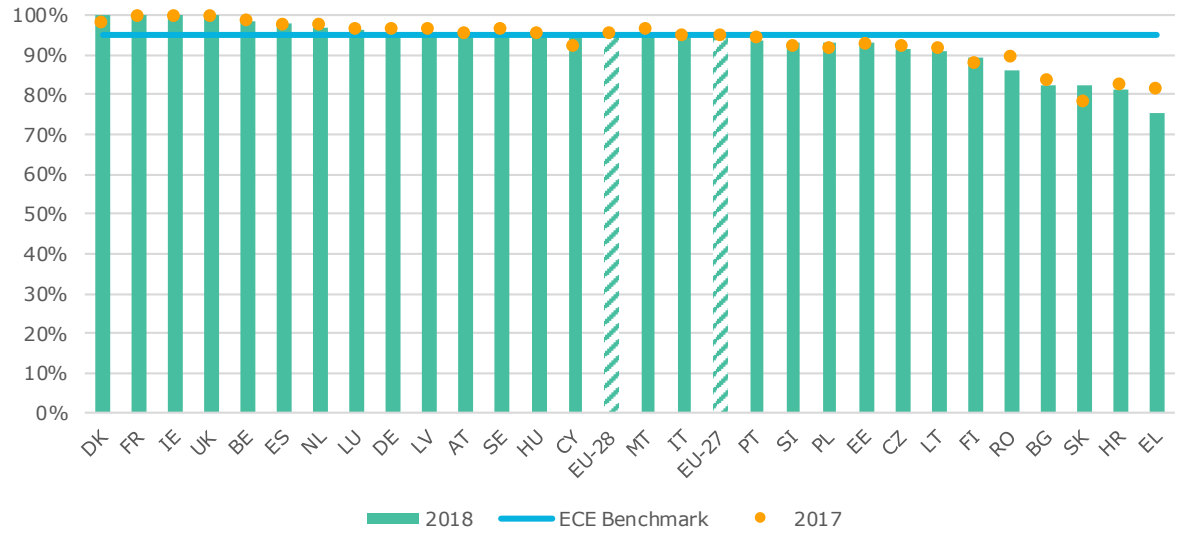
69 European Commission/EACEA/Eurydice (2019). Key indicators 2019, p. 66.
Cf. also European Commission/EACEA/Eurydice, The structure of the European education systems 2019/20.
European Commission/EACEA/Eurydice (2019). Compulsory Education in Europe – 2019/20. Eurydice Facts and Figures.

70 European Commission. Education and training monitor. 2018 edition.

71 There is under-coverage for Greece in the 2018 data, because some 3 and 4 year-olds are not included. Better coverage was reported in 2017, and Greece hopes to provide full coverage in the next data collection (and revise the 2018 data).

72 Mostly due to a rise in attendance in private facilities, as is clear from educ_uoe_enrp01.

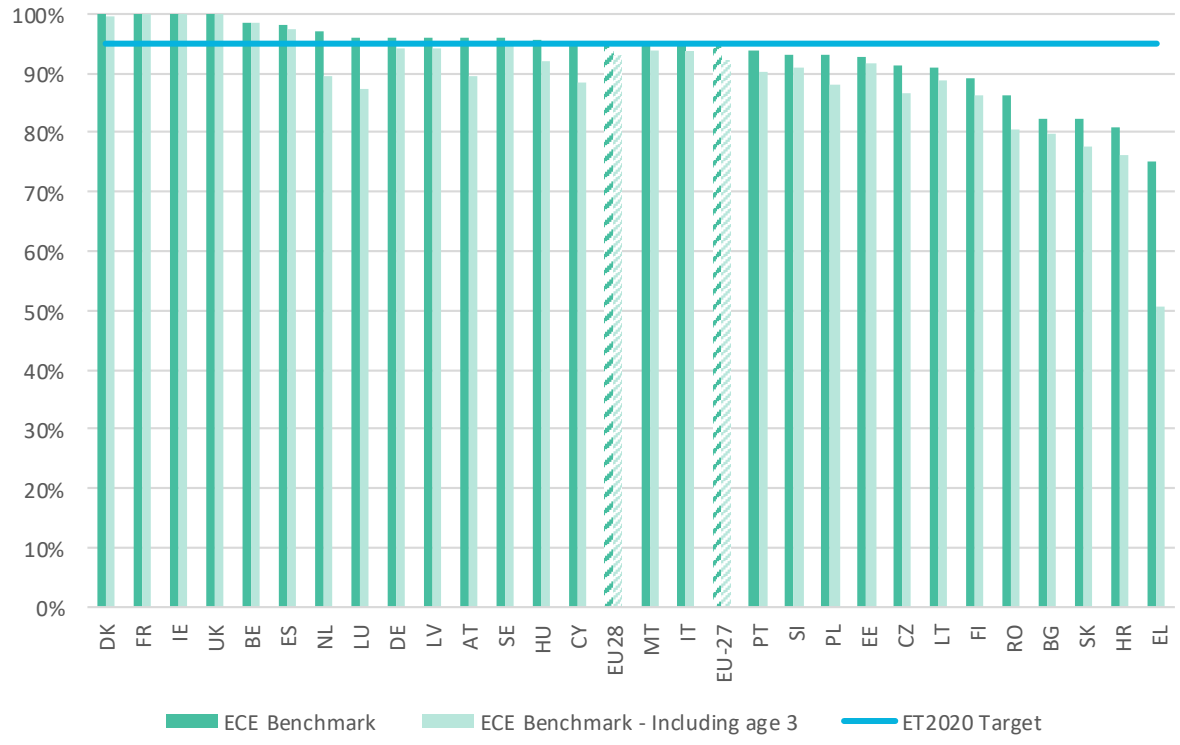
Figure 24 – Participation in ECEC by children between 4-years-old and the starting age of compulsory education, 2017 and 2018 [%]



Source: Eurostat, educ_uoe_enra10.

When considering a wider group, of children from 3 years of age upwards, Greece, Croatia, Slovakia and Bulgaria have participation rates in ECE below 80%. The highest participation rates, all over 95%, are seen in Ireland, France, and the United Kingdom (all three with 100%), Denmark, Belgium, Spain and Sweden. With a rate of 92.2%, the EU-27 average still has room for improvement.

Figure 25 – Participation in ECE by children between 4-years-old, respectively 3-years-old, and the starting age of compulsory education, 2018 (%)



Source: Eurostat, educ_uoe_enra10 and educ_UOE_enra21.

Expanding the age range even further, to all children from 0 up to the start of compulsory primary education, allows us to look at the ECE system as a whole. Participation rates in the overall group are much lower than in the older age categories of 3 and above and 4 and above[73]. Malta and Slovakia have the lowest participation rates, while Belgium, Sweden and Denmark are at the other end of the range, with participation rates above 70%. The EU-27 average for this age group is 57.10%.

Figure 26 – Participation in ECE of children from birth to the starting age of compulsory primary education, 2018 [%]

Source: Eurostat calculation from educ_uoe_enra02 on 2018 data (demo_pjan)

Research suggests that integrated ECEC systems – i.e. where care and education are considered as a whole – offer more continuity, quality and coherence across ECEC policy (e.g. regulation and funding, curriculum, workforce education/training and working conditions, monitoring and evaluation systems) and allocate more resources to younger children and their families. In addition, the literature suggests that unitary systems, which cover the whole age range, from birth up until the start of primary education, lead to better quality, more equitable service provision and result in greater financial efficiency[74]. Countries that provide integrated ECEC services for all children under primary school age were likely to guarantee a place in publicly funded provision for each child from an early age (6 to 18 months) and contribute to high standards across all ECEC services[75].

2.3.2 Inclusion/equity in access to early childhood education and care

Scientific literature has long shown that children participating in qualitative ECEC enjoy long-term emotional, social and cognitive benefits[76]. More study is needed, however, on the impact of policy changes to scale up universal ECEC for very young children and especially on the links between scaling up and the quality of this process.[77] To benefit children's early development and subsequent

73 ESTAT calculation on from educ_uoe_enra02 2018 data. Data is missing for Greece, because data on 0-2 year-olds enrolled in ISCED 01 are incomplete. Participation rates are underestimated for Belgium (under-coverage, only the Flemish Community has reported data on ISCED 01) and Malta (under-coverage, enrolments in ISCED 01 are not included).

74 Kaga, Y., Bennett, J., and Moss, P. (2010). Caring and Learning Together: A Cross-National Study of Integration of Early Childhood Care and Education within Education. Paris: UNESCO. Proposal for key principles of a Quality Framework for Early Childhood Education and Care, Report of the Working Group on Early Childhood Education and Care under the auspices of the European Commission, DG Education and Culture, 2014.

75 Key Data on Early Childhood Education and Care in Europe, 2019 Edition (European Commission/EACEA/Eurydice, 2019).

76 Literature review on the effects of early childhood education and care, in Vandenbroeck, M., Lenaerts, K., Beblavý, M. (2018). Benefits of early childhood education and care and the conditions for obtaining them. An EENEE Analytical Report No. 32, January 2018. Utrecht University and CARE consortium (2017). CARE: Curriculum Quality Analysis and Impact Review of European ECEC. Kottelenberg, M. J., and Lehrer, S. F. (2017). Targeted or universal coverage? Assessing heterogeneity in the effects of universal child care. Journal of Labour Economics, 35(3), 609-653.

77 OECD, Literature review on early childhood education and care for children under the age of 3 (forthcoming).

school performance, labour market participation, social mobility and social integration, ECEC needs to be of a high quality[78].

The beneficial effects of participation in ECEC seem to be especially pronounced for children from disadvantaged backgrounds[79]. ECEC broadens the educational experiences of children, has been shown to facilitate access to employment and may have a positive impact on parental aspirations and behaviour.

Administrative enrolment data currently does not track any information on children's socio-economic background, so it is not possible to track the extent to which vulnerable children are participating in ECEC services with a minimum educational component. It is clear from participation rates in the wider formal ECEC sphere (which includes services both with and without a minimum educational component). It is clear from participation rates in formal ECEC, however, that there is a clear tendency towards lower participation rates among children from a lower socio-economic background than for those from a higher one, i.e. a social gap in ECEC attendance, which is evident in several Member States[80]. In many European countries, children from socially disadvantaged groups do not fully enjoy the benefits of ECEC. Recent OECD analysis[81] reveals that several countries continue to struggle with equity issues regarding 0 to 2 year-olds' participation rates in ECEC. Approximately half of the countries in the most recent available OECD Family Database (2017 or latest)[82] show considerable differences in access depending on the income range of the families.

Recognising the importance of all children having access to basic services, the European Commission 2020 work programme announced the development of a European Child Guarantee, to be included in the next EU budget (2021-2027). Also, the Council Recommendation on High-Quality Early Childhood Education and Care Systems advocates the improvement of inclusiveness of ECEC[83]. In order to reach as many children as possible, many countries have worked over the past 5 years on extending a legal entitlement to ECEC or introducing compulsory ECEC of at least 1 year before primary education[84]. Most EU countries guarantee a place from a certain age, but only seven EU Member States (Denmark, Germany, Estonia, Latvia, Slovenia, Finland and Sweden) guarantee a place in ECEC for each child from an early age (6-18 months), often immediately after the end of childcare leave. From the age of 3, a place in publicly subsidised ECEC is ensured in Belgium, Czechia, Spain, France, Luxembourg, Hungary and Poland.[85]

Like availability, affordability contributes to ensuring access for as many children as possible. In EU, most families have to pay ECEC fees for the youngest children[86]. The older the children, the more countries provide ECEC free of charge for everyone. For children aged 3 or older, almost half

78 Schleicher, A. Helping our Youngest to Learn and Grow. Policies for Early Learning. OECD (2019). Council Recommendation on High-Quality Early Childhood Education and Care Systems of 22 May 2019.

79 Schleicher, A. Helping our Youngest to Learn and Grow. Policies for Early Learning. OECD (2019). Vandenbroeck, M., Lenaerts, K., Beblavý, M. (2018). Benefits of early childhood education and care and the conditions for obtaining them. An EENEE Analytical Report No. 32, January 2018. Utrecht University and CARE consortium (2017). CARE: Curriculum Quality Analysis and Impact Review of European ECEC.

80 Flisi, S. and Blasko, Zs. (2019). A note on early childhood education and care participation by socio-economic background, JRC Science for Policy Report. See also European Commission (2019). Education and training monitor. 2019 edition.

81 OECD, Literature review on early childhood education and care for children under the age of 3 (forthcoming).

82 OECD Family Data Base, chart PF3.2.B. Participation rates in early childhood education and care by income, 0 to 2 year-olds (OECD estimates, based on EU-SILC data).

83 Council Recommendation of 22 May 2019 on High-Quality Early Childhood Education and Care Systems, 9014/19.

84 Key data on early childhood education and care in Europe – 2019 edition. European Commission/EACEA/Eurydice. Structural indicators for monitoring education and training systems in Europe – 2019 and 2020.

85 Participation is compulsory from the age of 3 in France and Hungary.

86 See more details in Key data on early childhood education and care in Europe – 2019 edition. European Commission/EACEA/Eurydice, pp. 54-62.

of European countries offer a form of free ECEC. During the last year before compulsory primary education, free places are almost universal in Europe. Many countries provide targeted measures regarding availability or affordability, to facilitate ECEC access for children living in poverty. Price reductions (through lower fees and/or free meals) and priority admission are the most common measures for young children. Measures tackling inequalities by increasing affordability, through fee reductions, are more common than those that increase availability. Targeted groups are children living in poverty, children of single parents, children whose parents' work situation puts them at a disadvantage, number of siblings, children with disabilities/difficulties (SEN), children from migrant backgrounds and those from regional or ethnic minorities.

2.4 Underachievement in basic skills in the digital age

Key findings

The EU has scored no progress on the acquisition of basic skills since 2009. Reducing underachievement among 15 year-old pupils still represents a challenge. More than one in five pupils in the EU has insufficient proficiency in reading, mathematics or science. On average across the EU, the EU2020 target – an underachievement rate of less than 15% – has not been reached in any of the three areas tested by PISA 2018. The underachievement rate stands at 22.5% in reading[1], 22.9% in mathematics, and 22.3% in science. The persisting large share of underachievers across the three subjects is a burden on the EU economy and society.

Marked gender differences in underachievement levels only persists in reading – with higher shares of underachievers among boys. Overall, the results for top performance largely mirror the picture of underachievement: the countries with low shares of underachievers tend to have a high proportion of top performers.

Socio-economic differences persist and pupils with a migrant background achieve lower scores. The performance gap between urban and rural areas is also wide in many countries. Reduction of underachievement in basic skills has remained an unreached goal of the outgoing strategy and a persisting challenge.

2.4.1 The 2018 PISA study

The strategic framework for European cooperation in education and training (ET 2020) set a 15% target for 15 years-olds' underachievement[87] in reading, mathematics and science. The results from PISA 2018 show that the majority of EU Member States perform below the ET2020 target. As highlighted in the sections below, since 2009, the EU share of underachievement has increased in both science and reading, while remaining stable in mathematics. More than one in five 15 year-olds in the EU cannot complete even simple tasks in the three subject areas tested under PISA. Specifically, PISA 2018 shows that 21.7% of pupils in the EU-28 underachieve in reading[88], 22.4% in mathematics and 21.6% in science. Underachieving in basic skills implies not being equipped to thrive in the labour market and the broader society. Therefore the cost of underachievement is significant both for the individual and for society at large.

87 Underachievers in PISA are those pupils who fail to reach proficiency Level 2, i.e. the minimum level necessary to participate successfully in society.

88 All EU averages in reading exclude Spain, because Spanish data are not available at the time of writing.