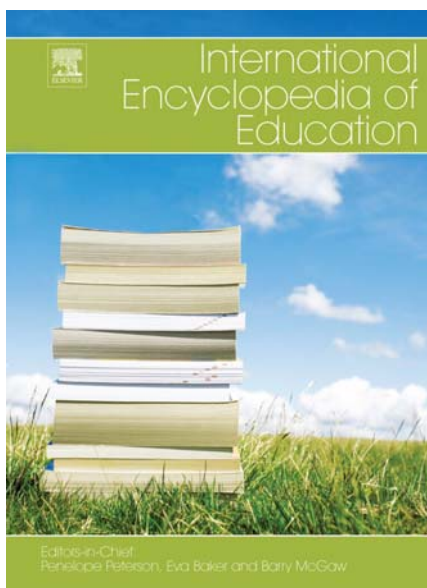


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Issues of Access and Program Quality

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Glossary

Child care – Early childhood program designed to offer care to children but without a primary emphasis on providing educational services.

Early childhood education and care – Organized program offering educational services and/or care to children during early childhood. Here, we have focused on programs serving children from birth until entry into primary school.

Enrollment rate – Percentage of children from a pre-defined group who are on record as current participants in a school or early childhood education and care program.

Externalities – Spillover benefits of an early childhood program to people beyond those enrolled as children or their families.

Gross enrollment ratio (GER) – Percentage of children enrolled in the age group that corresponds to a particular grade in school.

Head start – A US federal government program providing education and other services to children in poverty, primarily from age 3 to 5, and their families.

Legal entitlement to education – Children with legal entitlements to education are guaranteed access to a program, typically based on their age.

Pre-primary education program – An educational program designed to serve children between ages 3 and the primary school entry age. These types of programs may be known by terms such as preschool, nursery education, infant education, prekindergarten, and kindergarten.

Targeted preschool education – Education program that is targeted to a particular subset of children within a given age range, often based on family income.

Universal preschool education – An education program available to all children within a specified age range (such as the year before kindergarten eligibility) whose parents wish to enroll them.

The Importance of Early Childhood Education and Care

Early childhood education and care (ECEC) programs for young children have become increasingly available in

countries around the globe. There is consensus across a variety of fields that early childhood is a sensitive period of life, marked by development of critical cognitive, social–emotional, and physical skills. Over the past few decades, a large body of research has shown that participation in early childhood education programs can produce positive impacts on children's development. Improvements in early learning and development in turn produce long-term improvements in achievement, educational attainment, and social behavior. Specific impacts shown in longer-term studies of high-quality preschool programs include decreased rates of grade retention and special education enrolment, increased school completion rates, and reductions in crime and delinquency rates.

Although the aims of ECEC initiatives vary considerably from country to country, a common priority of these programs is to offer educational services and/or care to children during the years prior to their entry into primary school, which occurs by age 6 in a majority of countries. Implementation of ECEC programs internationally has been marked by divisions between the types of services offered to children from birth to age 3 and those offered for children from ages 3 to 6. When government agencies are involved in the provision of ECEC, this age boundary is often replicated at the government level as well, with different agencies or ministries responsible for overseeing ECEC programs depending on a child's age. Regardless of the level of government involvement, ECEC programs for children younger than age 3 tend to focus mainly on child care, while ECEC programs for children ages 3 and older tend to be conceptualized as pre-primary education.

Several Decades of Steady Growth in ECEC

Worldwide enrolment rates in preschool education programs have grown substantially since the 1960s. This rise in enrolment has occurred in the context of broad societal changes, including increased workforce participation by mothers of young children, higher numbers of single-parent households, decreasing birth rates, and urbanization. There has been burgeoning interest by both parents and governments in increasing the availability of educational opportunities for young children. One widely known example of an early government-sponsored ECEC initiative is the United States' federal Head Start program, for young children in poverty and their families, which was started in 1965.

Although many nations continue to target public resources on programs for disadvantaged children, there is a growing movement to ensure that all children can access preschool programs. Countries that were among the initial leaders in making ECEC widely accessible to all young children, regardless of socioeconomic background, include Belgium, France, and the Netherlands. In Belgium, nearly all children aged 3–6 were enrolled in ECEC programs by 1975. By 1980, almost all children in France aged 2–6 and almost all children aged 4–6 in the Netherlands were enrolled in ECEC. In general, differences in enrolment rates between countries have been diminishing, as ECEC becomes a higher priority internationally. Pre-primary enrolment rates are now about 3 times higher than in 1970, although rates are still low in less economically developed countries. Most countries in the Organization for Economic Cooperation and Development (OECD), which primarily counts industrialized countries as its members, are currently offering free pre-primary education programs of at least 2 years' duration.

Current Issues of Access to ECEC

International data on ECEC enrolment rates are gathered on an ongoing basis by the United Nations Educational, Scientific and Cultural Organization (UNESCO), which monitors progress toward a set of six Education for All goals adopted at the 2000 World Education Forum by 164 governments and 35 international institutions. These goals focus on increasing access to educational opportunities at all stages of life, as a human rights issue. The goal related to early childhood involves increasing access to comprehensive ECEC programs, and making improvements in these programs, with a particular emphasis on serving disadvantaged children. Data from UNESCO are reported in terms of the gross enrolment ratio (GER), a percentage of children enrolled from the age group matching a particular grade level in school. (A GER higher than 100% reflects enrolment by children whose age does not correspond to that expected at their current grade level, because they entered school at an atypical age or were retained.) The UNESCO data focus on enrolment in pre-primary education programs beginning at age 3 – programs offering a school-type, center-based environment, including programs variously known by such terms as preschool, nursery education, infant education, and kindergarten. Enrolment data for children from birth until age 3 are less widely available on an international level.

Pre-primary enrolment rates tend to be much higher in developed countries than in developing countries. The regions of the world with the highest pre-primary GERs in 2005 included North America and Western Europe (79%), Latin America and the Caribbean (62%), and Central and Eastern Europe (59%). In East Asia and the

Table 1 International pre-primary enrolment rates

Country or territory	Age group, 2005	Percent enrolled in pre-primary, 2005	Private as percent of total, 2005
<i>Arab States</i>			
Algeria	4–5	6	–
Bahrain	3–5	47	99
Djibouti	4–5	1	84
Egypt	4–5	16	31
Iraq	4–5	6 ^c	–
Jordan	4–5	31	95 ^b
Kuwait	4–5	73	37
Lebanon	3–5	74	77
Libyan Arab Jamahiriya	4–5	8 ^b	15 ^{b, c}
Mauritania	3–5	2 ^c	78 ^c
Morocco	4–5	54	100
Oman	4–5	8 ^b	100 ^b
Palestinian Autonomous Territories	4–5	30	100
Qatar	3–5	36	94
Saudi Arabia	3–5	10	45
Sudan	4–5	25	71
Syrian Arab Republic	3–5	10	74
Tunisia	3–5	22 ^{b, c}	–
United Arab Emirates	4–5	64	75
Yemen	3–5	1	49
<i>Central and Eastern Europe</i>			
Albania	3–5	49 ^b	5 ^b
Belarus	3–5	100	5
Bulgaria	3–6	79	0.3
Croatia	3–6	47 ^b	8 ^b
Czech Republic	3–5	100	1
Estonia	3–6	100	2
Hungary	3–6	83	5
Latvia	3–6	84	3
Lithuania	3–6	68	0.1
Poland	3–6	54	8
Republic of Moldova ^a	3–6	62	1
Romania	3–6	75	1
Russian Federation	3–6	84	1
Slovakia	3–5	95	1
Slovenia	3–5	79	1
TFYR Macedonia	3–6	33	–
Turkey	3–5	10	4
Ukraine	3–5	86	3
<i>Central Asia</i>			
Armenia	3–6	33	1
Azerbaijan	3–5	29	0.1
Georgia	3–5	51	–
Kazakhstan	3–6	34	5
Kyrgyzstan	3–6	13	1
Mongolia	3–6	40	1
Tajikistan	3–6	9	–
Uzbekistan	3–6	28 ^{b, c}	–
<i>East Asia and the Pacific</i>			
Australia	4–4	100	66
Brunei Darussalam	3–5	52	65
Cambodia	3–5	9	24
China	4–6	40 ^b	31 ^b

Continued

Table 1 Continued

Country or territory	Age group, 2005	Percent enrolled in pre-primary, 2005	Private as percent of total, 2005
Cook Islands ^a	4-4	91 ^{b, c}	22 ^{b, c}
Fiji	3-5	16 ^c	100 ^c
Indonesia	5-6	34	99
Japan	3-5	85	66
Kiribati	3-5	75 ^{b, c}	–
Lao People's Democratic Republic	3-5	9	26
Macao, China	3-5	92	95
Malaysia	5-5	100 ^b	45 ^b
Marshall Islands	4-5	50 ^{b, c}	18 ^{b, c}
Nauru ^a	3-5	71 ^{b, c}	17 ^{b, c}
New Zealand	3-4	93	98
Niue ^a	4-4	100 ^c	–
Palau ^a	3-5	64 ^c	20 ^c
Papua New Guinea	6-6	59 ^{b, c}	–
Philippines	5-5	41	45
Republic of Korea	5-5	96 ^b	77 ^b
Samoa	3-4	49 ^{b, c}	–
Solomon Islands	3-5	41 ^{b, c}	–
Thailand	3-5	82 ^b	21 ^b
Timor-Leste	4-5	16	–
Tokelau ^a	3-4	100 ^{b, c}	–
Tonga	3-4	23 ^c	12 ^c
Tuvalu ^a	3-5	99 ^b	–
Vietnam	3-5	60	58
<i>Latin America and the Caribbean</i>			
Anguilla	3-4	97 ^c	100
Argentina	3-5	64 ^b	27 ^b
Aruba ^a	4-5	99	77
Bahamas	3-4	31 ^{b, c}	79 ^{b, c}
Barbados	3-4	93	17
Belize	3-4	33	96
Bolivia	4-5	50 ^c	23 ^{b, c}
Brazil	4-6	63 ^b	29 ^b
British Virgin Islands ^a	3-4	90	100
Cayman Islands	4-4	93 ^c	91
Chile	3-5	54	48
Colombia	3-5	39	38
Costa Rica	4-5	69	10
Cuba	3-5	100	–
Dominica ^a	3-4	78	100
Dominican Republic	3-5	34	43
Ecuador	5-5	77 ^c	47 ^c
El Salvador	4-6	51	18
Grenada ^a	3-4	81 ^c	58 ^b
Guatemala	3-6	28	19
Guyana	4-5	100	3
Honduras	3-5	33 ^c	23 ^c
Jamaica	3-5	95	91
Mexico	4-5	93	13
Montserrat ^a	3-4	100	–
Netherlands Antilles	4-5	100 ^{b, c}	75 ^b
Nicaragua	3-6	37	16
Panama	4-5	62	18
Paraguay	3-5	31 ^b	27 ^b
Peru	3-5	62	21
Saint Kitts and Nevis ^a	3-4	100	59

Continued

Table 1 Continued

Country or territory	Age group, 2005	Percent enrolled in pre-primary, 2005	Private as percent of total, 2005
Saint Lucia	3-4	74	100
Saint Vincent and the Grenadines	3-4	86 ^c	100 ^c
Suriname	4-5	89	45
Trinidad and Tobago	3-4	87	100
Turks and Caicos Islands	4-5	100 ^c	65
Uruguay	3-5	62 ^b	20 ^b
Venezuela	3-5	58	18
<i>North America and Western Europe</i>			
Andorra ^a	3-5	100	2
Austria	3-5	91	27
Belgium	3-5	100	53
Cyprus ^a	3-5	65	40
Denmark	3-6	93	–
Finland	3-6	59	8
France	3-5	100	13
Germany	3-5	98	59
Greece	4-5	67	3
Iceland	3-5	94 ^b	8 ^b
Israel	3-5	92	4
Italy	3-5	100	30
Luxembourg	3-5	86	6
Malta	3-4	100	39
Monaco	3-5	–	19 ^b
Netherlands	4-5	90	70 ^b
Norway	3-5	88	42
Portugal	3-5	77	47
Spain	3-5	100	35
Sweden	3-6	88	14
Switzerland	5-6	99	8
United Kingdom	3-4	59	8
United States	3-5	61	38
<i>South and West Asia</i>			
Afghanistan	3-6	1 ^{b, c}	–
Bangladesh	3-5	11 ^b	53
Bhutan	4-5	–	100
India	3-5	41	4 ^b
Iran, Islamic Republic of	5-5	46	8
Maldives	3-5	49	38
Nepal	3-4	27 ^b	80 ^b
Pakistan	3-4	50	–
<i>Sub-Saharan Africa</i>			
Benin	4-5	5	37
Burkina Faso	4-6	2	–
Burundi	4-6	2	47
Cameroon	4-5	24	66
Cape Verde	3-5	54	–
Central African Republic	3-5	2 ^{b, c}	–
Chad	3-5	1 ^c	47 ^b
Comoros	3-5	3 ^c	62 ^c
Congo	3-5	6	77
Côte d'Ivoire	3-5	3 ^b	46 ^{b, c}
Democratic Rep. of the Congo	3-5	1 ^{b, c}	84 ^{b, c}

Continued

Table 1 Continued

Country or territory	Age group, 2005	Percent enrolled in pre-primary, 2005	Private as percent of total, 2005
Equatorial Guinea	3–6	41	49
Eritrea	5–6	12	48
Ethiopia	4–6	2 ^b	100
Gambia	3–6	18 ^{b, c}	100 ^{b, c}
Ghana	3–5	56 ^b	34
Guinea	3–6	7	91 ^b
Kenya	3–5	52	31
Lesotho	3–5	34	100
Madagascar	3–5	10 ^{b, c}	90 ^b
Mali	3–6	3	–
Mauritius	3–4	95	83
Namibia	3–5	29 ^{b, c}	100 ^{b, c}
Niger	4–6	1	32
Nigeria	3–5	15	–
Sao Tome and Principe	3–6	32	–
Senegal	4–6	8	68
Seychelles ^a	4–5	100	5 ^b
South Africa	6–6	37 ^b	7 ^b
Swaziland	3–5	18 ^b	–
Togo	3–5	2 ^{b, c}	59 ^{b, c}
Uganda	4–5	1	100
United Republic of Tanzania	5–6	30 ^b	2 ^b
Zimbabwe	3–5	43 ^b	–

^aEnrolment rates were calculated using national population data.

^bData are from a year other than 2005. In all cases, data from 2003 or later were used.

^cEstimated data were used.

For purposes of this table, gross enrolment rates exceeding 100% are capped at 100%. From United Nations Educational, Scientific and Cultural Organization (2007). *Education for All Global Monitoring Report 2008: Education for All by 2015. Will We Make It?* Paris: UNESCO.

Pacific, 43% of children were enrolled in pre-primary education; and in South and West Asia 37% of children were enrolled. Less than one-third of children were enrolled in pre-primary education programs in Central Asia (28%), the Arab States (17%), and sub-Saharan Africa (14%). From 1999 to 2005 (the years just after the adoption of the Education for All goals), pre-primary enrolment rates grew by 19% worldwide, with a 30% increase in transition countries, a 24% increase in developing countries, and a 6% increase in developed countries. Regions with the lowest enrolment rates at the beginning of that time period tended to show the greatest percentage increases, although these areas of the world continue to offer fairly limited access to ECEC programs for children between age 3 and primary school entry. See **Table 1** for country-by-country enrolment rates in 2005 from UNESCO. **Table 2** provides further details about enrolment in 20 OECD countries, focusing on legal entitlements and

enrolment rates for children from birth to age 3 and from age 3 until primary school entry.

Issues of ECEC Program Administration and Governance

Although, by definition, ECEC specifically encompasses services for young children starting at birth, the reality is that most policies and organized programs focus on children starting at age 3. Only about 53% of countries internationally have at least one type of program for children from birth to age 3; such programs are most prevalent in North America and Western Europe and are least prevalent in the Arab States and in Central and Eastern Europe. In countries that offer ECEC services prior to age 3, programs for older and younger preschoolers are often separately organized and administered, with those for younger children focusing on child care and those for older children focusing on education. Thus, programs for infants and toddlers may be separate from a country's pre-primary education programs rather than a downward extension of them.

The governmental divisions with responsibility for ECEC programs often differ depending on children's ages. From birth until age 3, ministries of health frequently administer child-care programs, whereas other ministries – particularly ministries of education – are more likely to be involved in ECEC for children age 3 and older. Research on early childhood education systems in France and Sweden suggests that as government education agencies took more responsibility for ECEC programs, this provided the resources for increased access for children and also helped to professionalize early childhood staffing.

The ways in which ECEC programs are paid for also tend to vary, depending on children's ages and whether the program is conceptualized as child care or education. For example, in OECD countries, governments bear the majority of the costs for pre-primary education programs. However, parents generally must contribute larger shares toward the total costs when their children attend ECEC programs for infants and toddlers or programs for older children that are considered to be child care. The parental share of costs for these programs can be very high in countries such as Canada and the United States, where parents may bear the entire cost unless they qualify for programs targeting families in or near poverty.

Pre-primary education programs are much more likely to be provided in public school settings than in private settings internationally. The use of private settings is most common in developing countries, where a median 47% of pre-primary education programs are in private settings. Less than 10% of programs in developed countries and almost none of the programs in transition countries occur in private settings. UNESCO reports that use of private

Table 2 ECEC programs from birth until primary school in OECD countries

<i>ECEC entitlements and enrolment rates</i>		
<i>Country</i>	<i>Birth to age 3</i>	<i>Age 3 until primary school entry</i>
Australia	There is no legal entitlement to ECEC. Child-care benefits are available for children enrolled in approved services. Accredited and family day care centers reach approximately 25% of children.	There is no legal entitlement to ECEC. Free or nearly free preschool is provided by most states at ages 4 and 5. Accredited and family day care centers reach up to 62% of 4-year-olds. Kindergarten or reception classes reach 17% of 4-year-olds and 84% of 5-year-olds. Primary school begins at age 6.
Austria	There is no legal entitlement to ECEC. About 9% of children attend family day care or crèche programs.	Children aged 3–6 have a legal right to fee-based kindergarten, and 80% are enrolled. Primary school begins at age 6.
Belgium	The legal right to schooling begins at age 2.5. Earlier, subsidized services are widely available, although supply is less than demand. In the Flemish community, family day care and crèches are most common, reaching 34% of children. In the French community, crèches and centers are most common, reaching 18% of children.	Children aged 2.5–6 are entitled to free school programs. At age 2.5, 90% of children are enrolled, and almost 100% are enrolled by age 3. Primary school begins at age 6.
Canada	Entitlements to schooling vary by province. In Quebec, the right to educational child care begins at birth, and 38% of children from birth to age 4 are enrolled. Programs are fee-based, though parent fees are very low. Outside Quebec, provincial support is weak.	Entitlements vary by province. Fee-based junior kindergartens enroll 40% of 4-year-olds in Ontario and 50% in Quebec. Free kindergartens enrol 95% of 5-year-olds in most provinces. Primary school begins at age 6.
Czech Republic	There is no legal entitlement to ECEC, and few crèche services are available.	There is no legal entitlement, but kindergarten programs are widely accessible. Beginning at age 3, 76% of children are enrolled. Free programs are available by age 4, with priority given to 5-year-olds. By age 5, 98% of children are enrolled. Primary school begins at age 6.
Denmark	Day care services for all children ages 1 to 5 are guaranteed by 87% of municipalities. Fee-based services may begin at 6 months and continue until age 6. Family day care centers enroll 45% of children, with an additional 15% in crèches and age-integrated facilities.	Until age 6, children may continue to attend day care programs. At age 6, children have a legal right to attend free preschool in a center-based setting or primary school. About 58% of children are enrolled in kindergartens from ages 3 to 6, and 98% of children are enrolled from age 6 until age 7. Primary school begins at age 7.
Finland	Beginning at birth, children have a legal right to enroll in a center- or home-based ECEC program. Family day care and municipal programs reach 28% of children from ages 1 to 2 and 44% of children aged 2–3. Programs are fee-based, with parents paying an average of 15% of costs in public day care programs.	Children have a legal right to enroll in a center- or home-based ECEC program. By age 5, 73% are enrolled. At age 6, preschool classes in centers and primary schools are free, and 96% of children are enrolled. Primary school begins at age 7.
France	There is no legal entitlement to ECEC, although subsidized services are widely available. About 30% of children are enrolled in various types of settings. Starting at age 2, about 35% of children are enrolled in free educational programs.	Children have a legal right to free ECEC services, and almost all children attend until primary school begins at age 6.
Germany	There is no legal entitlement to ECEC, but 37% of children in the former East Germany and about 3% of children in the former West Germany attend center-based crèche programs, for a total of 9% nationwide.	Children have a legal right to fee-based kindergarten programs from ages 3 to 6, and 90% are enrolled. Primary school begins at age 6.
Great Britain	There is no legal entitlement to ECEC. Under the responsibility of the Ministry of Education, 26% of children attend private nurseries or play groups, or are cared for by child minders.	At ages 3 and 4, children are legally entitled to enroll in a free, part-time ECEC program. At age 3, 95% of children attend play groups or nurseries, and at age 4 nearly 100% attend reception classes or nursery schools. Primary school begins at age 5.
Hungary	Children of working parents have a legal right to free ECEC at 6 months of age, but only 9% of children attend.	Children have a legal right to free kindergarten programs starting at age 3. From ages 3 to 5, 85% of children are enrolled. Compulsory kindergarten starts at age 5, and 97% of children are enrolled.

Continued

Table 2 Continued

Country	<i>ECEC entitlements and enrolment rates</i>	
	<i>Birth to age 3</i>	<i>Age 3 until primary school entry</i>
Ireland	There is no legal entitlement to ECEC. The majority of children are in family or informal child care, although 10–15% of children up to age 4 attend licensed family day care centers or nurseries.	Up to age 4, 10–15% of children attend licensed family day care centers or nurseries, and 4% of 3-year-olds attend pre-primary education. The legal right to free preschool begins at age 4, and 56% of children ages 3 to 6 are enrolled in public pre-primary programs. By age 5, enrolment rates are nearly 100%. Primary school begins at age 6.
Italy	There is no legal entitlement to ECEC. The majority of children are in family or informal child care, although 19% are enrolled in crèches.	Children have a legal right to enroll in school-based ECEC; programs in public settings are free. From ages 3 to 4, 98% of children are enrolled in regulated services (although rates vary by region); this increases to 100% from ages 5 to 6. Primary school begins at age 6.
Korea	There is no legal entitlement to ECEC. Family and informal child care are common, although 10% of children are enrolled in child care centers.	Four-year-olds from low income families gained a legal right to ECEC in 2006. Otherwise, the right to free ECEC begins at age 5. Child care centers enrol 31% of children ages 3 to 5. Ministry of Education kindergartens enrol 12% of children at age 3, 27% at age 4, and 45% at age 5. About 70% of 5-year-olds receive licensed services. Primary school begins at age 6.
Mexico	There is no legal entitlement to ECEC, and only 3% of children are enrolled in crèches.	Currently, more than 80% of children participate in ECEC at age 5, with enrolment rates for younger children much lower. Starting in 2009, free, school-based compulsory education will begin at age 3.
Netherlands	There is no legal entitlement to ECEC, although subsidies are available for children at risk. Family day care and child care centers cover 23% of children from birth to age 4, and another 5–10% attend municipal education services for children who are disadvantaged.	Although there is no legal right to ECEC until age 4, 89% of children aged 2–4 participate in play groups or receive other types of services. Nearly all children are enrolled in free pre-primary school starting at age 4, and pre-primary school is compulsory at age 5.
Norway	There is no legal entitlement to ECEC. Private and public kindergartens enrol about 48% of children.	There is no legal entitlement to ECEC. Private and public kindergartens are available in most areas, and about 88% of children ages 3 to 6 are enrolled in fee-based ECEC. Primary school begins at age 6.
Portugal	There is no legal entitlement to ECEC. About 13% of children are enrolled in crèche programs.	A legal entitlement to free ECEC programs begins at age 4. Average enrolment for children from age 3 to age 6 is 76%, with 60% of 3-year-olds enrolled and 90% of children enrolled from age 5 to age 6. Primary school begins at age 6.
Sweden	Beginning at 1 year of age, children of working or studying parents have a right to fee-based ECEC. Full-day programs enroll 45% of children from age 1 to age 2 and 86% of children from age 2 to age 3. Family day care programs enroll 8% of children from birth to age 6.	At age 3, bilingual children are entitled to free preschool. This right is being extended to all 5-year-olds and all 4-year-olds, progressively. All 6-year-olds are entitled to free preschool; enrolment in these programs is 91%, with the other 9% already in school. Primary school begins at age 7.
United States	There is no legal entitlement to ECEC. About 50% of children attend private child care centers or family day care settings. Of these children, 38% are in licensed settings.	There is no legal entitlement to ECEC. Most states offer free public prekindergarten at age 4, and sometimes at age 3 as well, but usually to targeted populations. At age 3, 40% of children are enrolled in some type of education program, and 70% are enrolled at age 4. Most school districts offer a year of free kindergarten at age 5, and more than 90% of children are enrolled. Primary school begins at age 6.

From [Organisation for Economic Co-operation and Development \(2006\)](#). *Starting Strong II: Early Childhood Education and Care*. Paris: OECD.

settings has changed little during the recent expansion of pre-primary education programs, with roughly equal proportions of countries increasing their use of private providers, decreasing their use of private providers, or

experiencing few changes in their use of private providers. Nevertheless, some countries rely heavily on private provision of ECEC programs during the pre-primary years. This is particularly the case in Arab States such as Bahrain,

Morocco, and Oman; Latin American and Caribbean countries such as Anguilla, the British Virgin Islands, and Saint Lucia; and some regions of sub-Saharan Africa including Ethiopia, Lesotho, and Uganda. In these countries, pre-primary education occurs almost exclusively in private settings. **Table 1** shows percentages of children in pre-primary programs who are enrolled in private settings by country.

Moving Beyond Enrolment Counts to Assure Access to High-Quality ECEC Programs

As mentioned previously, a substantial body of research indicates that children's early learning and development can benefit significantly from preschool education, leading to long-term improvements in achievement and educational attainment as well as in social behavior. Studies have found these results across a broad range of countries with more and less developed economies. There is some evidence that benefits are greater for more economically disadvantaged children and for those who are not native speakers of the language of the country in which they reside. Moreover, the precise benefits vary with the populations and with the characteristics of programs. These findings have two important implications.

First, it is not just the percentage of the population enrolled in ECEC that is important, but who is enrolled. Thus, international comparisons find that national average achievement test scores rise with preschool enrolment, but that the degree of inequality in scores begins to narrow only as enrolment rises above 60% of the population. One reason may be that high levels of enrolment are required to effectively reach most disadvantaged children. Another reason may be that there are peer effects from more socioeconomically mixed preschool classrooms and from a higher proportion of more able students in schools after preschool education.

Second, both the hours of preschool education and the quality of preschool education have implications for benefits. Longer hours are necessary if the programs are to facilitate parental employment and the increased income and productivity that result from this employment. Children's gains depend on what opportunities to learn are provided and how well these are provided. Programs that address children's needs more broadly have a broader range of positive effects. Thus, programs are more beneficial if they address both cognitive (academic achievement) and socioemotional (social behavior) development. Where children suffer from problems of inadequate health and nutrition, programs that address these needs as well as the need for education will be more beneficial. What teachers do in the classroom matters a great deal for the magnitude of

benefits to children's learning. As a result, the preparation, ongoing professional development, and supervision of teachers are important determinants of program benefits.

Very little comparative information has been reported about the quality of ECEC programs on a worldwide scale. However, due to differences in funding, policies, and standards, ECEC appears to be far from uniform with respect to both quality and quantity (age at start and length of day) both across and within nations. Program standards in ECEC are more variable than for K-12 education and often are quite low. Although some variation is to be expected because of variations in children's needs and the capacity of countries to provide for those needs, variations in which children are enrolled and in the characteristics of programs are likely to influence the effectiveness of early education in improving children's learning and development and supporting families.

Thus, it is important that monitoring of the national provision of ECEC programs moves beyond simply counting enrolment. Information should be available on enrolment for population subgroups – for example, children from low-income families, language minority children, and children of parents with low levels of education. Likewise, information is lacking on ECEC program characteristics including: program schedules, teacher education and training, class size, teacher–child ratio, the type and quality of children's classroom experiences, and other program services (e.g., nutritional supplementation). Direct measurement of program quality through observation of representative samples of classrooms is well advised, as classroom structural features are not strong predictors of actual practice. Conducting assessments of children's learning and development may also be useful, although practical limitations include the cost, difficulties obtaining valid assessment results for young children, and problems of attributing variations in children's assessment scores to particular program experiences.

Unfortunately, relatively few countries provide data on enrolment of subgroups, and quality data are rarely systematically collected and disseminated at national levels even in the wealthiest nations. The lack of detailed enrolment data is less of an issue, of course, in countries where enrolment is near universal. However, as mentioned earlier, even where enrolment is universal for older preschoolers it typically is far from universal for infants and toddlers. There are examples of private efforts to make such information available, including annual ratings of state preschool education programs in the United States by the National Institute for Early Education Research, and the Bertelsmann Foundation's ratings of preschool programs by state in Germany. Such efforts seek to inform both government policymakers and the general public. Examples of public efforts include government-sponsored rating systems for child-care programs that are provided

as guides to parents and may be linked to a schedule of government payments that vary with the rating attained.

Universal and Targeted ECEC Programs

Perhaps the most important policy decision governments make relating to the accessibility of ECEC programs is whether provision or subsidies for public programs should be limited to a particular population (typically, by means testing) or available to all. The arguments for targeting begin with the premise that the largest benefits accrue to children who are economically disadvantaged. If so, it is sensible to prioritize scarce public resources for those children. In addition, it is argued that governments are more able to provide higher-quality early education, with its higher cost per child served, if the total cost is kept down by serving a limited portion of the population. The arguments for public support of universal provision recognize that even if benefits are largest for disadvantaged children, the benefits to nondisadvantaged children may still far exceed costs and a universal program that serves all children together may better serve the disadvantaged children. Further, it is not always clear where to draw the line between children who are disadvantaged and those who are not. As the costs, takeup rates, and benefits of programs may vary by age and type of program (e.g., parenting education, paid parental leave, infant and toddler child care, and pre-primary education from age 3), countries may choose to target some programs and provide others to all children and families.

There are four major reasons to suppose that public support for universal preschool education may more effectively serve disadvantaged children. First, targeting has proven highly imperfect, and improving its accuracy is costly. In practice, universal programs can achieve better coverage of disadvantaged populations. When programs are targeted, there are costs of identifying and recruiting the intended population and excluding those who do not qualify. When means-testing is employed, the target population is constantly changing, as family income is not constant over time. A child who qualifies at the start of the year may not qualify 4 months later and vice versa. Frequent requalification of children for participation is costly and results in ineffective education if children are bounced in and out of an ECEC program during a single school year. This is the current policy in some programs that are operated primarily as child care. Moreover, any easily administered criterion such as means-testing fails to identify all of the children who are at elevated risk of school failure and other problems that preschool education might prevent or ameliorate. In addition, there may be social stigma associated with programs for the poor that lead some qualifying families to opt out. Second, because of the effects of peers on learning, disadvantaged

children appear to learn more when they attend programs that also include more advantaged children. Third, economic theory and experience suggest that the voters are more likely to support high-quality education if the program is available to all children and families.

Perhaps the strongest argument in favor of public support for universal preschool education is that all children benefit from high-quality preschool education, and there are substantial effects of subsidized high-quality child care on maternal employment in even the wealthiest countries. The externalities (spillover benefits to others that do not accrue to the child or parents) from high-quality preschool education are likely to remain significant for most of the nonpoor population. Even if benefits to more advantaged children are only a small fraction of those estimated for disadvantaged children, the benefits are likely to exceed the costs. If the effects on maternal labor-force participation and hours are somewhat smaller, this may be offset to some extent by the higher hourly earnings and higher taxes paid on those earnings of more advantaged mothers. In addition, countries seeking to support parents as a way of increasing the number of children born are likely to want this incentive to extend across the entire population. It should be noted that within a universal public program, the level of subsidy and intensity of service can be varied according to the individual needs of children and families. As with targeting, there are costs and practical difficulties in effectively delivering highly differentiated services.

One way of making ECEC programs universally available is by adopting policies that lower the mandatory school entry age to encompass the pre-primary years. UNESCO reports that by 2006, 30 countries had adopted policies for compulsory pre-primary education. This is a recent development, with fully half of the policies for required pre-primary attendance enacted since 1995. Countries that have lowered their school entry ages to include the pre-primary years are heavily concentrated in Latin America and the Caribbean, and also in Central and Eastern Europe. Attendance rates from countries with compulsory pre-primary attendance policies indicate that these countries, while signaling a commitment to ECEC, have not necessarily achieved universal attendance. In addition, a number of countries (particularly in Europe) offer universal programs with 4-year-old enrolment rates that exceed 90% even in the absence of mandatory attendance laws. Although national policies that address whether programs are universal or targeted offer an important starting point, other factors weigh in to accessibility of ECEC as well – including cultural attitudes toward early childhood education, government funding levels, whether ECEC programs are integrated within systems for primary education, and availability of appropriate ECEC facilities.

Conclusions

While international enrolment rates in ECEC programs have increased substantially over the past few decades, there is still wide variability across countries with respect to ECEC policies. Within this sector, countries have generally prioritized education programs for children beginning at age 3. There has been less emphasis on providing programs for infants and toddlers, and the initiatives that do exist have often focused on child care. As a result, much of the information about the availability of ECEC on an international level has focused on pre-primary education programs for children from ages 3 to 6. Most pre-primary education programs tend to occur in public settings around the world, although there is great variability from country to country, and some countries rely almost exclusively on private settings.

One complication in international comparisons of pre-primary education is that the primary school starting age varies considerably among countries. This is true even among countries where there is universal participation in the primary grades, with the compulsory primary school entry age ranging from age 4 (Northern Ireland) to age 7 (Finland, Sweden, and many other countries). Thus, 2 years of pre-primary education in some countries might still leave children with the same level of access to education as in other countries that start school at age 5 and have no pre-primary education. Interestingly, compulsory school starting age is positively related to international differences in test scores, but less strongly so than is the number of years of preschool education. This may be because universal preschool education policies to some extent compensate or negate the need for earlier compulsory schooling. At some point, the line is blurred between pre-primary and primary education, and what is important is the extent to which children can access programs and the content and methods of education rather than whether programs are administered within a primary or pre-primary education system, although the administrative auspices of a program may well influence who it serves and how it operates.

Based on the available international data, it is currently difficult to move beyond tallying enrolment rates from country to country. There is little comparative information available on a worldwide scale about which children are enrolled in ECEC, what specific services they receive, and the quality of programs they attend. These additional types of data are key to further examination of the educational opportunities available to children internationally, during the years before they begin primary school.

See *also*: Early Childhood Care and Education: The Family, The Market, and The State; Family Environment in the Production of Schooling.

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Relevant Websites

- <http://www.bernardvanleer.org> – Bernard van Leer Foundation.
- <http://www.ecdgroup.com> – Consultative Group on Early Childhood Care and Development (CGECCD).
- <http://www.highscope.org> – High/Scope Educational Research Foundation.
- <http://nieer.org> – National Institute for Early Education Research (NIEER).
- <http://www.oecd.org> – Organisation for Economic Cooperation and Development (OECD).
- <http://portal.unesco.org> – United Nations Educational, Scientific and Cultural Organization (UNESCO).