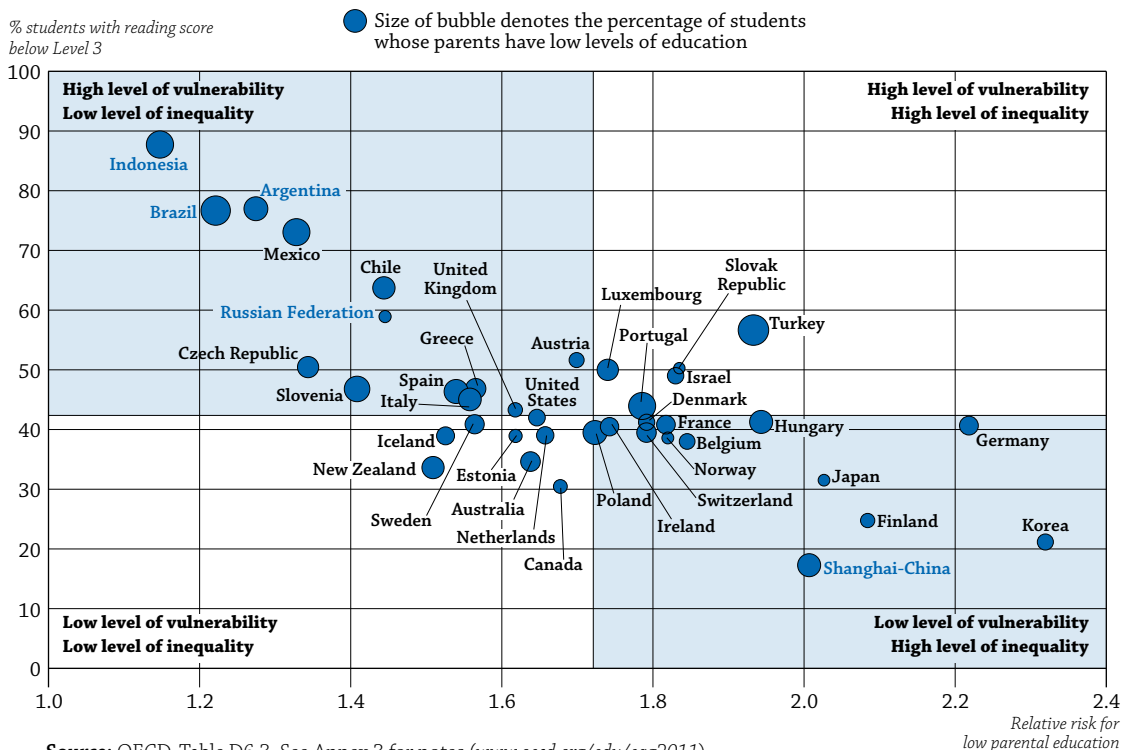


HOW EQUAL ARE EDUCATIONAL OUTCOMES AND OPPORTUNITIES?

- Over 40% of 15-year-old students in OECD countries scored below PISA reading proficiency Level 3. The risk of having these low reading scores was about one-and-three-quarters as large for students from socio-economically disadvantaged backgrounds, one-and-a-half times as large for immigrants as for non-immigrants, and one-and-a-half times as large for boys as for girls.
- A student whose parents have only attained low levels of education is 1.72 times more likely to score below Level 3 on the PISA reading proficiency scale.

Chart D6.1. Relationship between student vulnerability and inequality associated with parental education (PISA 2009)



Source: OECD. Table D6.3. See Annex 3 for notes (www.oecd.org/edu/eag2011).
 StatLink <http://dx.doi.org/10.1787/888932462149>

How to read this chart

This chart shows the relationship between a measure of vulnerability – 15-year-old students with reading scores below Level 3 – and an indicator of inequality – the relative risk associated with parents with low levels of education. The size of the dot for each country is proportional to the percentage of students in the country whose parents have low levels of education. A country can have a low level of inequality but not necessarily a low level of vulnerability. Chile is a good example, as the relative risk associated with parents with low levels of education is relatively small (1.4), yet Chile has a relatively high percentage of students who perform poorly in reading (64%). In New Zealand, the relative risk associated with parents who have low levels of education is also small (1.5), as in Chile, but the prevalence of 15-year-olds with poor reading performance is markedly lower (34%). Also, a country may show a relatively high level of inequality, but the difference in outcomes applies to a smaller proportion of the population. Finland and Japan are good examples, as fewer than 5% of the students in these countries have parents with low levels of education.

Context

Over the past twenty years, the demand for workers with strong literacy skills has grown, while jobs for low-skilled workers are becoming harder to find. Young people who do not acquire strong literacy skills during their primary and secondary education are considered vulnerable in that they are at greater risk of being unemployed, developing physical and mental health

problems, and participating in criminal activities. The development of non-cognitive skills, such as perseverance, motivation, and social and intellectual engagement, is equally important for long-term health and well-being (Heckman, 2008). Students who fail to develop these skills adequately are also considered to be vulnerable. Willms (1997) argues that literacy itself is a defining characteristic of social class: “People become part of a culture through its language, and use that language to engage in social relations that increase their knowledge and develop their potential. Decreasing inequalities in literacy is therefore crucial for achieving tolerance, social cohesion and equality of opportunity in a modern society” (p.22).

Equality of outcomes can only be achieved if disadvantaged students have the opportunity to attend schools with high-quality resources and effective school policies and practices. Focusing on the prevalence of vulnerable students and the extent to which certain subpopulations are at greater risk of being vulnerable – having low literacy skills or being disengaged from school, for example – enables countries to set meaningful and achievable goals. The most desirable outcome for a country is to have low levels of vulnerability *and* low levels of inequality.

■ Other findings

- **Students from disadvantaged backgrounds are considered a potentially vulnerable group.** On average across OECD countries, these students were 1.76 times as likely to have reading scores below Level 3 as their counterparts who were in the top three quartiles on the *PISA index of economic, social and cultural status*. This relative risk associated with low socio-economic status varies among OECD countries from 1.30 to 2.26 (Table D6.3).
- **Fifteen-year-olds whose parents had low levels of education are also considered potentially vulnerable, with the relative risk associated with low levels of parents’ education ranging from 1.33 to 2.32 among OECD countries.** In some countries, such as Finland, the relative risk is high, but comparatively few students have parents with low levels of education. Therefore, the reduction in vulnerability that would be gained by achieving equality for this group is small.
- **The relative risk of low proficiency in reading associated with immigrant status is 1.50 on average across OECD countries.**
- **On average across OECD countries, 15-year-old boys are about one-and-a-half times more likely to have low reading scores than 15-year-old girls.** This varies markedly among OECD countries, ranging from 1.13 to 2.57 times more likely.
- The extent to which students identify with and value schooling outcomes is a key indicator of student engagement. The prevalence of 15-year-olds who do not **value success at school** also varies considerably among countries. However, there is greater equality on this measure than in reading achievement for students from different socio-economic backgrounds, with different levels of parents’ education, between immigrants and non-immigrants, and between boys and girls (Table D6.5).

Analysis

A focus on vulnerability and risk

International data on student performance allow analysts not only to examine differences among countries in their average performance, but also the prevalence of vulnerable students. In this analysis, a cut-point or benchmark for each outcome was established such that one can consider the prevalence of 15-year-olds who are considered vulnerable, such as those with “reading proficiency below Level 3” or those with “low levels of engagement”.

A focus on student vulnerability and risk has at least three advantages. First, it provides a measure, easily understood by the wider community, against which goals can be set. For example, one might state that the aim of educational reforms is to reduce the prevalence of poor readers from 43% to 25% over the next ten years. This has greater meaning than saying the aim is to increase reading scores by 12 points on the PISA scale.

Second, for many countries, reducing the number of vulnerable students is more important than shifting the entire distribution of reading skills. This is because young people with poor reading skills and low levels of engagement at school are at greater risk of being unemployed and experiencing physical and mental health problems.

The third advantage is that in many countries, a substantial number of 15-year-olds score at or very close to the “floor” (or lowest level) of the test. However, the “true score” for these students may be even lower than the scores they attain on the PISA test. Depending on how many students in a country score close to the floor of the test, the *average* levels of performance is upwardly biased, while the prevalence of vulnerable students is unaffected (Nonoyama-Tarumi and Willms, 2010).

A disadvantage of using cut-points to establish vulnerability is that not all analysts or policy makers would agree on where to set the cut-point. This shortcoming can be addressed to some extent by considering two or more cut-points. For example, in this analysis, “below Level 3” refers to poor reading performance. One advantage of using “below level 3” rather than “below level 2” is that it is less sensitive to variations among countries in the percentage of students excluded from the study. Also, the majority of students scoring at Level 2 on the PISA scale lack the skills necessary for secondary-level studies. In the United States, for example, 42% of students scored below Level 3 on PISA, while 26% of public school students scored below the “Basic” level of proficiency on the Grade 8 test used for the US National Report Card. The Basic level denotes “partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade” (National Centre for Education Statistics, 2010). The US results suggest that about two-thirds of the students who score below Level 3 on PISA would be below the basic level of proficiency, and the remaining one-third would be at the lower end of the basic level.

Another compelling reason for focusing on a higher standard is that labour-market demands for higher literacy skills have increased over the past two decades. In their 2008 publication, Goldin and Katz describe an almost century-long “race” between education and technology: wages and economic growth depend on how well workers can keep up with changes in the complexity of job tasks.

Still, “below Level 2” is an important indicator of vulnerability as well, especially for countries with very low reading scores. About 19% of students in OECD countries had reading scores below Level 2, and in some countries the prevalence exceeded 25%. Therefore, this definition of vulnerability is considered as well (Table D6.4). The relative risk of vulnerability was about two-and-one-third times as large for students from socio-economically disadvantaged backgrounds, two times as large for immigrants as for non-immigrants, and two-and-one-fifth times as large for boys as for girls. A student whose parents have only attained low levels of education is two-and-one-quarter times more likely to score below Level 2 on the PISA reading proficiency scale.

When the analysis focuses on the prevalence of vulnerability, one can then consider various subpopulations’ “risk” of being vulnerable. In this analysis, four subpopulations were considered: 15-year-old students from socio-economically disadvantaged backgrounds, that is students whose families were in the lowest quartile (bottom 25%) on the *PISA index of economic, social and cultural status* (ESCS) in their country, 15-year-old students

whose parents have low levels of education, immigrants, and boys. Socio-economic disadvantage was considered in *relative* terms; that is, these students are among the 25% most disadvantaged students in their country. The results for these students are compared with those of students who are among the 25% most socio-economically advantaged students.

Box D6.1. Summary descriptions for the seven levels of proficiency in reading

Level	Lower score limit	Percentage of students able to perform tasks at this level or above	Characteristics of tasks
6	698	0.8%	Tasks at this level typically require the reader to make multiple inferences, comparisons and contrasts that are both detailed and precise. They require demonstration of a full and detailed understanding of one or more texts and may involve integrating information from more than one text. Tasks may require the reader to deal with unfamiliar ideas, in the presence of prominent competing information, and to generate abstract categories for interpretations. <i>Reflect and evaluate</i> tasks may require the reader to hypothesise about or critically evaluate a complex text on an unfamiliar topic, taking into account multiple criteria or perspectives, and applying sophisticated understandings from beyond the text. A salient condition for <i>access and retrieve</i> tasks at this level is precision of analysis and fine attention to detail that is inconspicuous in the texts.
5	626	7.6%	Tasks at this level that involve retrieving information require the reader to locate and organise several pieces of deeply embedded information, inferring which information in the text is relevant. Reflective tasks require critical evaluation or hypothesis, drawing on specialised knowledge. Both interpretative and reflective tasks require a full and detailed understanding of a text whose content or form is unfamiliar. For all aspects of reading, tasks at this level typically involve dealing with concepts that are contrary to expectations.
4	553	28.3%	Tasks at this level that involve retrieving information require the reader to locate and organise several pieces of embedded information. Some tasks at this level require interpreting the meaning of nuances of language in a section of text by taking into account the text as a whole. Other interpretative tasks require understanding and applying categories in an unfamiliar context. Reflective tasks at this level require readers to use formal or public knowledge to hypothesise about or critically evaluate a text. Readers must demonstrate an accurate understanding of long or complex texts whose content or form may be unfamiliar.
3	480	57.2%	Tasks at this level require the reader to locate, and in some cases recognise the relationship between, several pieces of information that must meet multiple conditions. Interpretative tasks at this level require the reader to integrate several parts of a text in order to identify a main idea, understand a relationship or construe the meaning of a word or phrase. They need to take into account many features in comparing, contrasting or categorising. Often the required information is not prominent or there is much competing information; or there are other text obstacles, such as ideas that are contrary to expectation or negatively worded. Reflective tasks at this level may require connections, comparisons, and explanations, or they may require the reader to evaluate a feature of the text. Some reflective tasks require readers to demonstrate a fine understanding of the text in relation to familiar, everyday knowledge. Other tasks do not require detailed text comprehension but require the reader to draw on less common knowledge.
2	407	81.2%	Some tasks at this level require the reader to locate one or more pieces of information, which may need to be inferred and may need to meet several conditions. Others require recognising the main idea in a text, understanding relationships, or construing meaning within a limited part of the text when the information is not prominent and the reader must make low level inferences. Tasks at this level may involve comparisons or contrasts based on a single feature in the text. Typical reflective tasks at this level require readers to make a comparison or several connections between the text and outside knowledge, by drawing on personal experience and attitudes.
1a	335	94.3%	Tasks at this level require the reader to locate one or more independent pieces of explicitly stated information; to recognise the main theme or author's purpose in a text about a familiar topic, or to make a simple connection between information in the text and common, everyday knowledge. Typically the required information in the text is prominent and there is little, if any, competing information. The reader is explicitly directed to consider relevant factors in the task and in the text.
1b	262	98.9%	Tasks at this level require the reader to locate a single piece of explicitly stated information in a prominent position in a short, syntactically simple text with a familiar context and text type, such as a narrative or a simple list. The text typically provides support to the reader, such as repetition of information, pictures or familiar symbols. There is minimal competing information. In tasks requiring interpretation the reader may need to make simple connections between adjacent pieces of information.

Source: OECD (2010a).

Low levels of parents' education were considered in *absolute* terms; that is, the subpopulation included 15-year-old students whose parents or guardians had completed less than 12 years of schooling. The results for these students are compared with students with at least one parent or guardian who had completed 12 or more years of schooling. The subpopulation of immigrants included those who were first- or second-generation immigrants. Fifteen-year-old boys were chosen as a potentially vulnerable group, because in most jurisdictions boys have lower reading scores than girls. However, the results can be readily transformed into results pertaining to girls.

A measure commonly used by epidemiologists is “relative risk”. This is simply the ratio of risk in a subpopulation compared to the risk among those who are not members of that subpopulation. For example, if the prevalence of low reading scores is 60% among immigrants and 40% among non-immigrants, the relative risk for immigrants is 1.5.

Education policy can then focus on *reducing the prevalence of vulnerable students by lowering the relative risk for potentially vulnerable subpopulations*. This is different from the aim of “closing the achievement gap”, which does not necessarily reduce the prevalence of vulnerability. Also, this approach allows one to gauge the “population relevance” associated with increased vulnerability among a subpopulation. Population relevance is the reduction in prevalence for the full population that would be achieved if the risk in the potentially vulnerable population (for example, immigrants) were reduced to the same prevalence as that of the non-vulnerable group (in this example, non-immigrants).

For example, in both the Netherlands and Switzerland, the relative risk for an immigrant to have reading scores below Level 3 is 1.63. In both countries, the percentage of vulnerable students – those with low reading scores – is about 39%. However, in the Netherlands, 12.1% of 15-year-olds are immigrants. If education policies reduced the risk of low reading scores for immigrants to the same level as that of non-immigrants, the overall prevalence would decrease by about 7% (the population relevance for the Netherlands). In Switzerland, 23.5% of 15-year-olds are immigrants; if education policies reduced the risk of low reading scores for immigrants to the same level as that of non-immigrants in Switzerland, the overall prevalence would decrease by about 13% (the population relevance for Switzerland) (Table D6.3).

Equality versus equity

The term “equality” is used to refer to differences in educational outcomes between high- and low-status groups, such as socio-economically advantaged and disadvantaged students. Attempts to achieve equality of outcomes usually begin by ensuring there is “equity” – a fair allocation of school resources. Thus, it is important also to consider differences between high- and low-status groups in factors known to affect educational outcomes, such as attending a school with positive student-teacher relations, certified teachers, and a strong infrastructure. After establishing cut-points or thresholds for these factors, one can use the same statistics – relative risk and population relevance – to assess whether key resources are allocated equitably.

The results show that 15-year-old students from different family backgrounds do not report substantially worse teacher-student relations: the relative risk for disadvantaged students is 1.07. The same applies for 15-year-old immigrant students, as the relative risk is 1.03. However, 15-year-old boys tend to report worse teacher-student relations, and the relative risk among them is 1.25 (Table D6.6).

The results for other school factors indicate that potentially vulnerable students tend to be in smaller, not larger, classes: the relative risk for disadvantaged 15-year-olds and for students whose parents have low levels of education are 0.66 and 0.67 (Table D6.7, available on line). However, in many countries, attending a school with poor infrastructure is an important equity issue for disadvantaged and immigrant students: the relative risks are 1.14 and 1.20, respectively (Table D6.8, available on line). In many countries, receiving instruction from uncertified teachers is an equity issue for disadvantaged students: on average across OECD countries, the relative risk is 1.12. Fifteen-year-old boys are more likely than 15-year-old girls to be taught by uncertified teachers, and their relative risk is 1.17 (Table D6.9, available on line). Students from socio-economically disadvantaged backgrounds and boys are, on average, more likely to attend a school with a climate that is not

conducive to learning (Table D6.10, available on line). The factor that has the largest risk associated with all four subpopulations considered is grade repetition. On average across the OECD countries, 15-year-olds are more than twice as likely to repeat one or more grades at school if they are from disadvantaged backgrounds, have parents with a low level of education, or are immigrants. Fifteen-year-old boys are about one-and-a-half times as likely as girls to repeat one or more grades (Table D6.11, available on line).

Inclusive schools

Some school systems are more inclusive than others, although most schools welcome students of varying ability and backgrounds. The term “inclusive” is used in the broad sense to refer to schools and school systems that support diversity among all learners (UNESCO, 2000). On average, school systems with greater levels of inclusion have better overall outcomes and less inequality (Willms, 2010). This is because the students themselves are a key resource: a disadvantaged student has a better chance of success if he or she is in a school with students who have high expectations and are more intellectually engaged. When school systems are more inclusive, material resources and experienced teachers tend to be more evenly distributed among schools. Similarly, the critical factors that affect student outcomes, such as positive teacher-student relations, high expectations for students’ success, and a safe school environment, are more easily achieved in inclusive school systems.

In some school systems, inequality is entrenched through the mechanisms in which students are allocated to schools, including tracks that channel students into different schools based on their prior achievement or ability, private schools, and special programmes in the public sector. Within schools, students can be selected into other programmes, such as those for students with special needs, grade repetition, split classes, ability grouping, curricular tracking, and various other types of special programmes. These processes tend to separate low- and high-performing students into different schools or different classes within schools. Willms (2010) refers to this kind of school system as *vertically segregated*. The German school system, in which students are streamed at an early age into different types of schools, is an example of a vertically segregated school system. This indicator refers to systems with low levels of vertical separation as *vertically inclusive*.

Inequality can also be embedded in school systems when there is a high level of residential segregation, especially in large cities, and when there are marked socio-economic differences between urban and rural areas. Chile and Mexico have school systems with this type of segregation. In these systems, levels of student ability can be similar within and between schools, but students from different socio-economic backgrounds are separated into different schools. Willms (2010) refers to this kind of school system as *horizontally segregated*, and this indicator refers to systems with low levels of horizontal segregation as *horizontally inclusive*.

Indices of vertical and horizontal inclusion can be derived from 2009 PISA data. The first is a measure of vertical inclusion: the proportion of variance in reading performance within schools. School systems with relatively less variation in performance *between* schools, and relatively more variation within schools, are vertically inclusive. Finland, Iceland, and Norway have high levels of *vertical* inclusion, while Germany, Hungary, Italy, the Netherlands and Turkey have low levels of *vertical* inclusion. School systems that allocate students into different types of schools based on their ability tend to have low levels of vertical inclusion (Table D6.2).

The second indicator is the proportion of variance in socio-economic background within schools. It indicates how evenly students from different backgrounds are distributed across schools. Finland, Norway, Sweden and Switzerland have high levels of horizontal inclusion, while Chile, Hungary and Mexico have low levels of horizontal inclusion. School systems in cities in which residents are separated into poor or wealthy residential areas tend to have low levels of inclusion on this measure. However, inclusive education policies can help improve horizontal inclusion (Table D6.2).

One of the best ways to achieve equality and equity is to adopt policies that increase vertical and horizontal inclusion. Increasing vertical inclusion is often difficult to achieve politically, as it can be challenging to convince parents of high-performing students that their children will fare equally well or better in mixed-ability schools. In systems with low levels of horizontal inclusion, there tend to be larger social and economic forces at play that have resulted in residential segregation or a large urban-rural socio-economic divide.

In these cases, equality and equity can be increased through a compensatory allocation of resources to schools that have a disproportionate number of students from disadvantaged families (Willms, 2008). Policies that provide greater school choice could potentially increase horizontal inclusion, but this is not necessarily the case, especially if disadvantaged parents are less able to exercise that choice (Ladd, Fiske, and Ruijs, 2009).

Definitions

D6

Climate that is not conducive to learning is an atmosphere in the classroom with a value on the *PISA index of disciplinary climate* (DISCLIMA) that is in the bottom quarter of the OECD distribution. The cut-off point of -0.547 was calculated by taking the 25th percentile of the student distribution of DISCLIMA index in OECD countries, assigning the same weight to each OECD country. The DISCLIMA index is based on students' responses in the student questionnaire.

Grade repetition occurs when a student repeats one or more grades while in primary, lower secondary or upper secondary school. This is based on students' responses in the student questionnaire.

Immigrant students include those who were born in another country (first generation) and those who were born in the country in which they were assessed, but whose parents were born in another country (second generation). Immigrant status is based on students' responses in the student questionnaire.

Large classes are those in the top quartile of the OECD distribution. The cut-off point was calculated by taking the 75th percentile of the student distribution of class sizes in OECD countries, assigning the same weight to each OECD country. The cut-point for a large class was 30 students. The class size of students is based on students' responses in the student questionnaire.

Low levels of parents' education identifies those parents who have gone through less than 12 years of schooling. The number of years of schooling (PARED) was converted from the highest education level of parents index (HISCED), which corresponds to the higher ISCED level of either parent. The educational level of parents is based on students' responses in the student questionnaire.

Poor school infrastructure refers to those schools in the bottom quarter of the OECD distribution of the *PISA index of quality of the schools' educational resources* (SCMATEDU). The cut-off point of -0.560 was calculated by taking the 25th percentile of the student distribution on the SCMATEDU index in OECD countries, assigning the same weight to each OECD country. The SCMATEDU index is based on school principals' responses in the school principal questionnaire.

Poor student-teacher relations are those that fall in the bottom quarter of the OECD distribution on the *PISA index of teacher-student relations* (STUDREL). The cut-off point of -0.626 was calculated by taking the 25th percentile of the student distribution of STUDREL index in OECD countries, assigning the same weight to each OECD country. The STUDREL index is based on students' responses in the student questionnaire.

Socio-economically disadvantaged students are those in the bottom quarter of the OECD distribution on the *PISA index of economic, social and cultural status* (ESCS). The cut-off point was calculated by taking the 25th percentile of the student distribution of ESCS in OECD countries, assigning the same weight to each OECD country. The ESCS index is based on students' responses in the student questionnaire.

Students who were assessed by PISA were between 15 years 3 months and 16 years 2 months at the time of the assessment and had completed at least 6 years of formal schooling, regardless of the type of institution or programme they attended. The terms "15-year-olds" and "students" are used interchangeably in this indicator.

Students receiving instruction from uncertified teachers refers to those students in schools where the proportion of certified teachers is in the bottom quarter of the OECD distribution. The cut-off point of 0.889 (89.9%) was calculated by taking the 25th percentile of the student distribution of the proportion of certified teachers in OECD countries, assigning the same weight to each OECD country. This is based on school principals' responses in the school principal questionnaire.

Value school outcomes, an index reflecting how students value school outcomes, was constructed using responses to question 33 of the PISA student background questionnaire. Student responses were recoded into a 10-point scale, with higher values denoting more positive outcomes. Students' responses were classified as low if their scores were in the bottom quartile of the OECD distribution of this index. The cut-off point was calculated by taking the 25th percentile of the student distribution of this index in OECD countries, assigning the same weight to each OECD country.

Methodology

Two measures of educational equality and equity are reported: relative risk and population relevance, which in epidemiology is referred to as population attributable risk. In this report, relative risk refers to the risk associated with being a member of a potentially vulnerable sub-population (e.g. immigrant students) compared with *not* being a member of the potentially vulnerable sub-population (e.g. non-immigrant students). For example, if 40% of immigrant students had low reading scores while only 20% of non-immigrants had low reading scores, then the relative risk would be 2.0. Population relevance expresses the proportion of the total occurrence of an outcome, such as low reading scores, that is associated with membership in the potentially vulnerable population.

Consider a hypothetical population of 1 000 15-year-old students who participated in PISA. Twenty percent of the students (200) are immigrants and 30% of the population (300 students) have reading scores below Level 3. One hundred of the 200 immigrant students had low reading scores, while 200 of the 800 non-immigrant students had low reading scores. These data are displayed in Table 1.

Table 1. Low reading scores for immigrants and non-immigrants in a hypothetical population of 1 000 students with 20% immigrants

	Reading scores below Level 3	Reading scores at or above Level 3	Total
Immigrants	100	100	200
Non-immigrants	200	600	800
	300	700	N =1 000

The “risk” or prevalence of low reading scores among immigrants is 50% (100/200) while for non-immigrants it is 25% (200/800). Therefore, the relative risk is 2.0 (50/25).

The population relevance is the reduction in prevalence for the full population that would be achieved if the risk in the potentially vulnerable population (e.g. immigrants) were reduced to the same prevalence as that of the non-vulnerable group (e.g. non-immigrants). In the example for Table 1, the prevalence of low reading scores in the full population is 30% (300/1 000), while the prevalence among non-immigrants is 25%. If more equitable educational policies and practices led to a reduction in the risk for immigrants from 50% to 25% (the same prevalence as non-immigrants), then the prevalence in the full population would be reduced from 30% to 25%. This reduction of 5% represents a percentage reduction of 16.7%, which is referred to as population relevance.

Notice that the population relevance depends not only on the relative risk associated with membership in the vulnerable group, but also on the relative size of the vulnerable group. For example, consider the results in Table 2 for another hypothetical population that has only 2% immigrants.

Table 2. Low reading scores for immigrants and non-immigrants in a hypothetical population of 1 000 students with 2% immigrants

	Reading scores below Level 3	Reading scores at or above Level 3	Total
Immigrants	10	10	20
Non-immigrants	245	735	980
	255	845	N =1 000

In this example, the prevalence of low reading scores among immigrants and non-immigrants are 50% (10/20) and 25% (245/980), respectively, which are the same as those in the first example. Therefore, the relative risk is the same: 2.0. However, if the level of risk for immigrants were reduced to that of non-immigrants, the total risk would be reduced from 25.5% to 25%, or by about 2%. Thus, the population relevance is considerably lower.

The achievement scores are based on assessments of reading performance administered as part of the Programme for International Student Assessment (PISA) undertaken by the Organisation for Economic Co-operation and Development (OECD). PISA was administered most recently during the 2009 school year.

The statistical data for Israel are supplied by and 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.

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The following additional material relevant to this indicator is available on line:






- **Table D6.7. Student in large classes (PISA 2009)**
StatLink  <http://dx.doi.org/10.1787/888932466234>
- **Table D6.8. Student attends a school with poor school infrastructure (PISA 2009)**
StatLink  <http://dx.doi.org/10.1787/888932466253>
- **Table D6.9. Student receives instruction from uncertified teachers (PISA 2009)**
StatLink  <http://dx.doi.org/10.1787/888932466272>
- **Table D6.10. Student attends a school with a climate that is not conducive to learning (PISA 2009)**
StatLink  <http://dx.doi.org/10.1787/888932466291>
- **Table D6.11. Student has repeated one or more grades (PISA 2009)**
StatLink  <http://dx.doi.org/10.1787/888932466310>

Table D6.1. **Percentage of potentially vulnerable students, age 15 (PISA 2009)**

Results based on students' self-reports

	Percent of students whose parents have low levels of education ¹		Percent of immigrant students (first- and second-generation)	
	%	S.E.	%	S.E.
	(1)	(2)	(3)	(4)
OECD				
Australia	14.0	(0.5)	23.2	(1.1)
Austria	4.8	(0.4)	15.2	(1.2)
Belgium	5.7	(0.3)	14.8	(1.1)
Canada	3.4	(0.3)	24.4	(1.3)
Chile	23.2	(1.2)	0.5	(0.1)
Czech Republic	18.9	(0.7)	2.3	(0.2)
Denmark	6.5	(0.4)	8.6	(0.4)
Estonia	2.8	(0.3)	8.0	(0.6)
Finland	3.9	(0.3)	2.6	(0.3)
France	11.3	(0.7)	13.1	(1.4)
Germany	11.7	(0.6)	17.6	(1.0)
Greece	16.0	(1.0)	9.0	(0.8)
Hungary	26.3	(1.2)	2.1	(0.3)
Iceland	9.7	(0.5)	2.4	(0.2)
Ireland	10.7	(0.6)	8.3	(0.6)
Israel	6.8	(0.5)	19.7	(1.1)
Italy	24.5	(0.5)	5.5	(0.3)
Japan	1.7	(0.2)	0.3	(0.1)
Korea	6.3	(0.4)	0.0	(0.0)
Luxembourg	19.3	(0.6)	40.2	(0.7)
Mexico	49.7	(0.9)	1.9	(0.2)
Netherlands	8.5	(0.8)	12.1	(1.4)
New Zealand	22.8	(0.8)	24.7	(1.0)
Norway	1.9	(0.2)	6.8	(0.6)
Poland	30.8	(0.9)	0.0	(0.0)
Portugal	50.0	(1.3)	5.5	(0.5)
Slovak Republic	1.6	(0.3)	0.5	(0.1)
Slovenia	39.7	(0.9)	7.8	(0.4)
Spain	31.4	(1.0)	9.5	(0.5)
Sweden	12.6	(0.6)	11.7	(1.2)
Switzerland	13.5	(0.6)	23.5	(0.9)
Turkey	80.9	(1.2)	0.5	(0.1)
United Kingdom	4.0	(0.4)	10.6	(1.0)
United States	7.3	(0.7)	19.5	(1.3)
OECD average	17.1	(0.1)	10.4	(0.1)
Other G20				
Argentina	30.4	(1.3)	3.6	(0.5)
Brazil	69.4	(0.7)	0.8	(0.1)
Indonesia	51.3	(2.1)	0.3	(0.1)
Russian Federation	2.0	(0.3)	12.1	(0.7)
Shanghai-China	26.2	(1.2)	0.5	(0.1)

1. Students whose parents have less than 12 years of schooling.

Source: OECD, PISA 2009 Database.

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


StatLink  <http://dx.doi.org/10.1787/888932466120>

Table D6.2. **Index of social inclusion (PISA 2009)**

Results based on students' performance and self-reports

	Index of vertical inclusion ¹	Index of horizontal inclusion ²
	Proportion of student performance variance within schools	Proportion of variance in the PISA index of social, economic and cultural status of students (ESCS) within schools
	(1)	(2)
OECD		
Australia	73.9	76.4
Austria	44.4	69.2
Belgium	47.5	69.8
Canada	78.3	82.4
Chile	45.0	48.6
Czech Republic	51.0	75.1
Denmark	84.1	83.6
Estonia	78.2	81.5
Finland	91.3	89.2
France	w	w
Germany	39.8	76.0
Greece	53.9	68.0
Hungary	33.3	54.2
Iceland	85.9	82.8
Ireland	71.3	76.7
Israel	51.4	76.7
Italy	37.9	73.9
Japan	51.4	78.2
Korea	65.8	74.1
Luxembourg	56.4	73.3
Mexico	51.9	56.2
Netherlands	35.4	76.2
New Zealand	75.8	78.9
Norway	89.7	91.2
Poland	81.2	73.3
Portugal	66.9	73.2
Slovak Republic	60.4	76.6
Slovenia	42.8	75.0
Spain	78.2	77.1
Sweden	81.5	85.7
Switzerland	67.4	85.4
Turkey	33.2	63.5
United Kingdom	70.7	81.6
United States	64.0	70.7
OECD average	61.4	74.8
Other G20		
Argentina	39.5	59.8
Brazil	51.6	64.7
Indonesia	56.8	61.3
Russian Federation	74.8	71.5
Shanghai-China	61.6	66.3

1. The index of vertical inclusion is calculated as $100 \cdot (1 - \rho)$, where ρ stands for the intra-class correlation of performance, i.e. the variance in student performance between schools, divided by the sum of variance in student performance between schools and the variance in student performance within schools.

2. The index of horizontal inclusion is calculated as $100 \cdot (1 - \rho)$, where ρ stands for the intra-class correlation of socio-economic background, i.e. the variance in the PISA index of social, economic and cultural status of students between schools, divided by the sum of variance in students' socio-economic background between schools and the variance in students' socio-economic background within schools.

Source: OECD, PISA 2009 Database.

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


StatLink  <http://dx.doi.org/10.1787/888932466139>

Table D6.3. Reading scores below PISA proficiency Level 3, age 15 (PISA 2009)

Results based on students' performance and self-reports

	Percent of students with reading scores below Level 3		Low socio-economic status (low vs. high)				Low parental education (low vs. high)				Immigrant status (immigrant vs. non-immigrant)				Gender (boys vs. girls)			
			Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²	
	%	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD																		
Australia	34.7	(0.9)	1.94	(0.03)	19	(0.5)	1.64	(0.03)	8	(0.4)	0.93	(0.03)	-2	(0.7)	1.54	(0.04)	21	(1.2)
Austria	51.7	(1.3)	1.61	(0.03)	13	(0.6)	1.70	(0.04)	3	(0.3)	1.58	(0.04)	8	(0.7)	1.39	(0.04)	16	(1.5)
Belgium	38.0	(1.0)	2.03	(0.04)	21	(0.7)	1.85	(0.06)	5	(0.3)	1.87	(0.06)	11	(0.8)	1.34	(0.03)	15	(1.3)
Canada	30.5	(0.7)	1.65	(0.04)	14	(0.7)	1.68	(0.07)	2	(0.2)	1.13	(0.04)	3	(0.9)	1.59	(0.03)	23	(0.7)
Chile	63.7	(1.5)	1.44	(0.03)	10	(0.6)	1.44	(0.03)	9	(0.6)	c	c	c	c	1.15	(0.02)	7	(1.1)
Czech Republic	50.5	(1.4)	1.59	(0.04)	13	(0.7)	1.34	(0.03)	6	(0.5)	1.12	(0.06)	0	(0.1)	1.56	(0.05)	23	(1.7)
Denmark	41.2	(1.1)	1.82	(0.04)	17	(0.7)	1.79	(0.08)	5	(0.4)	1.82	(0.04)	7	(0.3)	1.41	(0.04)	17	(1.3)
Estonia	39.0	(1.5)	1.50	(0.04)	11	(0.8)	1.62	(0.10)	2	(0.3)	1.43	(0.07)	3	(0.5)	1.76	(0.07)	28	(2.0)
Finland	24.8	(0.9)	1.84	(0.07)	17	(1.2)	2.08	(0.12)	4	(0.5)	2.27	(0.17)	3	(0.5)	2.57	(0.09)	44	(1.5)
France	40.8	(1.4)	1.92	(0.05)	19	(0.9)	1.82	(0.06)	8	(0.6)	1.67	(0.06)	8	(0.8)	1.48	(0.05)	19	(1.5)
Germany	40.7	(1.3)	2.13	(0.08)	22	(1.2)	2.22	(0.06)	12	(0.6)	1.73	(0.05)	11	(0.7)	1.47	(0.04)	19	(1.4)
Greece	46.9	(1.9)	1.67	(0.04)	14	(0.8)	1.57	(0.04)	8	(0.6)	1.56	(0.07)	5	(0.6)	1.54	(0.04)	21	(1.2)
Hungary	41.3	(1.5)	2.17	(0.07)	23	(1.1)	1.94	(0.05)	20	(0.9)	0.88	(0.08)	0	(0.2)	1.48	(0.05)	19	(1.6)
Iceland	39.0	(0.8)	1.49	(0.04)	11	(0.8)	1.53	(0.05)	5	(0.4)	1.94	(0.09)	2	(0.2)	1.62	(0.05)	23	(1.4)
Ireland	40.5	(1.3)	1.85	(0.06)	18	(1.0)	1.74	(0.05)	7	(0.5)	1.39	(0.07)	3	(0.6)	1.47	(0.05)	19	(1.7)
Israel	49.0	(1.3)	1.75	(0.05)	16	(0.9)	1.83	(0.05)	5	(0.3)	1.05	(0.04)	1	(0.8)	1.38	(0.04)	16	(1.3)
Italy	45.1	(0.8)	1.69	(0.02)	15	(0.4)	1.56	(0.02)	12	(0.3)	1.69	(0.03)	4	(0.2)	1.58	(0.03)	23	(1.1)
Japan	31.6	(1.4)	1.79	(0.05)	16	(0.8)	2.03	(0.15)	2	(0.3)	c	c	c	c	1.67	(0.09)	26	(2.7)
Korea	21.2	(1.4)	2.26	(0.11)	24	(1.6)	2.32	(0.14)	8	(0.8)	c	c	c	c	2.07	(0.18)	36	(4.1)
Luxembourg	50.0	(0.6)	1.84	(0.03)	17	(0.5)	1.74	(0.04)	13	(0.6)	1.50	(0.03)	17	(0.8)	1.32	(0.02)	14	(0.7)
Mexico	73.1	(0.8)	1.30	(0.01)	7	(0.2)	1.33	(0.01)	14	(0.5)	1.33	(0.01)	1	(0.0)	1.13	(0.01)	6	(0.4)
Netherlands	39.1	(2.7)	1.72	(0.04)	15	(0.8)	1.66	(0.07)	5	(0.6)	1.63	(0.09)	7	(1.1)	1.32	(0.04)	14	(1.4)
New Zealand	33.7	(1.0)	1.98	(0.06)	20	(1.1)	1.51	(0.07)	10	(1.2)	1.23	(0.05)	5	(1.1)	1.67	(0.05)	25	(1.4)
Norway	38.6	(1.2)	1.70	(0.06)	15	(1.1)	1.82	(0.10)	2	(0.2)	1.66	(0.06)	4	(0.4)	1.75	(0.06)	28	(1.5)
Poland	39.5	(1.3)	1.75	(0.05)	16	(0.9)	1.72	(0.06)	18	(1.3)	c	c	c	c	1.81	(0.05)	29	(1.4)
Portugal	44.0	(1.6)	1.67	(0.04)	14	(0.7)	1.79	(0.05)	28	(1.3)	1.37	(0.06)	2	(0.3)	1.50	(0.03)	20	(0.9)
Slovak Republic	50.3	(1.3)	1.60	(0.04)	13	(0.8)	1.83	(0.08)	1	(0.2)	c	c	c	c	1.64	(0.03)	24	(1.0)
Slovenia	46.8	(0.6)	1.65	(0.04)	14	(0.7)	1.41	(0.04)	14	(1.2)	1.48	(0.04)	4	(0.3)	1.70	(0.03)	26	(0.8)
Spain	46.4	(1.1)	1.61	(0.04)	13	(0.7)	1.54	(0.04)	14	(1.0)	1.66	(0.03)	6	(0.3)	1.36	(0.02)	15	(0.9)
Sweden	40.9	(1.3)	1.78	(0.04)	16	(0.8)	1.56	(0.04)	7	(0.5)	1.71	(0.05)	8	(0.8)	1.59	(0.03)	23	(0.9)
Switzerland	39.5	(1.0)	1.81	(0.04)	17	(0.7)	1.79	(0.04)	10	(0.5)	1.63	(0.04)	13	(0.7)	1.54	(0.04)	22	(1.2)
Turkey	56.7	(1.8)	1.56	(0.03)	12	(0.7)	1.93	(0.07)	43	(1.8)	c	c	c	c	1.43	(0.05)	18	(1.7)
United Kingdom	43.3	(1.1)	1.75	(0.03)	16	(0.6)	1.62	(0.06)	2	(0.3)	1.19	(0.04)	2	(0.5)	1.29	(0.03)	12	(1.2)
United States	42.0	(1.5)	1.83	(0.06)	17	(1.0)	1.65	(0.06)	4	(0.4)	1.27	(0.04)	5	(0.8)	1.28	(0.04)	12	(1.5)
OECD average	42.8	(0.2)	1.76	(0.04)	16	(0.8)	1.72	(0.01)	9	(0.1)	1.50	(0.07)	4	(0.5)	1.54	(0.05)	21	(1.4)
Other G20																		
Argentina	77.0	(1.7)	1.31	(0.02)	7	(0.4)	1.27	(0.02)	8	(0.5)	1.12	(0.03)	0	(0.1)	1.13	(0.01)	5	(0.6)
Brazil	76.7	(1.1)	1.26	(0.01)	6	(0.3)	1.22	(0.02)	13	(1.0)	1.25	(0.03)	0	(0.0)	1.10	(0.01)	5	(0.6)
Indonesia	87.7	(1.6)	1.10	(0.02)	2	(0.4)	1.15	(0.02)	7	(0.8)	c	c	c	c	1.12	(0.01)	6	(0.6)
Russian Federation	58.9	(1.4)	1.41	(0.03)	9	(0.6)	1.45	(0.04)	1	(0.1)	1.20	(0.04)	2	(0.4)	1.41	(0.04)	17	(1.2)
Shanghai-China	17.3	(1.1)	2.22	(0.15)	23	(2.2)	2.01	(0.12)	21	(2.0)	c	c	c	c	2.36	(0.13)	40	(2.3)

1. Relative risk refers to the risk associated with being a member of a potentially vulnerable sub-population (e.g. immigrant students) compared with the risk associated with not being a member of the potentially vulnerable sub-population (e.g. non-immigrant students).

2. Population relevance expresses the proportion of the total prevalence of an outcome, such as low reading scores, that is associated with membership in the potentially vulnerable population.

Source: OECD, PISA 2009 Database.

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


StatLink  <http://dx.doi.org/10.1787/888932466158>

Table D6.4. Reading scores below PISA proficiency Level 2, age 15 (PISA 2009)
Results based on students' performance and self-reports

	Percent of students with reading scores below Level 2		Low socio-economic status (low vs. high)				Low parental education (low vs. high)				Immigrant status (immigrant vs. non-immigrant)				Gender (boys vs. girls)			
			Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²	
	%	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD																		
Australia	14.2	(0.6)	2.50	(0.08)	27	(1.1)	1.97	(0.07)	12	(0.7)	0.93	(0.05)	-2	(1.1)	2.17	(0.08)	36	(1.5)
Austria	27.6	(1.3)	2.27	(0.09)	24	(1.3)	2.52	(0.13)	7	(0.6)	2.16	(0.11)	15	(1.4)	1.74	(0.08)	27	(2.3)
Belgium	17.7	(0.9)	2.84	(0.11)	31	(1.4)	2.43	(0.16)	8	(0.8)	2.52	(0.13)	18	(1.4)	1.56	(0.08)	22	(2.5)
Canada	10.3	(0.5)	2.12	(0.10)	22	(1.6)	2.37	(0.23)	4	(0.7)	1.25	(0.07)	6	(1.6)	2.39	(0.12)	41	(2.0)
Chile	30.6	(1.5)	2.07	(0.07)	21	(1.1)	2.01	(0.07)	19	(1.2)	c	c	c	c	1.46	(0.05)	19	(1.6)
Czech Republic	23.1	(1.3)	2.09	(0.07)	21	(1.1)	1.44	(0.05)	8	(0.8)	1.43	(0.19)	1	(0.4)	2.16	(0.12)	38	(2.5)
Denmark	15.2	(0.9)	2.46	(0.12)	27	(1.6)	2.48	(0.24)	9	(1.3)	2.77	(0.18)	13	(1.2)	1.66	(0.10)	25	(2.7)
Estonia	13.3	(1.0)	1.72	(0.10)	15	(1.8)	1.88	(0.24)	2	(0.7)	1.82	(0.15)	6	(1.1)	2.58	(0.21)	45	(3.4)
Finland	8.1	(0.5)	2.18	(0.20)	23	(3.1)	2.83	(0.42)	7	(1.4)	3.92	(0.48)	7	(1.2)	4.07	(0.41)	61	(3.3)
France	19.8	(1.2)	2.68	(0.13)	30	(1.7)	2.43	(0.12)	14	(1.0)	2.19	(0.17)	14	(1.9)	1.82	(0.07)	28	(1.6)
Germany	18.5	(1.1)	3.07	(0.13)	34	(1.4)	3.29	(0.13)	21	(1.0)	2.24	(0.11)	18	(1.2)	1.89	(0.10)	31	(2.3)
Greece	21.3	(1.8)	2.37	(0.11)	25	(1.5)	2.20	(0.09)	16	(1.1)	2.05	(0.17)	9	(1.4)	2.25	(0.12)	38	(2.4)
Hungary	17.6	(1.4)	3.53	(0.22)	39	(2.2)	2.70	(0.19)	31	(2.4)	0.69	(0.14)	-1	(0.3)	2.09	(0.19)	35	(3.9)
Iceland	16.8	(0.6)	1.87	(0.11)	18	(1.9)	1.97	(0.14)	9	(1.1)	2.75	(0.23)	4	(0.5)	2.41	(0.14)	41	(2.5)
Ireland	17.2	(1.0)	2.40	(0.10)	26	(1.4)	2.05	(0.11)	10	(0.9)	1.87	(0.14)	7	(1.0)	2.06	(0.14)	35	(3.1)
Israel	26.5	(1.2)	2.22	(0.08)	23	(1.1)	2.36	(0.10)	8	(0.6)	0.99	(0.05)	0	(0.9)	1.77	(0.06)	27	(1.6)
Italy	21.0	(0.6)	2.17	(0.06)	23	(0.8)	1.86	(0.05)	18	(0.8)	2.42	(0.08)	7	(0.5)	2.28	(0.07)	40	(1.5)
Japan	13.6	(1.1)	2.02	(0.12)	20	(1.9)	2.16	(0.29)	2	(0.5)	c	c	c	c	2.36	(0.18)	41	(3.3)
Korea	5.8	(0.8)	3.49	(0.26)	38	(2.6)	3.75	(0.39)	15	(1.8)	c	c	c	c	3.65	(0.48)	58	(4.7)
Luxembourg	26.0	(0.6)	2.57	(0.12)	28	(1.6)	2.35	(0.08)	21	(1.1)	2.16	(0.07)	32	(1.4)	1.72	(0.09)	27	(2.3)
Mexico	40.1	(1.0)	1.80	(0.03)	17	(0.5)	1.82	(0.03)	29	(0.8)	2.15	(0.07)	2	(0.2)	1.36	(0.02)	15	(0.7)
Netherlands	14.3	(1.5)	1.72	(0.10)	15	(1.7)	1.77	(0.17)	6	(1.3)	1.76	(0.22)	8	(2.4)	1.67	(0.09)	25	(2.6)
New Zealand	14.3	(0.7)	2.57	(0.16)	28	(2.1)	1.68	(0.10)	13	(1.7)	1.39	(0.09)	9	(1.9)	2.64	(0.13)	46	(2.0)
Norway	15.0	(0.8)	2.32	(0.11)	25	(1.6)	2.42	(0.33)	3	(0.6)	2.26	(0.21)	8	(1.3)	2.57	(0.14)	44	(2.3)
Poland	15.0	(0.8)	2.44	(0.12)	26	(1.6)	2.20	(0.10)	27	(1.7)	c	c	c	c	3.05	(0.22)	51	(2.6)
Portugal	17.6	(1.2)	2.26	(0.12)	24	(1.7)	2.22	(0.13)	38	(2.4)	1.49	(0.13)	3	(0.7)	2.29	(0.13)	39	(2.4)
Slovak Republic	22.2	(1.2)	2.18	(0.11)	23	(1.7)	3.35	(0.22)	4	(0.5)	c	c	c	c	2.56	(0.13)	44	(2.0)
Slovenia	21.2	(0.6)	2.13	(0.07)	22	(1.1)	1.55	(0.05)	18	(1.4)	1.79	(0.12)	6	(0.8)	2.92	(0.14)	49	(1.8)
Spain	19.6	(0.9)	2.26	(0.08)	24	(1.2)	1.98	(0.08)	23	(1.5)	2.26	(0.10)	11	(0.8)	1.68	(0.06)	26	(1.6)
Sweden	17.4	(0.9)	2.61	(0.11)	29	(1.4)	2.10	(0.12)	12	(1.2)	2.51	(0.14)	15	(1.5)	2.31	(0.13)	40	(2.4)
Switzerland	16.8	(0.9)	2.49	(0.10)	27	(1.3)	2.32	(0.08)	15	(0.8)	2.30	(0.13)	23	(1.8)	1.93	(0.09)	32	(2.0)
Turkey	24.5	(1.4)	2.30	(0.12)	24	(1.8)	2.76	(0.34)	58	(4.9)	c	c	c	c	2.23	(0.13)	39	(2.6)
United Kingdom	18.4	(0.8)	2.31	(0.11)	25	(1.5)	2.03	(0.16)	4	(0.6)	1.42	(0.12)	4	(1.2)	1.65	(0.07)	24	(2.0)
United States	17.6	(1.1)	2.43	(0.14)	26	(1.9)	1.90	(0.13)	6	(0.8)	1.29	(0.09)	5	(1.5)	1.57	(0.10)	23	(3.1)
OECD average	18.8	(0.2)	2.37	(0.11)	25	(1.6)	2.27	(0.03)	15	(0.2)	2.02	(0.48)	7	(1.0)	2.19	(0.13)	36	(2.4)
Other G20																		
Argentina	51.6	(1.9)	1.68	(0.05)	15	(0.8)	1.54	(0.04)	14	(0.8)	1.31	(0.07)	1	(0.2)	1.30	(0.02)	12	(0.9)
Brazil	49.6	(1.3)	1.53	(0.02)	12	(0.4)	1.27	(0.03)	16	(1.3)	1.86	(0.09)	1	(0.1)	1.30	(0.02)	12	(0.6)
Indonesia	53.4	(2.3)	1.27	(0.03)	6	(0.7)	1.40	(0.05)	17	(1.7)	c	c	c	c	1.57	(0.05)	22	(1.4)
Russian Federation	27.4	(1.3)	1.83	(0.06)	17	(1.1)	1.87	(0.19)	2	(0.4)	1.39	(0.08)	4	(0.9)	1.95	(0.09)	32	(2.0)
Shanghai-China	4.1	(0.5)	2.64	(0.22)	29	(2.7)	2.03	(0.24)	21	(3.9)	c	c	c	c	4.19	(0.45)	61	(3.4)

1. Relative risk refers to the risk associated with being a member of a potentially vulnerable sub-population (e.g. immigrant students) compared with the risk associated with not being a member of the potentially vulnerable sub-population (e.g. non-immigrant students).

2. Population relevance expresses the proportion of the total prevalence of an outcome, such as low reading scores, that is associated with membership in the potentially vulnerable population.

Source: OECD, PISA 2009 Database.

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


StatLink  <http://dx.doi.org/10.1787/888932466177>

Table D6.5. **Student does not value schooling outcomes (PISA 2009)**

Results based on students' self-reports

	Percent of students who do not value schooling outcomes		Low socio-economic status (low vs. high)				Low parental education (low vs. high)				Immigrant status (immigrant vs. non-immigrant)				Gender (boys vs. girls)				
			Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²		
			%	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	
OECD																			
Australia	19.0	(0.4)	1.31	(0.03)	7	(0.6)	1.34	(0.04)	5	(0.5)	1.00	(0.03)	0	(0.6)	1.06	(0.02)	3	(1.0)	
Austria	26.3	(0.9)	1.04	(0.03)	1	(0.8)	0.95	(0.08)	0	(0.4)	0.78	(0.04)	-4	(0.7)	1.19	(0.03)	8	(1.3)	
Belgium	24.9	(0.6)	1.00	(0.03)	0	(0.7)	0.94	(0.04)	0	(0.2)	0.97	(0.03)	0	(0.5)	1.20	(0.03)	9	(1.1)	
Canada	21.7	(0.4)	1.13	(0.02)	3	(0.5)	0.97	(0.05)	0	(0.2)	0.84	(0.02)	-4	(0.6)	1.21	(0.02)	10	(0.9)	
Chile	17.9	(0.6)	0.99	(0.04)	0	(0.9)	1.00	(0.04)	0	(1.0)	c	c	c	c	0.95	(0.03)	-3	(1.6)	
Czech Republic	29.0	(0.8)	0.95	(0.02)	-1	(0.6)	0.89	(0.03)	-2	(0.6)	1.11	(0.08)	0	(0.2)	1.17	(0.03)	8	(1.3)	
Denmark	22.9	(0.7)	1.38	(0.04)	9	(0.8)	1.56	(0.07)	3	(0.4)	1.01	(0.04)	0	(0.4)	1.19	(0.04)	9	(1.5)	
Estonia	19.4	(0.7)	1.11	(0.05)	3	(1.2)	0.78	(0.19)	-1	(0.5)	0.92	(0.05)	-1	(0.4)	1.42	(0.05)	18	(1.7)	
Finland	20.0	(0.6)	1.49	(0.04)	11	(0.8)	1.40	(0.09)	2	(0.4)	0.75	(0.09)	-1	(0.3)	1.68	(0.05)	25	(1.4)	
France	22.5	(0.9)	1.22	(0.04)	5	(1.0)	1.21	(0.06)	2	(0.6)	0.92	(0.04)	-1	(0.6)	1.56	(0.05)	21	(1.4)	
Germany	30.4	(0.8)	0.85	(0.03)	-4	(0.7)	0.93	(0.04)	-1	(0.5)	0.90	(0.03)	-2	(0.6)	1.29	(0.03)	13	(1.3)	
Greece	37.4	(1.0)	0.77	(0.02)	-6	(0.5)	0.74	(0.03)	-4	(0.5)	0.72	(0.04)	-3	(0.4)	1.07	(0.03)	3	(1.1)	
Hungary	21.9	(0.8)	1.06	(0.04)	1	(1.1)	0.98	(0.04)	-1	(1.1)	0.80	(0.08)	0	(0.2)	1.28	(0.04)	12	(1.7)	
Iceland	23.1	(0.7)	1.45	(0.05)	10	(1.0)	1.45	(0.06)	4	(0.5)	0.83	(0.10)	0	(0.2)	1.36	(0.04)	15	(1.5)	
Ireland	19.5	(0.7)	1.34	(0.06)	8	(1.2)	1.19	(0.08)	2	(0.8)	0.93	(0.07)	-1	(0.6)	1.16	(0.04)	8	(1.7)	
Israel	31.0	(0.9)	0.95	(0.03)	-1	(0.7)	0.83	(0.05)	-1	(0.3)	1.19	(0.04)	4	(0.6)	1.27	(0.04)	12	(1.4)	
Italy	20.8	(0.4)	0.98	(0.02)	-1	(0.5)	0.91	(0.02)	-2	(0.4)	1.01	(0.04)	0	(0.2)	1.42	(0.03)	18	(0.9)	
Japan	45.6	(0.7)	1.10	(0.02)	3	(0.4)	0.96	(0.05)	0	(0.1)	c	c	c	c	1.13	(0.02)	6	(0.8)	
Korea	42.9	(0.9)	0.89	(0.02)	-3	(0.6)	0.91	(0.03)	-1	(0.2)	c	c	c	c	0.99	(0.02)	0	(1.1)	
Luxembourg	32.3	(0.7)	0.86	(0.02)	-4	(0.5)	0.87	(0.02)	-3	(0.5)	0.69	(0.02)	-14	(0.9)	1.32	(0.03)	14	(1.1)	
Mexico	12.6	(0.3)	1.27	(0.03)	6	(0.7)	1.26	(0.03)	11	(1.1)	2.33	(0.14)	2	(0.3)	1.54	(0.04)	21	(1.2)	
Netherlands	24.7	(0.8)	1.00	(0.03)	0	(0.7)	0.95	(0.06)	0	(0.5)	1.02	(0.06)	0	(0.7)	1.26	(0.04)	11	(1.5)	
New Zealand	17.2	(0.6)	1.44	(0.06)	10	(1.1)	1.39	(0.06)	8	(1.1)	0.84	(0.03)	-4	(0.8)	1.16	(0.05)	8	(2.0)	
Norway	33.6	(0.8)	1.26	(0.03)	6	(0.8)	1.39	(0.08)	1	(0.1)	0.88	(0.03)	-1	(0.2)	1.15	(0.03)	7	(1.1)	
Poland	37.3	(0.9)	0.89	(0.02)	-3	(0.5)	0.87	(0.02)	-4	(0.6)	c	c	c	c	1.21	(0.02)	9	(1.0)	
Portugal	12.4	(0.5)	1.13	(0.05)	3	(1.1)	0.95	(0.04)	-3	(2.0)	1.18	(0.09)	1	(0.5)	1.70	(0.07)	26	(1.8)	
Slovak Republic	25.9	(0.8)	1.01	(0.04)	0	(0.9)	0.88	(0.10)	0	(0.2)	c	c	c	c	1.40	(0.05)	16	(1.6)	
Slovenia	25.0	(0.7)	0.99	(0.04)	0	(0.9)	1.01	(0.02)	1	(0.9)	1.06	(0.05)	0	(0.4)	1.35	(0.04)	15	(1.4)	
Spain	19.7	(0.5)	1.16	(0.03)	4	(0.8)	1.08	(0.03)	3	(0.8)	1.00	(0.04)	0	(0.4)	1.55	(0.04)	22	(1.3)	
Sweden	28.3	(0.8)	1.20	(0.03)	5	(0.7)	1.15	(0.05)	2	(0.6)	0.94	(0.04)	-1	(0.5)	1.34	(0.03)	15	(1.3)	
Switzerland	28.1	(0.8)	0.98	(0.03)	0	(0.7)	0.90	(0.03)	-1	(0.4)	0.82	(0.02)	-4	(0.6)	1.37	(0.04)	16	(1.3)	
Turkey	19.8	(0.7)	0.81	(0.04)	-5	(1.0)	0.62	(0.02)	-44	(3.5)	c	c	c	c	1.28	(0.04)	13	(1.6)	
United Kingdom	18.5	(0.5)	1.52	(0.05)	11	(0.9)	1.25	(0.08)	1	(0.3)	1.04	(0.05)	0	(0.5)	0.95	(0.03)	-3	(1.5)	
United States	18.9	(0.6)	1.21	(0.03)	5	(0.7)	1.01	(0.06)	0	(0.4)	0.84	(0.03)	-3	(0.7)	1.31	(0.04)	14	(1.6)	
OECD average	25.0	(0.1)	1.11	(0.03)	2	(0.8)	1.05	(0.01)	-1	(0.2)	1.10	(0.07)	-1	(0.4)	1.28	(0.04)	12	(1.4)	
Other G20																			
Argentina	21.7	(0.7)	0.87	(0.04)	-3	(1.0)	0.82	(0.03)	-6	(1.0)	0.86	(0.09)	0	(0.3)	1.19	(0.04)	8	(1.7)	
Brazil	12.1	(0.5)	0.90	(0.03)	-3	(0.9)	0.91	(0.03)	-7	(2.2)	1.87	(0.22)	1	(0.2)	1.38	(0.04)	15	(1.3)	
Indonesia	7.8	(0.5)	1.15	(0.07)	4	(1.6)	0.98	(0.05)	-1	(2.8)	c	c	c	c	1.49	(0.08)	19	(2.7)	
Russian Federation	15.7	(0.5)	0.92	(0.04)	-2	(1.2)	0.99	(0.14)	0	(0.3)	1.00	(0.06)	0	(0.7)	1.42	(0.05)	17	(1.8)	
Shanghai-China	35.5	(0.7)	0.94	(0.02)	-1	(0.6)	0.91	(0.02)	-2	(0.6)	c	c	c	c	1.08	(0.02)	4	(0.9)	

1. Relative risk refers to the risk associated with being a member of a potentially vulnerable sub-population (e.g. immigrant students) compared with the risk associated with not being a member of the potentially vulnerable sub-population (e.g. non-immigrant students).

2. Population relevance expresses the proportion of the total prevalence of an outcome, such as low reading scores, that is associated with membership in the potentially vulnerable population.

Source: OECD, PISA 2009 Database.

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


StatLink  <http://dx.doi.org/10.1787/888932466196>

Table D6.6. Student attends a school with negative student-teacher relations (PISA 2009)

Results based on students' self-reports


	Percent of students attending a school with negative student-teacher relations		Low socio-economic status (low vs. high)				Low parental education (low vs. high)				Immigrant status (immigrant vs. non-immigrant)				Gender (boys vs. girls)			
			Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²		Relative risk ¹		Population relevance ²	
	%	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.	R.R.	S.E.	P.A.R. (%)	S.E.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD																		
Australia	19.7	(0.4)	1.43	(0.03)	10	(0.7)	1.32	(0.04)	4	(0.5)	0.83	(0.02)	-4	(0.6)	1.18	(0.02)	8	(1.0)
Austria	29.1	(1.0)	0.96	(0.03)	-1	(0.8)	1.02	(0.09)	0	(0.4)	0.92	(0.04)	-1	(0.7)	1.18	(0.04)	8	(1.5)
Belgium	23.2	(0.6)	0.96	(0.03)	-1	(0.7)	0.84	(0.04)	-1	(0.3)	0.99	(0.04)	0	(0.5)	1.21	(0.03)	10	(1.3)
Canada	15.3	(0.4)	1.15	(0.03)	4	(0.6)	1.07	(0.07)	0	(0.2)	0.86	(0.03)	-3	(0.7)	1.17	(0.03)	8	(1.1)
Chile	22.4	(0.9)	0.95	(0.03)	-1	(0.9)	0.96	(0.03)	-1	(0.8)	c	c	c	c	1.11	(0.03)	5	(1.5)
Czech Republic	30.2	(0.9)	0.85	(0.02)	-4	(0.7)	0.86	(0.03)	-3	(0.6)	0.79	(0.06)	0	(0.1)	1.25	(0.04)	12	(1.6)
Denmark	19.0	(0.7)	1.46	(0.04)	10	(0.8)	1.65	(0.08)	4	(0.5)	1.12	(0.04)	1	(0.4)	1.04	(0.04)	2	(1.7)
Estonia	22.4	(0.7)	0.98	(0.03)	0	(0.9)	1.01	(0.09)	0	(0.3)	1.17	(0.06)	1	(0.5)	1.34	(0.04)	15	(1.7)
Finland	27.8	(0.8)	1.25	(0.03)	6	(0.7)	1.23	(0.06)	1	(0.2)	0.81	(0.07)	0	(0.2)	1.18	(0.03)	8	(1.1)
France	28.5	(0.9)	1.03	(0.03)	1	(0.8)	0.90	(0.04)	-1	(0.4)	1.16	(0.05)	2	(0.6)	1.37	(0.04)	15	(1.4)
Germany	27.7	(0.9)	0.91	(0.03)	-2	(0.8)	0.96	(0.04)	-1	(0.5)	1.02	(0.04)	0	(0.6)	1.25	(0.04)	11	(1.4)
Greece	32.6	(0.8)	0.86	(0.03)	-4	(0.7)	0.81	(0.03)	-3	(0.5)	0.98	(0.04)	0	(0.4)	1.29	(0.03)	12	(1.2)
Hungary	22.1	(0.8)	0.97	(0.04)	-1	(1.0)	0.93	(0.04)	-2	(1.1)	1.04	(0.09)	0	(0.2)	1.29	(0.04)	13	(1.6)
Iceland	21.3	(0.8)	1.25	(0.04)	6	(0.9)	1.30	(0.06)	3	(0.6)	0.51	(0.09)	-1	(0.2)	1.30	(0.04)	13	(1.5)
Ireland	25.8	(0.9)	1.42	(0.04)	10	(0.8)	1.34	(0.05)	4	(0.5)	0.98	(0.05)	0	(0.4)	1.08	(0.04)	4	(1.7)
Israel	28.8	(0.9)	0.92	(0.03)	-2	(0.7)	0.85	(0.04)	-1	(0.3)	1.04	(0.03)	1	(0.5)	1.33	(0.03)	14	(1.2)
Italy	25.7	(0.4)	0.89	(0.02)	-3	(0.4)	0.88	(0.02)	-3	(0.4)	0.95	(0.03)	0	(0.2)	1.39	(0.02)	17	(0.7)
Japan	41.4	(0.8)	1.17	(0.02)	4	(0.5)	1.32	(0.06)	1	(0.1)	c	c	c	c	1.09	(0.02)	5	(0.8)
Korea	30.6	(0.8)	1.07	(0.03)	2	(0.7)	1.02	(0.05)	0	(0.3)	c	c	c	c	1.09	(0.03)	4	(1.3)
Luxembourg	30.5	(0.7)	0.79	(0.02)	-6	(0.6)	0.80	(0.03)	-4	(0.6)	0.81	(0.02)	-8	(1.0)	1.31	(0.03)	14	(1.0)
Mexico	20.1	(0.3)	0.96	(0.02)	-1	(0.5)	0.90	(0.02)	-5	(0.9)	1.64	(0.09)	1	(0.2)	1.30	(0.02)	13	(0.8)
Netherlands	22.5	(0.8)	0.96	(0.03)	-1	(0.8)	1.06	(0.06)	0	(0.5)	1.18	(0.05)	2	(0.6)	1.10	(0.03)	5	(1.5)
New Zealand	17.2	(0.6)	1.36	(0.05)	8	(1.1)	1.20	(0.05)	4	(1.1)	0.81	(0.03)	-5	(0.8)	1.19	(0.05)	9	(1.9)
Norway	32.7	(0.8)	1.24	(0.03)	6	(0.6)	1.40	(0.09)	1	(0.2)	0.95	(0.04)	0	(0.2)	1.15	(0.03)	7	(1.2)
Poland	38.2	(0.9)	1.03	(0.02)	1	(0.6)	0.92	(0.02)	-3	(0.6)	c	c	c	c	1.18	(0.02)	8	(1.0)
Portugal	11.2	(0.5)	0.82	(0.04)	-5	(1.2)	0.82	(0.04)	-10	(2.3)	1.29	(0.11)	2	(0.6)	1.70	(0.08)	26	(2.2)
Slovak Republic	24.7	(1.0)	1.01	(0.04)	0	(0.9)	1.09	(0.12)	0	(0.2)	c	c	c	c	1.26	(0.04)	11	(1.6)
Slovenia	40.5	(0.6)	0.93	(0.02)	-2	(0.5)	0.92	(0.02)	-3	(0.7)	0.91	(0.03)	-1	(0.3)	0.99	(0.02)	-1	(0.9)
Spain	26.6	(0.6)	0.97	(0.02)	-1	(0.5)	0.97	(0.02)	-1	(0.7)	0.88	(0.03)	-1	(0.3)	1.47	(0.03)	19	(1.0)
Sweden	19.6	(0.7)	1.21	(0.05)	5	(1.2)	1.13	(0.06)	2	(0.7)	1.13	(0.06)	2	(0.6)	1.34	(0.04)	15	(1.6)
Switzerland	21.9	(0.7)	1.03	(0.03)	1	(0.8)	1.00	(0.03)	0	(0.5)	1.12	(0.03)	3	(0.7)	1.51	(0.04)	21	(1.3)
Turkey	16.7	(0.7)	0.87	(0.04)	-3	(1.0)	0.70	(0.03)	-31	(4.8)	c	c	c	c	1.57	(0.05)	23	(1.6)
United Kingdom	19.0	(0.7)	1.35	(0.05)	8	(1.0)	1.25	(0.08)	1	(0.3)	0.83	(0.06)	-2	(0.7)	1.04	(0.03)	2	(1.4)
United States	15.3	(0.5)	1.30	(0.04)	7	(1.0)	1.11	(0.07)	1	(0.5)	0.81	(0.04)	-4	(0.9)	1.20	(0.04)	9	(1.8)
OECD average	25.0	(0.1)	1.07	(0.03)	1	(0.8)	1.05	(0.01)	-1	(0.2)	1.03	(0.06)	-1	(0.4)	1.25	(0.03)	11	(1.4)
Other G20																		
Argentina	23.4	(1.0)	0.59	(0.03)	-11	(1.0)	0.70	(0.03)	-10	(1.1)	0.83	(0.07)	-1	(0.2)	1.10	(0.04)	4	(1.6)
Brazil	18.3	(0.6)	0.84	(0.03)	-4	(0.7)	0.89	(0.02)	-8	(1.9)	1.78	(0.27)	1	(0.2)	1.22	(0.03)	9	(1.3)
Indonesia	13.1	(0.6)	0.98	(0.05)	-1	(1.2)	0.86	(0.03)	-8	(1.9)	c	c	c	c	1.15	(0.04)	7	(2.0)
Russian Federation	19.0	(0.6)	0.90	(0.03)	-2	(0.8)	1.12	(0.12)	0	(0.2)	1.02	(0.05)	0	(0.6)	1.34	(0.04)	14	(1.5)
Shanghai-China	14.5	(0.6)	1.41	(0.06)	9	(1.2)	1.22	(0.05)	5	(1.2)	c	c	c	c	1.23	(0.04)	10	(1.7)

1. Relative risk refers to the risk associated with being a member of a potentially vulnerable sub-population (e.g. immigrant students) compared with the risk associated with not being a member of the potentially vulnerable sub-population (e.g. non-immigrant students).

2. Population relevance expresses the proportion of the total prevalence of an outcome, such as low reading scores, that is associated with membership in the potentially vulnerable population.

Source: OECD, PISA 2009 Database.

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

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