# EQUITY IN THE EDUCATION SUSTAINABLE DEVELOPMENT GOAL

- The 17 Sustainable Development Goals (SDGs) adopted by the 70th General Assembly of the United Nations in 2015, otherwise known as the Global Goals or the 2030 Agenda for Sustainable Development, are a universal call for action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. The fourth SDG (SDG 4) is to: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". SDG 4 is to be achieved through the accomplishment of ten targets, which represent the most comprehensive and ambitious agenda for global education ever attempted. Among these, Target 4.5 is of special interest for this year's edition of *Education at a Glance* as it focuses on equity.

- The 2030 Agenda for Sustainable Development widens the focus on participation to levels and programmes outside compulsory education, including participation in adult education. Achieving equitable participation in these programmes remains a challenge for many OECD countries.

- The 2030 Agenda for Sustainable Development has also a strong focus on equity in learning outcomes. In all OECD countries, the performance of 15-year-olds in mathematics is strongly associated with the location of their school (in rural or urban areas) and with their socio-economic background. These levels of socio-economic inequity have remained the same for the last decade in the majority of countries.

Figure 1. **Mathematics performance and gender, ESCS and location parity indices (2015)**

Indicator 4.1.1 - Proportion of 15-year-olds achieving at least a proficiency level 2 (PISA) in mathematics
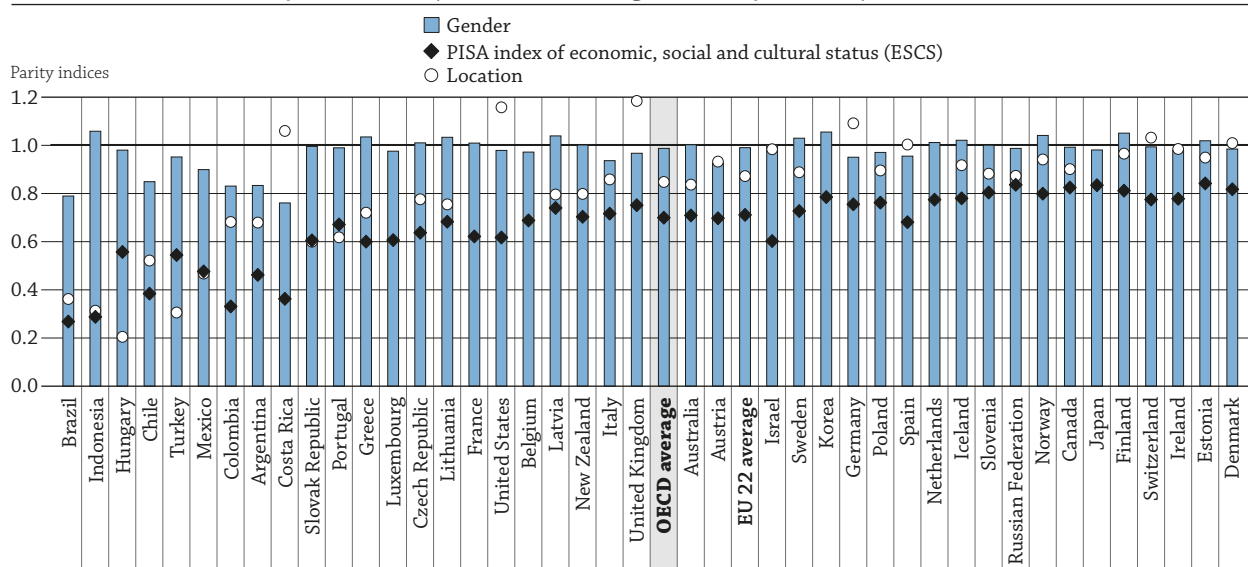
How to read this figure

In Denmark, the proportion of girls achieving at least PISA level 2 in mathematics is almost equal to that of boys (a parity index of 1 indicates perfect parity). The proportion of children from the bottom quartile of the PISA ESCS index achieving at least PISA level 2 in mathematics is 20% lower than that of children from the top ESCS quartile.

Note: The gender parity index refers to the ratio of the female value over the male value. ESCS refers to the PISA index of economic, social and cultural status. The ESCS parity index refers to the ratio of the value for the bottom quartile over the value for the top quartile of the ESCS index. Location parity is measured using the PISA definition of rural and urban areas (see the *Definitions* section at the end of this chapter). The location parity index refers to the ratio of the value for rural areas over the value for urban areas.

Countries are ranked based on the average distance of each index to 1 (high to low).

Source: OECD (2018), Table 2. See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).

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■ Context

It is well recognised that education plays a critical role in eradicating poverty and steering the vision for prosperous and sustainable development. As the 2018 World Development Report (World Bank Group, 2017[1]) and the 2016 Global Education Monitoring Report (UNESCO, 2016[2]) have made clear, education is also a foundation block for nearly every other SDG. Education saves lives, improves health and fosters shared understanding and values. Achieving SDG 4 will therefore be instrumental in realising the broader aspirations of the SDG agenda.

The international community has adopted a strong equity focus in the 2030 Agenda for Sustainable Development, and in the Education SDG agenda in particular. SDG 4 is broken down into ten targets, each measured by a set of global and thematic indicators. Among those, one whole target, Target 4.5, is dedicated to equity: "By 2030, eliminate gender disparities in education and ensure access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations." This target is cross-cutting by nature and encompasses all types of inequality across all educational outcomes.

In line with the overall equity theme of this year's edition of *Education at a Glance*, this chapter focuses on SDG Target 4.5 (Box 1). It will present data on the global and thematic indicators as agreed internationally within the context of the United Nations-led SDG framework, which in the case of SDG 4 is convened by UNESCO. The aim is to provide an assessment of where OECD and partner countries are on their path towards meeting the equity objectives of SDG Target 4.5.

■ Other findings

- The socio-economic status of students influences their participation in early childhood education, as well as in vocational and technical education (see Indicator B2).

- Men and women (25-64 year-olds) have similar literacy skills, but men tend to have higher skills in numeracy. Socio-economic background is also strongly associated with performance in numeracy. In two-thirds of countries with available data, adults (25-64 year-olds) with at least one tertiary-educated parent perform better than those whose parents have not attained this level of education.

- Men are more likely to use information and communications technology (ICT) skills than women, particularly the more specialised skills, such as programming. On average across OECD countries, less than 10% of adults over age 15 have recently used a specialised programming language. In all countries, men are at least 50% more likely to have used programming than women.

■ Note

In the SDG 4 monitoring framework, each target has at least one global indicator and a number of related thematic indicators designed to complement the analysis and measurement of the target. In total, there are 11 global indicators and 32 thematic indicators included in the SDG 4 monitoring framework. A list of all the indicators and their methodologies is available at http://SDG4monitoring.uis.unesco.org.

The tables and figures in this chapter present only a few of the agreed indicators for each target, selected based on their relevance for OECD and partner countries and on data availability. Some of the SDG 4 indicators correspond to indicators already published in other chapters of *Education at a Glance*. In those cases, the data are not repeated in this chapter, and reference is made to the corresponding indicator.

Box 1. **SDG Target 4.5**

This chapter focuses on Target 4.5 of the Sustainable Development Goals, which calls for the elimination of inequalities in education. Five indicators have been proposed to measure this target, as outlined in Table A below.

Global Indicator 4.5.1 sets the parity index as the main measure of inequity in education within the SDG 4 agenda (Box 2). This indicator casts a wide scope for measuring inequity, as it is meant to be applied to all other SDG 4 indicators with available data and can be used to measure inequity along several dimensions. Parity indices across a number of different indicators are presented and discussed in the *Participation* and *Skills* sections of this chapter. Due to data availability, only three dimensions of equity are analysed: gender, location (rural/urban) and socio-economic status (either measured using the index of economic, social and cultural status (ESCS) or proxied by parental education).

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Indicator 4.5.2 addresses the fact that language can be an important source of inequities in education. Teaching children in a language they do not speak at home can hinder their ability to learn and reinforce learning gaps between different groups. Results from PISA 2015 indicate that immigrant students who speak a language at home that is different from the language of assessment score over 20 points less in science than immigrants who speak the language of assessment at home. Nevertheless, Indicator 4.5.2 is targeted at younger children (primary school), for which data is not currently available (OECD, 2016[3]). This indicator is therefore not addressed in this chapter.

The other three indicators (4.5.3, 4.5.4, and 4.5.5) relate to the financing of education, which is an important means through which equity can be pursued. These three indicators are addressed in the *Resources* section of this chapter.

Table 1. SDG Indicators for Target 4.5

Target 4.5: By 2030, eliminate gender disparities in education and ensure access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.

Indicator	Definition
4.5.1 (Global)	Parity indices (female/male, rural/urban, bottom/top wealth quintiles and others, such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated
4.5.2	Percentage of students in primary education whose first or home language is the language of instruction
4.5.3	Extent to which explicit formula-based policies reallocate education resources to disadvantaged populations
4.5.4	Percentage of total aid to education allocated to least developed countries
4.5.5	Education expenditure per student by level of education and source of funding

Analysis

SDG 4 and its associated targets set an ambitious agenda that emphasises quality learning and equity in education alongside the more traditional indicators of access and participation. In doing so, it challenges every country in the world to improve its education system and marks a significant departure from previous global education goals and targets, such as the Millennium Development Goals, which were not as far-reaching and focused more on access and participation. The analysis below takes into account this larger scope and reports on equity levels in the areas of participation, skills acquisition and resources.

Participation in education

The 2030 Agenda for Sustainable Development widens the focus to education levels outside the traditional frame of compulsory education, including early childhood education and care (Indicator 4.2.2), secondary, post-secondary and tertiary vocational education (Indicator 4.3.3) and adult education (Indicator 4.3.1). Ensuring inclusive, quality education at these levels remains a challenge for most OECD member and partner countries.

Target 4.2 reaffirms the importance for all children of receiving a strong foundation through early childhood education and care (ECEC). Evidence has widely shown that the early years play a pivotal role in determining future performance and breaking the vicious circle of socio-economic inequality (OECD, 2017[4]). On average across OECD countries, 95% of children one year younger than the official primary school entry age are enrolled in ECEC, and all boys and girls participate equally in ECEC (Table 1). However, targeting the most disadvantaged groups remains a challenge in many countries. Indicator B2 of this publication highlights the fact that the mother's educational attainment often affects enrolment in ECEC. On average across countries with available data, only 31% of children below the age of 3 whose mother has not attained tertiary education participate in early childhood education, compared to 41% of those whose mother has completed tertiary education (Table B2.1c, available on line).

Box 2. **Measuring inequity in education and the parity index**

Measuring equity is challenging for at least three reasons. First, the notion of equity is linked to a normative framework of fairness, which may differ across countries and cultures. Second, there is a general lack of data availability because equity indicators often require more refined data that allow for disaggregation among different groups in the population. As an additional challenge, in the case of the SDG framework, this disaggregation must also follow internationally agreed definitions that do not always match the national definitions. Third, there are several different methods for measuring equity, all of which have advantages and disadvantages, and that could lead to different conclusions about the degree of inequity in a given country (UIS, 2018[5]).

The main indicator chosen to measure equity across the SDG 4 agenda is the parity index. It is defined as the ratio between the values of a given indicator for two different groups, with the value of the likely most disadvantaged group in the numerator. A parity index equal to 1 indicates parity between the two considered groups. A value of less than 1 indicates a disparity in favour of the likely most advantaged group, and a value greater than 1 indicates a disparity in favour of the most disadvantaged group.

The use of a parity index provides the relative magnitude of the disparity in a simple, easy-to-communicate way. However, it also has some drawbacks, such as being sensitive to low values and not being symmetrical around 1 (perfect equality). For example, if the enrolment rate for girls is 40% and for boys it is 50%, the gender parity index (GPI) has a value of 0.8. If the female and male values are reversed, the GPI has a value of 1.25, which gives the mistaken impression of greater gender disparity because 1.25 is at a greater distance from 1 than 0.8 (UIS, 2010[6]). To solve this, an adjusted parity index, which is symmetrical around 1, is used in the tables and figures of this indicator whenever values for the likely advantaged and likely disadvantaged groups are switched for an observation (see *Methodology* section at the end of this chapter).

For more information on measuring inequity in education, please see the *UNESCO Handbook on Measuring Equity in Education* (UIS, 2018[5]). The handbook provides a conceptual framework for measuring equity in education and offers thorough methodological guidance on how to calculate and interpret various types of equity indicators.

At the other end of non-compulsory education, Target 4.3 focuses on participation in technical, vocational and tertiary levels of education and training. Each of these programmes plays an important role in preparing students for the labour market. Participation of 15-24 year-olds in technical-vocational programmes in secondary, post-secondary non-tertiary and short-cycle tertiary education (Thematic Indicator 4.3.3) varies widely across countries, from 4% in Brazil to 30% in Slovenia,[1] and has a strong association with both gender and socio-economic status. In most OECD and partner countries, boys are at least 40% more likely than girls to enrol in vocational education (Figure 2.a), and students whose parents did not attain tertiary education are more likely to choose upper secondary vocational programmes than general programmes (Box B3.1).

Finally, Global Indicator 4.3.1 measures the participation rate of adults (25-64 year-olds) in formal and non-formal education and training in the previous 12 months. By including formal and non-formal education, this indicator captures participation in any type of programme that aims to improve knowledge, skills and competencies from a personal, civic, social or employment-related perspective (UNESCO, 2016[2]). In most OECD and partner countries, at least 20% of 25-64 year-olds have participated in formal or non-formal education and training in the previous 12 months, with participation among men and women varying greatly across countries. Figure 2.b shows that the gender gap for Global Indicator 4.3.1 varies in magnitude and direction across countries. Participation is higher among women in 17 countries and higher among men in 13 countries. The most extreme cases are in Turkey, where participation for women is about 30% lower than for men, and in Estonia, Lithuania and the Russian Federation, where participation for women is at least 30% higher.

Skills

The ultimate goal of education policy is not to simply provide access to all levels of education, but also to ensure that all students gain the necessary skills to guide them through life. All children, youth and adults, regardless of their gender, location or background, should be able to acquire similar skills and reach comparable levels of proficiency.

The OECD Programme for International Student Assessment (PISA) provides valuable insights to Global Indicator 4.1.1.c, which measures the "Proportion of children and young people at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex". Level 2 proficiency in reading and mathematics in PISA has been internationally accepted for the purposes of SDG 4 monitoring of minimum proficiency level achievement at the end of lower secondary in 2017 and 2018. Figure 1 displays parity indices for Indicator 4.1.1.c, measured along gender, location (urban and rural) and socio-economic background (based on the PISA index of economic, social and cultural status [ESCS], see the *Definitions* section at the end of this chapter). Among 15-year-olds, there are usually as many boys as girls who achieve at least PISA Level 2 in mathematics, and more girls who achieve PISA Level 2 in reading (Table 2 and Table 3, available on line).[2]

However, students' performance remains strongly determined by their school's location in the majority of OECD and partner countries. Students in urban schools (located in communities with over 100 000 inhabitants) are more likely to achieve at least Level 2 than students rural schools (located in communities with fewer than 100 000 inhabitants). Suburban areas are not taken into account. Students in urban schools tend to perform better because they go to schools that are usually larger and more likely to gather a higher proportion of qualified teachers. They are also more likely to come from a socio-economically advantaged background, which is directly linked to their performance in PISA (OECD, 2013[7]).

The performance gap between students from different socio-economic backgrounds remains a reality in all countries, for both reading and mathematics skills. Even in those where parity is (almost) met along each of the three dimensions displayed in Figure 1, such as Denmark, Estonia and Slovenia, the proportion of youth achieving PISA Level 2 in mathematics remains 20% lower among the most disadvantaged students. Even more concerning, levels of socio-economic inequity have not changed since 2006 in the majority of countries. Figure 3 shows that in a few countries, such as Australia, Finland and Korea, the discrepancy between students in the top and bottom quartiles of PISA's socio-economic ESCS index grew even larger between 2006 and 2015. However, PISA results show that inequality of opportunity is not set in stone, and that selected school systems succeeded in becoming more equitable over a relatively short period (OECD, 2017[8]). This is the case in Mexico and the Russian Federation, where the gap between ESCS quartiles narrowed significantly in this period, although high discrepancies between disadvantaged and advantaged students remain.

Target 4.4 refers to skills for work. One measure of this target is the percentage of adults who have attained tertiary education (Thematic Indicator 4.4.3). Across OECD countries, 36% of 25-64 year-olds have attained tertiary education, but one's educational attainment is likely to depend on his or her parents' educational attainment. Among adults who have at least one parent who attained tertiary education, 68% attained tertiary education themselves, compared to 21% of those whose parents have not attained upper secondary education (see Box A1.1 in Indicator A1). While these inequalities may be reflected in the labour market, it is important to keep in mind that attainment is not a direct measure of skills.

Global Indicator 4.6.1 measures the "Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex." In the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), this fixed level corresponds to PIAAC score 226 in (a) numeracy and (b) literacy skills. This score corresponds to Level 2 in the Survey of Adult Skills (PIAAC), which reports results on a scale from Below Level 1 (below 176 points) to Level 5 (376 points or more). Among 25-64 year-olds, gender parity in numeracy skills is met in less than half of the countries with available data (Table 2). However, women and men perform similarly in literacy in the majority of OECD and partner countries (Table 3 available on line). Socio-economic background is more strongly related to performance than gender. In all countries with available data, adults with at least one tertiary-educated parent have higher numeracy skills than those whose parents have not attained this level of education (Table 2).

In today's increasingly digitalised economies, literacy and numeracy skills may not be sufficient to thrive in the labour market. Related to SDG Target 4.4 on Skills for Work, Global Indicator 4.4.1 measures the "Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill." This indicator has been developed according to the definition of the International Telecommunication Union in the framework of the Partnership on Measuring ICT for Development (ITU, 2014[9]). ICT skills refer to nine computer-related activities with varying levels of difficulty, from transferring files between a computer and other devices to writing a computer programme using a specialised programming language.

Figure 2.a. Gender parity in participation in technical-vocational programmes (2016)

Indicator 4.3.3 - Participation rate of 15-24 year-olds in technical-vocational programmes and related gender parity index
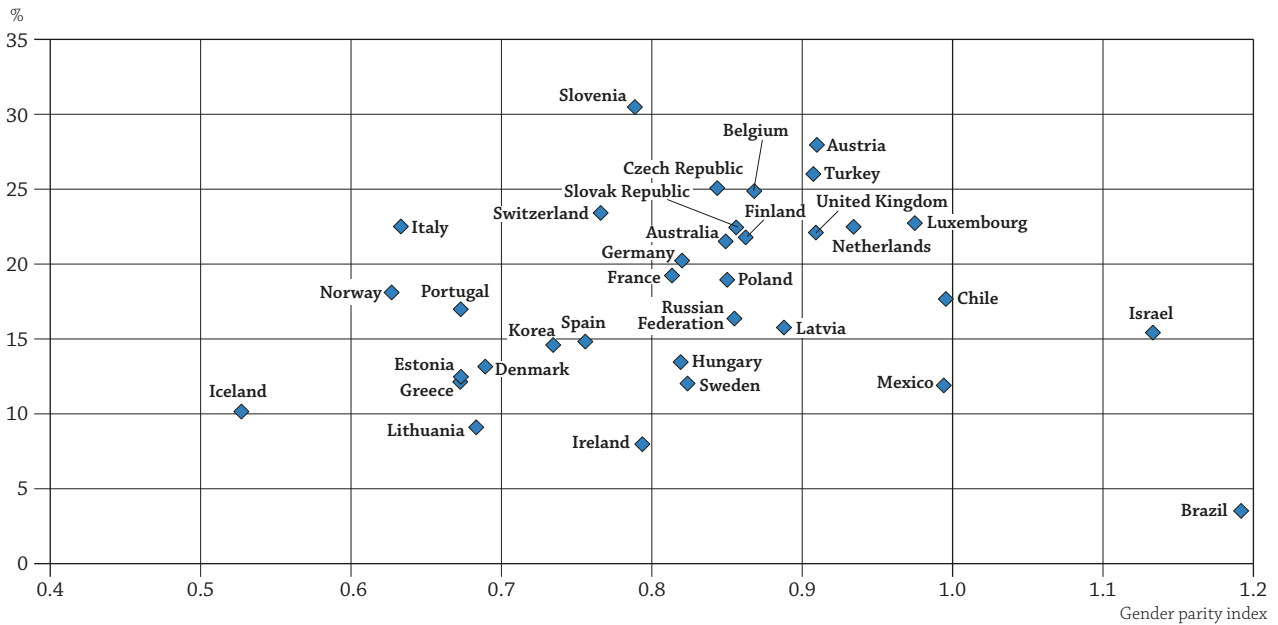

Note: Indicator 4.3.3 refers to participation in technical and vocational programmes in secondary, post-secondary non-tertiary and short-cycle tertiary education (ISCED 2 to 5).
Source: OECD (2018), Table 1. See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).
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Figure 2.b. Gender parity in participation in adult education (2012 or 2015, 2016)

Indicator 4.3.1 - Participation rate of 25-64 year-olds in formal and non-formal education and related gender parity index
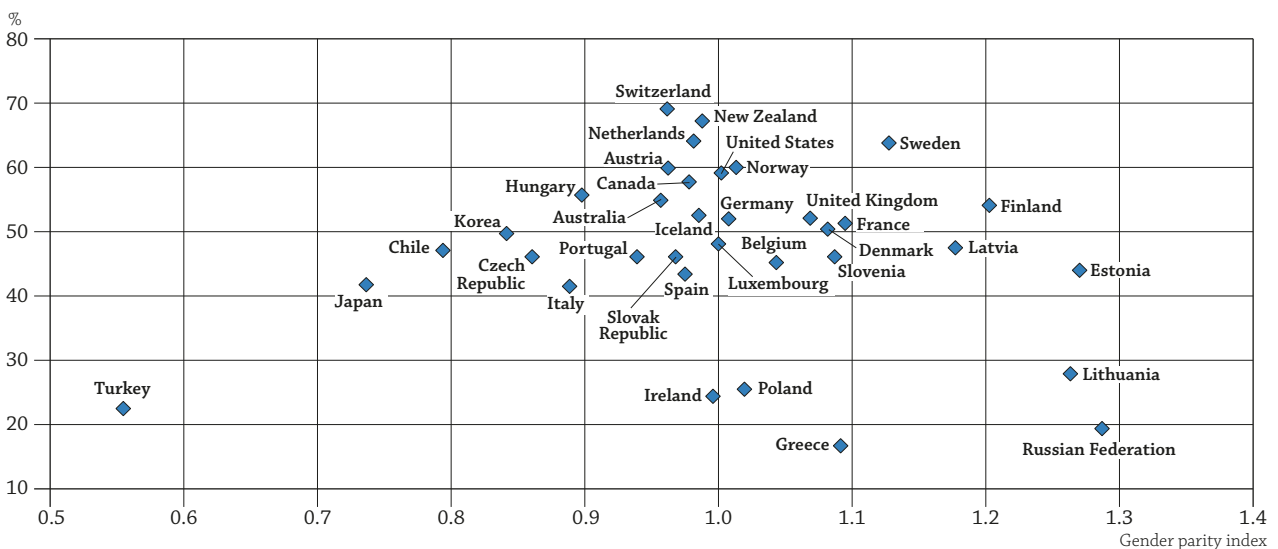
Note: Data from the Survey of Adult Skills (PIAAC) are reported and refer to 2012 for Australia, Canada, Korea, Russian Federation and the United States and 2015 for Chile, Israel, New Zealand and Turkey. For other countries, data from the Adult Education Survey (AES) are reported and refer to 2011 for Ireland and 2016 for all others.
Source: OECD (2018), Table 1. See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).
StatLink https://doi.org/10.1787/888933801525

Men are more likely to use ICT skills than women, particularly the more specialised skills such as programming. On average across OECD countries, over 50% of adults over the age of 15 have transferred files between a computer and other devices in the last three months, and women are only about 10% less likely to have recently used this skill in comparison to men.[3] On the other hand, except in a few countries, such as Denmark and Iceland, less than 10% of adults over the age of 15 have recently used a specialised programming language. In all countries, men are at least 50% more likely to have recently run a programme than women (Table 2). These results mirror the gender differences in fields of study and occupations, as men are more likely to obtain a degree in the fields of science, technology, engineering and mathematics (STEM) (OECD, 2018[10]).

Figure 3. Trends in socio-economic (ESCS) parity index (2006, 2015)

Indicator 4.1.1 - Proportion of 15-year-olds achieving at least proficiency level 2 (PISA) in mathematics
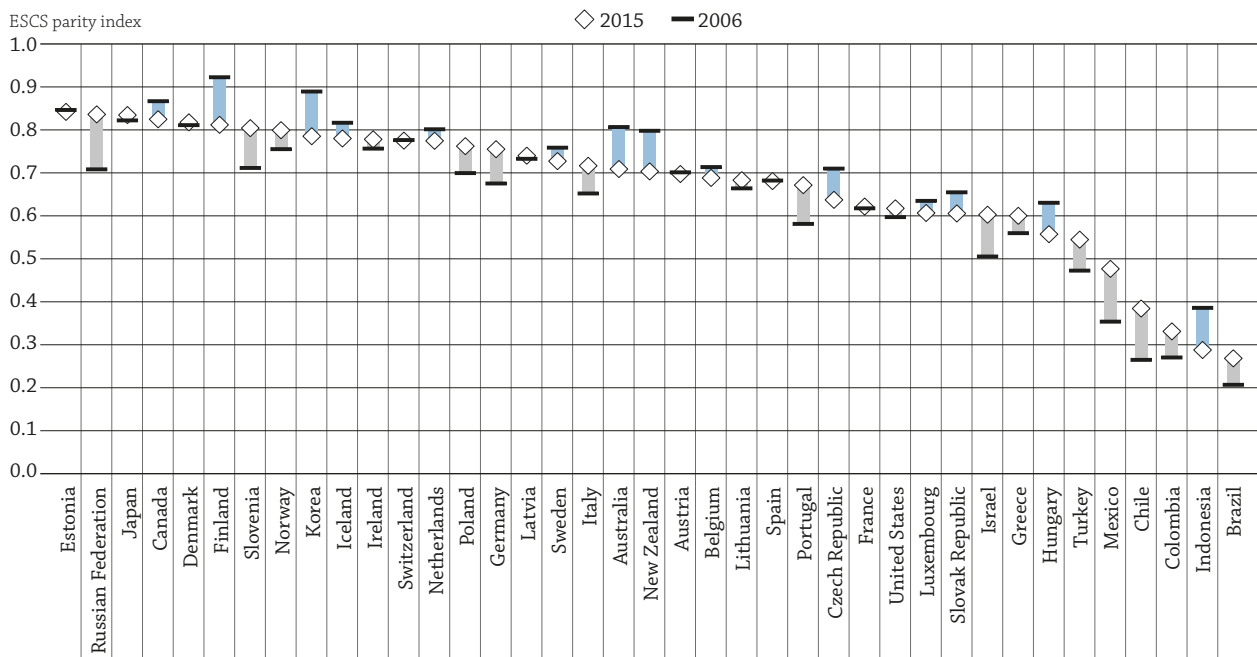
Note: Gray bars indicate that ESCS parity has gotten closer to 1 (perfect parity) between 2006 and 2015, while blue bars indicate that it has gotten further from 1 in the same period.
Countries are ranked in descending order of the ESCS parity index value in 2015.
Source: OECD (2018), Table 2, and PISA database. See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).
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Resources

Ensuring equitable participation and skills acquisition relies on the availability of resources. That is why Target 4.5 contains three financing-related indicators, each of which tackles education expenditure from a different angle.

Thematic Indicator 4.5.4 on "Education expenditure per student by level of education and source of funding" provides a meaningful way to measure the availability of resources in a country. This indicator alone cannot measure the quality or equitability of education in a country, but it serves as a useful reference point. Increased data availability, such as disaggregation by students' socio-economic status or location of schools, for example, would provide more relevant information to measure Target 4.5.

Expenditure per student is presented for OECD and partner countries in Indicator C1 of this edition of *Education at a Glance*. Results show that governments are by far the main investors in education, especially at primary and secondary levels. There are higher shares of private expenditure at the tertiary level, which may raise equity concerns if financial support to students, such as grants and public loans, are not readily available.

Even though governments are the main source of education expenditure, international assistance remains an important financing mechanism in least developed countries. Indicator 4.5.5, "Percentage of total aid to education allocated to least developed countries", aims to measure the extent to which international education assistance

is targeted to the countries that are most in need. Figure 4 shows the total official development assistance to education disbursed by each OECD country to all developing countries and the share of this assistance directed to least developed countries.

These figures only include public bilateral assistance transfers, so transfers to multilateral organisations, such as the World Bank, the European Commission and other important institutions in education funding worldwide like the Global Partnership for Education, are not included. As a result, countries that donate mostly through multilateral organisations may appear lower than those that donate directly to other countries, even if the total amount given is higher. These figures also do not include aid destined to humanitarian aid or aid allocated for budget support which could also help achieve education goals.

Figure 4. Official development assistance to education, gross disbursements and percentage allocated to least developed countries (2016)

Including scholarships and imputed student costs, current prices
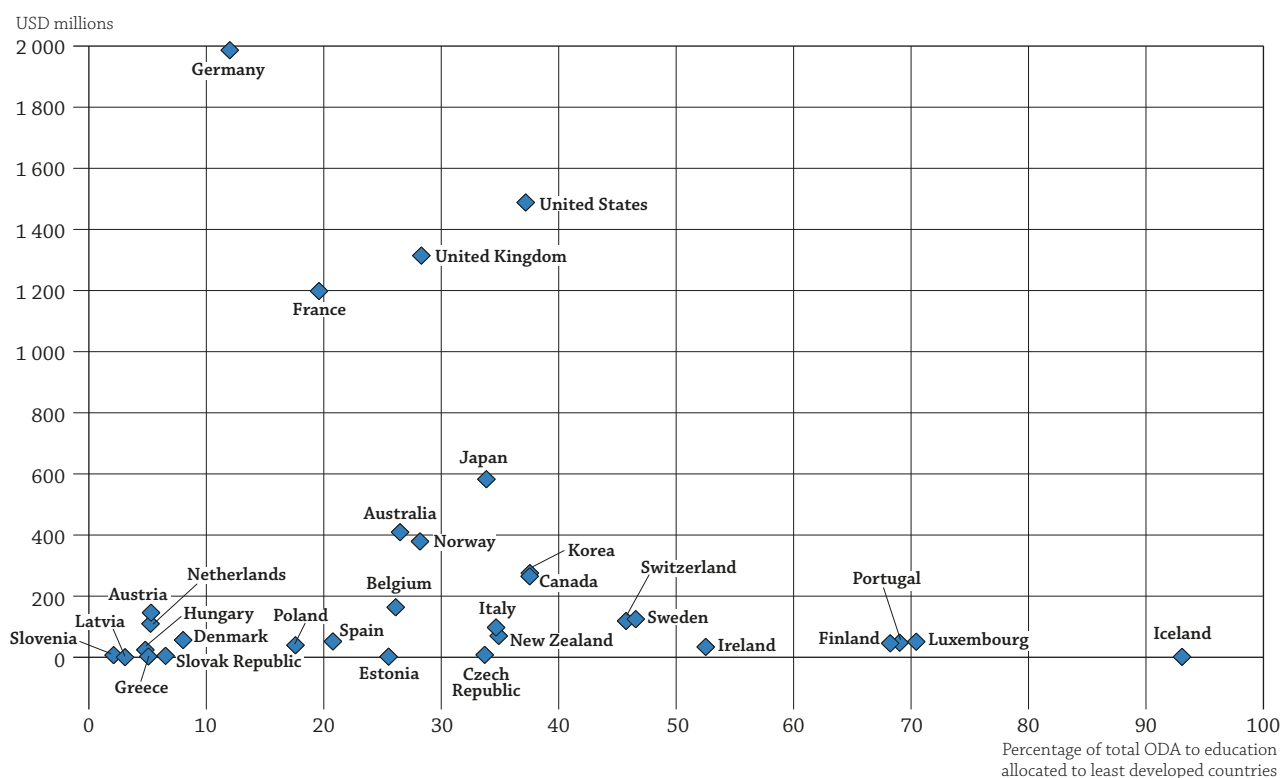
Source: OECD (2018), "Creditor Reporting System: Aid activities", OECD International Development Statistics (database), http://dx.doi.org/10.1787/data-00061-en (accessed on 03 May 2018).

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These two indicators address the availability of resources, but it is not only the amount of resources that matters, but also how effectively these resources are allocated. Evidence consistently points to the fact that spending more does not necessarily lead to better outcomes (OECD, 2012[11]). This is especially true as countries try to develop education systems that strive for both excellence and equity. The SDG Thematic Indicator 4.5.3 attempts to tackle this issue by measuring "the extent to which explicit formula-based policies reallocate education resources to disadvantaged populations". Lack of data and of an international agreement on its scope has led this indicator to be classified as requiring further development, and it has not yet been approved for monitoring. However, the concept behind the indicator and the notion that countries must find efficient ways to diminish inequalities in education remain pertinent.

The 2017 OECD report, *The Funding of School Education: Connecting Resources and Learning* (OECD, 2017[12]), sheds light on countries' strategies to allocate resources, taking into account the fact that schools have different resource needs. For example, in Chile, the Flemish and French Communities of Belgium, Estonia and Israel, at least part of

the main school-funding mechanism is allocated using a formula with different weightings for variables such as students' socio-economic characteristics, school location and special educational needs. Some of these countries also provide targeted funding outside of the main allocation mechanism for specific groups, such as newly arrived immigrants or refugees. These examples may not be appropriate in every context, and there are several other policy tools that can be used by countries (UNESCO, 2016[2]). What is important is that countries take steps to ensure that resource allocation also tackles equity concerns.

Definitions

Level 2 in PISA (baseline proficiency level):

- **Mathematics:** Students can use basic algorithms, formulae, procedures or conventions to solve problems involving whole numbers (e.g. to compute the approximate price of an object in a different currency or to compare the total distance across two alternative routes). They can interpret and recognise situations in contexts that require no more than direct inference, extract relevant information from a single source and make use of a single representational mode. Students at this level are capable of making literal interpretations of the results.

- **Reading:** Students begin to demonstrate the reading skills that will enable them to participate effectively and productively in life. Some tasks at Level 2 require the student to retrieve one or more pieces of information that may have to be inferred and may have to meet several conditions. Others require recognising the main idea in a text, understanding relationships, or interpreting meaning within a limited part of the text when the information is not prominent and the student must make low-level inferences.

Level 2 (score 226) in PIAAC (baseline proficiency level):

- **Numeracy:** Tasks at this level require the application of two or more steps or processes involving calculation with whole numbers and common decimals, percentages and fractions; simple measurement and spatial representation; estimation; and interpretation of relatively simple data and statistics in texts, tables and graphs.

- **Literacy:** Tasks at this level require the respondent to make matches between the text, either digital or printed, and information, and may require paraphrasing or low-level inferences.

The **PISA index of economic, social and cultural status (ESCS)** was created on the basis of the following variables: 1) the International Socio-Economic Index of Occupational Status (ISEI); 2) the highest level of education of the student's parents, converted into years of schooling; 3) the PISA index of family wealth; 4) the PISA index of home educational resources; and 5) the PISA index of possessions related to "classical" culture in the family home. See Volume I of *PISA 2015 Results* (OECD, 2016[3]) for more information.

Technical and vocational education and training is a comprehensive term commonly used by the UNESCO Institute for Statistics to refer to education, training and skills development in a wide range of occupational fields, production, services and livelihoods. Vocational education may have work-based components (e.g. apprenticeships, dual-system education programmes). Successful completion of such programmes leads to labour market-relevant, vocational qualifications acknowledged as occupationally-oriented by the relevant national authorities and/or the labour market.

Parental education (only two categories are considered in this chapter):

- Below tertiary means that neither parent has attained a tertiary degree (ISCED 2011 levels 5, 6, 7 and 8).
- Tertiary means that at least one parent has attained a tertiary degree (ISCED 2011 levels 5, 6, 7 and 8).

Location is defined based on the number of inhabitants in the community where the school is located. In the PISA survey, principals are asked to choose the closest description to the community. Rural schools are those where the principal answered "a village, hamlet or rural area" (fewer than 3 000 people), "a small town" (3 000 to about 15 000 people) or a town (15 000 to about 100 000 people), whereas urban schools are those where the principal answered either "a city" (100 000 to about 1 million people) or "a large city" (with over 1 million people).

The Development Assistance Committee List of Official Development Assistance Recipients shows all countries and territories eligible to receive official development assistance. These consist of all low- and middle-income countries, based on gross national income per capita as published by the World Bank, with the exception of G8 members, EU members, and countries with a firm date for entry into the European Union. The list also includes all of the Least Developed Countries as defined by the United Nations (UN-OHRLLS[13]). **Least developed countries** (LDCs) are low-income countries confronting severe structural impediments to sustainable development, they are highly vulnerable to economic and environmental shocks and have low levels of human assets.

Methodology

The parity indices are calculated using the more likely disadvantaged group as the numerator and the more likely advantaged group in the denominator. The gender parity is calculated as the indicator value for women divided by the indicator value for men. The ESCS parity index is calculated as Q1%/Q 4%, where Q = a quartile of ESCS. The location parity index is calculated as the indicator value for rural schools divided by the indicator value for urban schools. The parental education parity index is calculated as the indicator value for those whose parents have not attained tertiary education divided by the value for those with at least one tertiary-educated parent.

In order to make the parity index results symmetrical around 1, the adjusted parity index is used whenever the indicator values for the likely advantaged and likely disadvantaged groups are switched for an observation. For example, if the enrolment rate for girls (likely disadvantaged) is higher than the enrolment rate for boys (likely advantaged), the adjusted parity index is calculated for this observation. The adjusted parity index (API) is calculated as API = 2-(value for likely advantaged group/ value for likely disadvantaged group).

All indicators presented in this chapter follow the agreed SDG methodology, and may differ in some cases from other indicators presented in *Education at a Glance*, including on issues such as population data sources (i.e. the population data used in this chapter is collected from the United Nations Population Division).

Lithuania was not an OECD member at the time of preparation of this publication. Accordingly, Lithuania does not appear in the list of OECD members and is not included in the zone aggregates.

Indicator	Source
4.1.1	OECD, PISA 2015 Database
4.2.2	UOE 2017 data collection
4.3.1	Two different data sources: PIAAC (2012, 2015) and Adult Education Survey (2016)
4.3.3	UOE 2017 data collection
4.4.1	International Telecommunication Union (2015)
4.4.3	Indicator A1 in *Education at a Glance 2018*
4.5.3	The Funding of School Education OECD
4.5.4	OECD International Development Statistics Database
4.5.5	Indicator C1 in *Education at a Glance 2018*
4.6.1	PIAAC Database (2012, 2015)

Note regarding data from Israel

The statistical data for Israel are supplied by and are under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Notes

1. In many countries, the large majority of students who participate in technical-vocational programmes do so at ages corresponding to upper secondary education (mostly age 15-19; see Indicator B1 for more information on enrolment in secondary education). Thus, taking into account the extended 15-24 age span in Indicator 4.3.3 may underestimate participation rates in these programmes.

2. Although boys and girls are likely to perform similarly at PISA Level 2 in mathematics, the gender gap in favour of boys increases at higher levels of performance.

3. According to the ITU survey manual, the question asked is: "Which of the following computer-related activities have you carried out in the last three months? Respondent should select all that apply." Respondents have the choice among nine ICT skills. The indicator therefore measures the percentage of individuals who have used the specific skills.

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"The education sustainable development goal" Tables

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	Table 1	**Equity in participation in education**
	Table 2	**Equity in skills acquisition (mathematics, numeracy and ICT skills)**
WEB	Table 3	**Equity in skills acquisition (reading and literacy skills)**

Data can be found on line at http://dx.doi.org/10.1787/eag-data-en.

Table 1. Equity in participation in education

Indicators 4.2.2, 4.3.1 and 4.3.3 and related parity indices

		Target 4.2 – By 2030, ensure that all boys and girls have access to quality early childhood development, care and pre-primary education so that they are ready for primary education		Target 4.3 – By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university				
		4.2.2 Participation rate in organised learning one year before the official primary entry age[1] (2016)		4.3.1 Participation rate of adults in formal and non-formal education[2] (2012/2015, 2016)			4.3.3 Participation rate of 15-24 year-olds in technical and vocational programmes[3] (2016)	
		%	Gender parity index[4]	%	(S.E.)	Gender parity index[4]	%	Gender parity index[4]
		(1)	(2)	(3)		(4)	(5)	(6)
OECD	Australia	91	1.0	55	0.7	1.0	22	0.8
	Austria	99	1.0	60	m	1.0	28	0.9
	Belgium	100	1.0	45	m	1.0	25	0.9
	Canada	93	1.0	58	0.6	1.0	m	m
	Chile	97	1.0	47	1.9	0.8	18	1.0
	Czech Republic	92	1.0	46	m	0.9	25	0.8
	Denmark	98	1.0	50	m	1.1	13	0.7
	Estonia	91	1.0	44	m	1.3	12	0.7
	Finland	99	1.0	54	m	1.2	22	0.9
	France[5]	100	1.0	51	m	1.1	19	0.8
	Germany	100	1.0	52	m	1.0	20	0.8
	Greece	89	1.0	17	m	1.1	12	0.7
	Hungary	91	1.0	56	m	0.9	13	0.8
	Iceland	99	1.0	m	m	m	10	0.5
	Ireland[5]	98	1.0	24	m	1.0	8	0.8
	Israel[5]	97	1.0	53	0.7	1.0	15	1.1
	Italy	98	1.0	42	m	0.9	23	0.6
	Japan	91	m	42	0.8	0.7	6	0.8
	Korea	96	1.0	50	0.8	0.8	15	0.7
	Latvia[5]	97	1.0	48	m	1.2	16	0.9
	Luxembourg	99	1.0	48	m	1.0	23	1.0
	Mexico	99	1.0	m	m	m	12	1.0
	Netherlands	99	1.0	64	m	1.0	22	0.9
	New Zealand	92	1.0	67	0.8	1.0	m	m
	Norway	98	1.0	60	m	1.0	18	0.6
	Poland	100	1.0	26	m	1.0	19	0.9
	Portugal	100	1.0	46	m	0.9	17	0.7
	Slovak Republic	82	1.0	46	m	1.0	22	0.9
	Slovenia	94	1.0	46	m	1.1	30	0.8
	Spain	96	1.0	43	m	1.0	15	0.8
	Sweden	99	1.0	64	m	1.1	12	0.8
	Switzerland	99	1.0	69	m	1.0	23	0.8
	Turkey	66	1.0	22	0.8	0.6	26	0.9
	United Kingdom	100	1.0	52	m	1.1	22	0.9
	United States[5]	91	1.0	59	1.1	1.0	m	m
	OECD average	95	1.0	49	~	1.0	18	0.8
	EU22 average	96	1.0	47	~	1.0	19	0.8
Partners	Argentina	m	m	m	m	m	m	m
	Brazil[5]	97	1.0	m	m	m	4	1.2
	China	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m
	Costa Rica	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m
	Lithuania[5]	99	1.0	28	m	1.3	9	0.7
	Russian Federation	96	1.0	19	1.5	1.3	16	0.9
	Saudi Arabia	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m
	G20 average	m	m	m	~	m	m	m

1. Official primary entry ages are reported in Table X1.3. in Annex 1.

2. Data from the Survey of Adult Skills (PIAAC) are reported in italics and refer to 2012 for Australia, Canada, Korea, Russian Federation and the United States and 2015 for Chile, Israel, New Zealand and Turkey. Data from the Adult Education Survey (AES) are not italicised and refer to 2011 for Ireland and 2016 for all others.

3. Indicator 4.3.3 refers to participation in technical and vocational programmes in secondary, post-secondary non-tertiary and short-cycle tertiary education (ISCED 2 to 5).

4. Gender parity index refers to the ratio of the female value over the male value.

5. Population data is collected from the UOE data or Eurostat database (instead of UNPD).

Source: OECD/UIS/Eurostat (2018), Eurostat (2011, 2016) and PIAAC (2012/2015). See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).

Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.

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Table 2. **Equity in skills acquisition (mathematics, numeracy and ICT Skills)**

Indicator 4.1.1 (mathematics), 4.4.1 and 4.6.1 (numeracy) and related parity indices

	Target 4.1 – By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes				Target 4.4 – By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent work and entrepreneurship						Target 4.6 – By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy			
	4.1.1 Proportion of 15-year-olds achieving at least a minimum proficiency level (PISA level 2) in mathematics (2015)[1]				4.4.1 Proportion of adults over age 15 with information and communications technology (ICT) skills **Programming language** (2015)		4.4.1 Proportion of adults over age 15 with information and communications technology (ICT) skills **Presentation** (2015)		4.4.1 Proportion of adults over age 15 with information and communications technology (ICT) skills **File transfer** (2015)		4.6.1 Proportion of adults (25-64 year-olds) achieving at least a fixed level of proficiency (score 226) in functional numeracy skills (2012/2015)[1]			
	%	(S.E.)	Gender parity index[2]	ESCS parity index[3]	Location parity index[4]	%	Gender parity index[2]	%	Gender parity index[2]	%	Gender parity index[2]	%	(S.E.)	Gender parity index[2]	Parental education attainment parity index[5]
	(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)
OECD															
Australia	78	0.6	1.0	**0.7**	**0.8**	m	m	m	m	m	m	80	0.7	**0.9**	**0.8**
Austria	78	1.1	**0.9**	**0.7**	0.9	8	0.2	42	0.7	59	0.8	85	0.7	**1.0**	0.9
French Comm. (Belgium)	80	1.0	1.0	**0.7**	**1.2**	5	0.2	33	0.8	58	0.9	m	m	m	m
Canada	86	0.7	1.0	**0.8**	**0.9**	m	m	m	m	m	m	77	0.5	**0.9**	**0.8**
Chile	51	1.3	**0.8**	**0.4**	**0.5**	m	m	m	m	m	m	38	2.6	**0.7**	**0.5**
Czech Republic	78	1.1	1.0	**0.6**	**0.8**	4	0.1	31	0.9	56	0.9	87	0.8	**1.0**	0.9
Denmark	86	0.9	1.0	**0.8**	1.0	13	0.5	58	0.9	71	0.9	86	0.6	**1.0**	0.9
Estonia	89	0.7	1.0	**0.8**	**0.9**	7	0.3	37	1.0	58	0.8	86	0.5	1.0	0.9
Finland	86	0.8	**1.1**	**0.8**	1.0	8	0.3	46	0.9	66	0.9	87	0.5	1.0	0.9
France	77	0.9	1.0	**0.6**	m	5	0.3	35	0.9	62	0.9	72	0.6	**0.9**	0.7
Germany	83	1.0	**1.0**	**0.8**	1.1	6	0.2	39	0.8	60	0.8	81	0.7	**0.9**	**0.8**
Greece	64	1.8	1.0	**0.6**	**0.7**	10	0.4	25	0.9	47	0.8	71	1.1	**0.9**	**0.8**
Hungary	72	1.2	1.0	**0.6**	**0.2**	3	0.3	25	0.9	54	0.9	m	m	m	m
Iceland	76	1.0	1.0	**0.8**	**0.9**	18	0.5	58	1.0	74	0.9	m	m	m	m
Ireland	85	0.9	1.0	**0.8**	1.0	4	0.3	30	0.9	37	0.9	75	0.9	**0.9**	**0.8**
Israel	68	1.4	1.0	**0.6**	1.0	m	m	m	m	m	m	68	0.8	**0.9**	0.7
Italy	77	1.1	**0.9**	**0.7**	0.9	5	0.4	31	0.8	43	0.8	68	1.0	**0.9**	**0.8**
Japan	89	0.8	1.0	**0.8**	c	m	m	m	m	m	m	92	0.6	**1.0**	0.9
Korea	85	1.1	**1.1**	**0.8**	c	5	0.5	m	m	48	0.8	81	0.6	**0.9**	**0.8**
Latvia	79	1.0	1.0	**0.7**	**0.8**	1	0.3	24	1.2	56	0.9	m	m	m	m
Luxembourg	74	0.7	1.0	**0.6**	m	13	0.5	63	0.9	75	0.8	m	m	m	m
Mexico	43	1.3	**0.9**	**0.5**	**0.5**	m	m	m	m	m	m	m	m	m	m
Netherlands	83	0.9	1.0	**0.8**	c	7	0.3	43	0.8	63	0.9	86	0.6	**0.9**	**0.9**
New Zealand	78	1.0	1.0	**0.7**	0.8	m	m	m	m	m	m	81	0.7	**0.9**	**0.8**
Norway	83	0.8	**1.0**	**0.8**	0.9	10	0.5	55	0.9	61	0.9	85	0.6	**1.0**	0.9
Poland	83	1.0	1.0	**0.8**	**0.9**	2	0.2	21	0.9	43	0.8	77	0.7	1.0	**0.8**
Portugal	76	1.0	1.0	**0.7**	**0.6**	7	0.4	35	0.9	45	0.8	m	m	m	m
Slovak Republic	72	1.2	1.0	**0.6**	**0.6**	3	0.3	31	1.0	57	0.9	86	0.6	1.0	0.9
Slovenia	84	0.6	1.0	**0.8**	**0.9**	4	0.3	33	1.1	49	1.0	74	0.8	1.0	0.7
Spain	78	1.0	**1.0**	**0.7**	1.0	6	0.4	39	0.9	53	0.9	69	0.7	**0.9**	0.7
Sweden	79	1.2	1.0	**0.7**	**0.9**	10	0.3	34	1.0	63	0.9	85	0.7	**0.9**	0.9
Switzerland	84	1.0	1.0	**0.8**	1.0	7	m	m	m	m	m	m	m	m	m
Turkey	49	2.2	1.0	**0.5**	**0.3**	2	m	18	m	26	m	49	1.6	**0.7**	**0.6**
United Kingdom	78	1.0	1.0	**0.8**	**1.2**	7	0.4	45	0.9	52	0.9	m	m	m	m
United States	71	1.4	1.0	**0.6**	**1.2**	m	m	m	m	m	m	70	0.9	**0.9**	0.7
OECD average	77	~	1.0	0.7	0.8	7	0.3	37	0.9	55	0.9	77	~	0.9	0.8
EU22 average	79	~	1.0	0.7	0.8	6	0.3	36	0.9	56	0.9	80	~	1.0	0.8
Partners															
Argentina[6]	44	1.7	**0.8**	**0.5**	**0.7**	m	m	m	m	m	m	m	m	m	m
Brazil	30	1.2	**0.8**	**0.3**	**0.4**	6	0.6	12	0.9	21	0.8	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	34	1.2	**0.8**	**0.3**	**0.7**	m	m	m	m	m	m	m	m	m	m
Costa Rica	38	1.5	**0.8**	**0.4**	1.1	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	31	1.6	1.1	**0.3**	**0.3**	m	m	m	m	m	m	m	m	m	m
Lithuania	75	1.1	1.0	**0.7**	**0.8**	4	0.3	32	1.0	55	0.9	82	0.8	1.0	**0.8**
Russian Federation	81	1.2	1.0	**0.8**	**0.9**	1	0.3	8	1.2	28	0.9	86	1.5	1.0	1.0
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	m	~	m	m	m	m	m	m	m	m	m	m	~	m	m

1. For indicators 4.1.1 and 4.6.1, parity indices are in bold when the difference between the two considered groups is statistically significant.
2. The gender parity index refers to the ratio of the female value over the male value.
3. ESCS refers to the PISA index of economic, social and cultural status. The ESCS parity index refers to the ratio of the value for the bottom quartile over the value for the top quartile of the ESCS index.
4. The location parity index refers to the ratio of the value for rural areas over the value for urban areas.
5. The parental attainment parity index refers to the ratio of the value for individuals whose parents have not attained tertiary education over the value for those with at least one tertiary-educated parent.
6. For PISA results, coverage is too small to ensure comparability.
c: There are too few observations or no observation to provide reliable estimates (i.e. there are fewer than 30 students or fewer than 5 schools with valid data).
Source: PISA (2015), ITU (2015) and PIAAC (2012/2015). See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).
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