2

Examining local, global and intercultural issues

This chapter explores students' ability to examine issues of local, global and cultural significance. In particular, it examines students' self-efficacy regarding and awareness of global issues, as well as their performance on the global competence test related to this first dimension, while highlighting differences among students related to their socio-economic background and circumstances.

What the data tell us

- When it comes to students' awareness of global issues, students in Albania, Greece, Lithuania, Malta, Portugal and the United Arab Emirates scored substantially higher than the OECD average, while students in Argentina, Brunei Darussalam, Indonesia, Malaysia, Romania, Saudi Arabia and Viet Nam scored substantially lower than the OECD average.
- Students in Albania, the Dominican Republic, Germany, Peru and the United Arab Emirates reported the highest level of self-efficacy regarding global issues, scoring substantially higher than the OECD average. By contrast, students in Indonesia, Kosovo, Morocco, the Republic of North Macedonia, Romania, Saudi Arabia, the Slovak Republic and Viet Nam scored lower than the OECD average.
- The largest proportions of correct answers in the cognitive test examining local, global and intercultural issues were observed in Canada, Croatia, Hong Kong (China), Israel[1], Korea, Latvia, Scotland (United Kingdom), Singapore, the Slovak Republic, Spain and Chinese Taipei. In all of these countries and economies, the proportion of correct answers exceeded the overall average of 38%.

The first dimension of global competence focuses on students' ability to combine knowledge about the world and critical understanding whenever they form opinions about a local or global issue. In the European Reference Framework of Competencies for Democratic Culture, knowledge is defined as "the body of information that is possessed by a person, while understanding is the comprehension and appreciation of meanings. The term "critical understanding" is used to emphasise the need for the comprehension and appreciation of meanings in the context of democratic processes and intercultural dialogue to involve active reflection on and critical evaluation of that which is being understood and interpreted (as opposed to automatic, habitual and unreflective interpretation)" (Council of Europe, 2018[1]). Similarly, in the OECD global competence framework (OECD, 2018[2]), students who are proficient in this dimension are able to combine their knowledge of global and intercultural issues with critical reasoning to form an informed opinion about a particular issue. People who acquire a mature level of development in this dimension use higher-order thinking skills, such as selecting and weighing appropriate evidence to reason about global developments. They can also draw on the disciplinary knowledge and modes of thinking they have acquired in school and beyond to ask questions, select and analyse evidence, explain phenomena and develop a position on local and global issues. Proficiency in this dimension also requires media literacy, as students should be able to identify, access, analyse and critically evaluate the validity of media content from different sources (Buckingham, 2007[3]; Kellner and Share, 2005[4]).

Knowledge and critical understanding cover a number of issues.

Knowledge and critical understanding of economics, the environment and long-term sustainability include understanding poverty, economic development and how it affects the natural environment, and the relationship between employment, production, working conditions, profits, migration and how they are related to globalisation (Imoto, 2015[5]).

Knowledge and critical understanding of culture cover understanding how people's cultural affiliation shapes their worldviews, identity, perceptions, beliefs, practices and behaviours. It also encompasses the understanding that, within a cultural group, people come from diverse backgrounds and are constantly evolving and changing. Such knowledge allows students to understand how cultural stereotypes, power structures, discriminatory practices and institutional barriers between and within groups have the potential to disempower individuals (Huber et al., 2014[6]; UNESCO, 2006[7]; Boix Mansilla, V & Jackson, A.,2011[8]).

Knowledge and critical understanding of history include understanding the history of different groups, countries and regions and how interpretations of the past vary across groups and over time. They also involve understanding the process of historical investigation and how facts are selected and used, as well as the need to access alternative sources of information because the narrative of marginalised groups is often overlooked (Nordgren, 2017[9]).

Knowledge and critical understanding of the media focus on knowing and understanding the process through which the mass media select, edit and interpret information, in addition to knowledge of the mass media as commodities that involve producers and consumers and how relations between them are shaped by various motives, intentions and purposes. They also cover understanding the accuracy of information and how inaccurate information, propaganda and hate speech are produced and can be identified (Kellner and Share, 2005[4]; Buckingham, 2007[3]).

As mentioned in Chapter 1, in PISA 2018 the first dimension of global competence was assessed using the cognitive test and questions in the student questionnaire that focused on awareness of and self-efficacy regarding global issues. This chapter examines results from 37 test items focusing on this dimension and 2 questions from the student questionnaire.

STUDENTS' AWARENESS OF GLOBAL ISSUES

Students' awareness of global issues[2] was assessed using one question in the PISA 2018 student questionnaire. Students were asked to report the extent to which they are aware of global issues. Answers were given on a four-point scale: "I have never heard of this"; "I have heard about this but I would not be able to explain what it is really about"; "I know something about this and could explain the general issue"; and "I am familiar with this and I would be able to explain this well". They responded to statements about seven issues: climate change and global warning; global health; migration; international conflicts; hunger or malnutrition in different parts of the world; causes of poverty; and equality between men and women in different parts of the world. Answers were used to construct the index of awareness of global issues. Positive values in this index mean that the student expressed a greater awareness about global issues than the average student across OECD countries.

Figure VI.2.1 presents the average of the index of student awareness of global issues. The findings show wide variations between countries/economies in terms of their students' awareness of global issues. Students in Albania, Greece, Lithuania, Malta, Portugal and the United Arab Emirates scored substantially higher than the OECD average, while those in Argentina, Brunei Darussalam, Indonesia, Malaysia, Romania, Saudi Arabia and Viet Nam scored substantially lower than the OECD average. Large variations in awareness of global issues were also observed within countries/economies (Table VI.B1.2.1), with Albania, Baku (Azerbaijan), Bulgaria, the Dominican Republic, Jordan, Kazakhstan, Kosovo, Montenegro, the Philippines and the United Arab Emirates showing the greatest dispersion in the index among their students. Such variations could be related to the socio-economic profile of students, but also to their exposure to activities aimed to help them develop the knowledge and skills needed to thrive in an interconnected world. Those associations will be explored in more detail throughout this volume.

Most of the variation in the index of awareness of global issues was observed within schools (Table VI.B1.2.1). In most countries and economies, less than 10% of the variation in the index was observed between schools. However, in Austria, Brunei Darussalam, Kosovo, Lebanon, the Republic of North Macedonia (hereafter "North Macedonia"), Saudi Arabia and the United Arab Emirates, between 10% and 18% of the variation in the index was observed between schools. In Baku (Azerbaijan), Ireland, New Zealand and Chinese Taipei, only small between-school variations (less than 2%) were found.

Findings also show some significant differences in awareness of global issues related to students' socio-demographic profiles. In 45 of 65 countries and economies that took the questionnaire, girls showed significantly greater awareness of global issues than boys. This gender gap was largest in Albania, Jordan, Kazakhstan, Kosovo, Montenegro, North Macedonia and Saudi Arabia, while it was non-significant in 19 countries and economies, including Hong Kong (China), Iceland, Israel, Scotland (United Kingdom), Singapore and Chinese Taipei. The only country where boys exhibited greater awareness of global issues than girls was Korea. Moreover, in all countries and economies, students from advantaged backgrounds (those in the top quarter of the PISA index of economic, social and cultural status) showed greater awareness of global issues than students from disadvantaged backgrounds (those in the bottom quarter of the index). These differences were markedly large in Australia, Austria, Belarus, Brazil, Brunei Darussalam, Bulgaria, Iceland, Jordan, Korea, Lebanon, Lithuania, Malta, the Republic of Moldova (hereafter "Moldova"), New Zealand, North Macedonia, Panama, the Philippines, Saudi Arabia, the Slovak Republic, Ukraine and the United Arab Emirates. Such differences in awareness related to socio-economic status might be the result of unequal access to opportunities at school to learn about global issues, resulting from measures that separate or sort students, such as grade repetition and early selection.

Differences in awareness of global issues were also observed between immigrant and native-born students, even after accounting for students' and schools' socio-economic profile. Positive differences in favour of immigrants were observed in 17 of the 34 countries and economies where more than 5% of all students had an immigrant background. The reverse was observed only in Lebanon. The largest differences in awareness of global issues in favour of immigrant students were in Brunei Darussalam, Ireland, Saudi Arabia, Scotland (United Kingdom) and the United Arab Emirates.

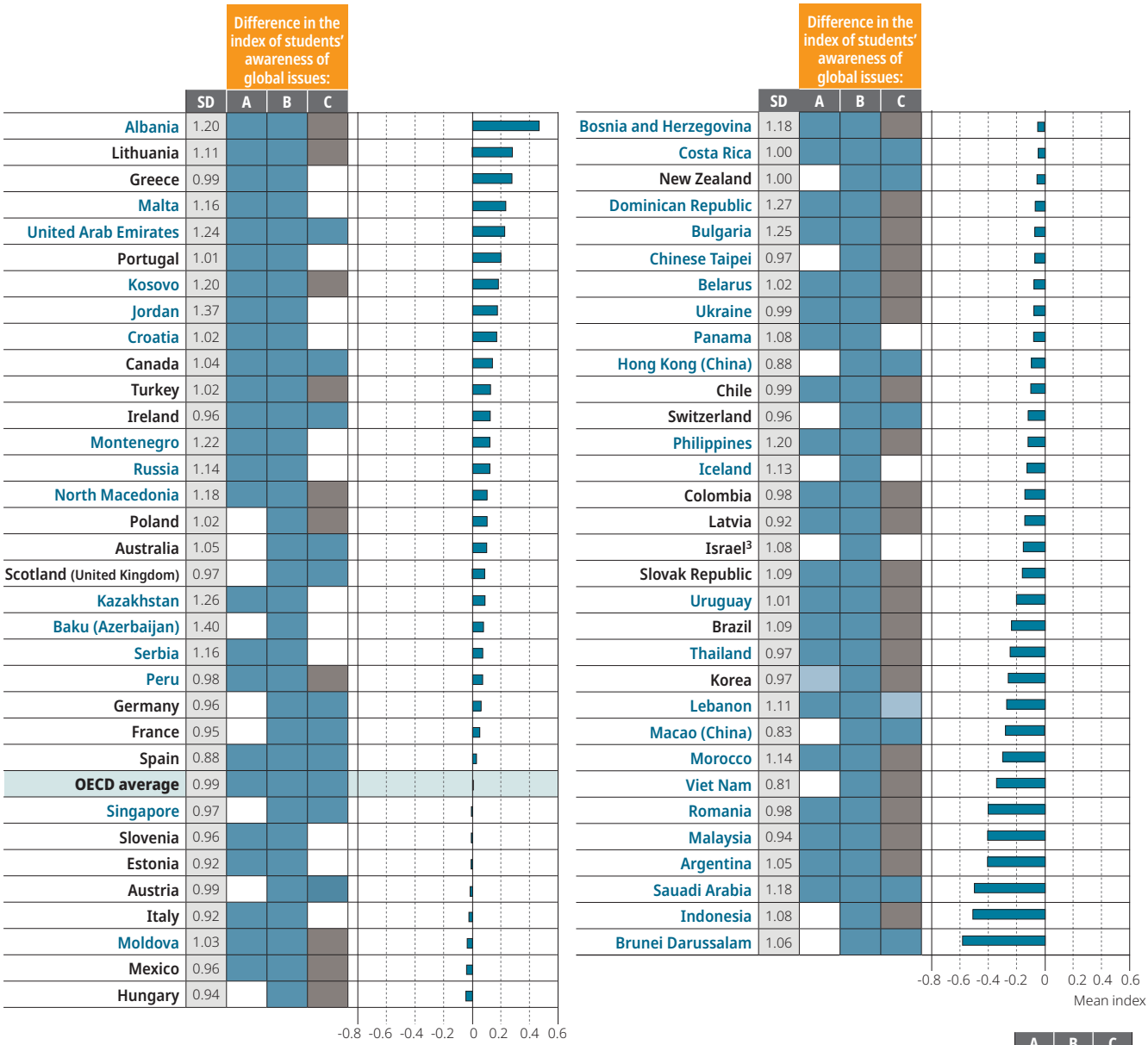
When looking at individual questionnaire items, on average across OECD countries, students reported that they are most familiar with issues related to gender equality: 83% of students reported that they know about the topic or are very familiar with it (Figure VI.2.2). Students are also familiar with migration, climate change, causes of poverty and hunger and malnutrition in different parts of the world: about 78% reported being familiar with those topics. The two topics with which students were the least familiar were global health issues, such as pandemics, and international conflicts. Some 65% of students reported being familiar with each of these two issues

Figure VI.2.1 **Students' awareness of global issues**

Average, dispersion and variation, by students' socio-demographic profile

Positive difference | Negative difference | Difference is not significant | Missing values

A Girls – boys | B Top - Bottom quarter of ESCS | C Immigrant - non-immigrant students[1,2]



	A	B	C
Countries/economies with a positive difference	45	65	17
Countries/economies with no difference	19	0	16
Countries/economies with a negative difference	1	0	1

1. After accounting for students' and schools' socio-economic profile. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).

2. Differences between immigrant and non-immigrant students are only presented for countries and economies where more than 5% of students have an immigrant background. The values for countries/economies with smaller proportions of immigrant students are reported as missing.

3. The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

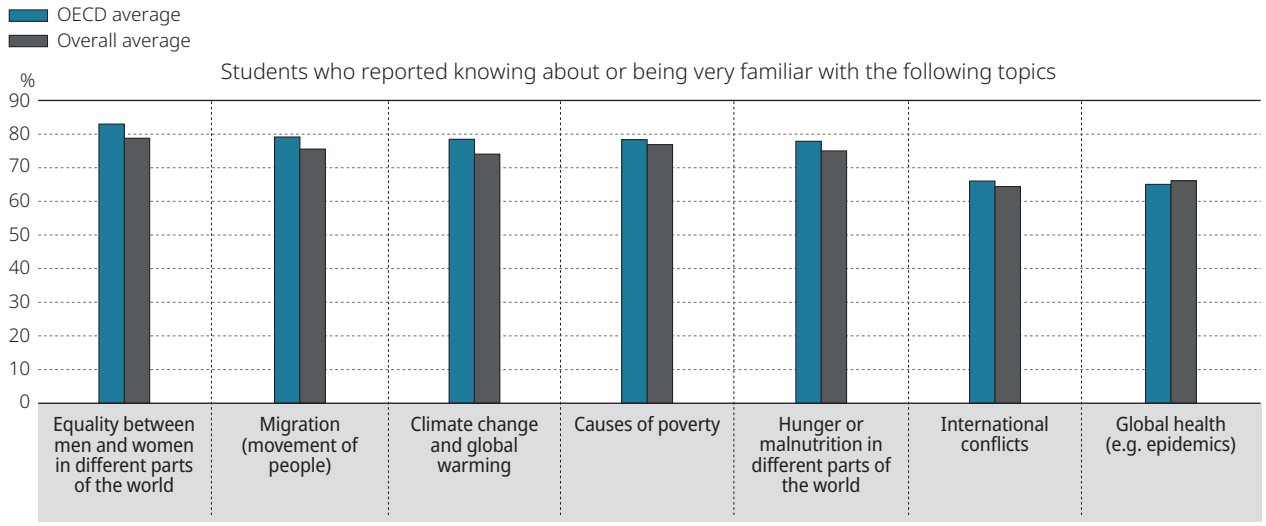
Countries and economies are ranked in descending order of the index of students' awareness of global issues.

Source: OECD, PISA 2018 Database, Tables VI.B1.2.1 and VI.B1.2.3.

StatLink https://doi.org/10.1787/888934169310

Figure VI.2.2 **Students' awareness of global issues, by topic**

OECD and overall averages



Source: OECD, PISA 2018 Database, Table VI.B1.2.1.
StatLink https://doi.org/10.1787/888934169329

Box VI.2.1. **Who is an immigrant student?**

In PISA 2018, students were classified into several categories based on their immigrant background and that of their parents. This chapter is concerned with two categories of students:

Non-immigrant students: Students whose mother or father (or both) was/were born in the country/economy where the student sat the PISA test, regardless of whether the student himself/herself was born in that country or economy.

Immigrant students: Students whose mother and father were both born in a country/economy other than that where the student sat the PISA test. Among immigrant students, a distinction was made between first- and second-generation students, based on whether the student was born in or outside the country/economy of assessment.

- **First-generation immigrant students** are foreign-born students whose parents are both foreign-born.
- **Second-generation immigrant students** are students born in the country/economy of assessment whose parents are both foreign-born.

When it comes to awareness of public health issues such as pandemics, students in Albania, France, Greece, Hong Kong (China), Lithuania, Portugal, the Russian Federation (hereafter "Russia"), Chinese Taipei and Ukraine were the most aware of those issues, while students in Argentina, Austria, Brunei Darussalam, Indonesia, Korea, Lebanon, Saudi Arabia and the Slovak Republic were the least aware (Figure VI.2.3).

One area of concern for policy makers and educators is the polarisation of students' attitudes, beliefs and knowledge. One key issue of contention is climate change. In spite of the well-established body of scientific knowledge on the topic, climate change is still disputed (Corner, Whitmarsh and Xenias, 2012[10]). The topic itself is complex, as it covers an extensive body of multi-disciplinary evidence interwoven with social and human issues in addition to scientific and technical issues. People disagree about the reality, seriousness and consequences of climate change because it means different things to different people. Such understanding depends on an awareness of the issues at stake and reflects differences in personal values and political ideologies (Powell et al., 2007[11]). The impact of arguments and evidence on people's attitudes is influenced by the perceived reliability of the source of information (Hahn, Harris and Corner, 2009[12]), the level of personal involvement an individual has with a particular issue, personal traits (such as the degree of openness to new ideas) and previously held attitudes about a topic (Kruglanski, Webster and Klem, 1993[13]). Such predispositions have the tendency to reinforce and polarise attitudes and even knowledge. The polarisation of attitudes is not unique to climate change. It extends to many other topics of global significance, such as migration, poverty and international conflicts, and it could even affect knowledge about those topics.

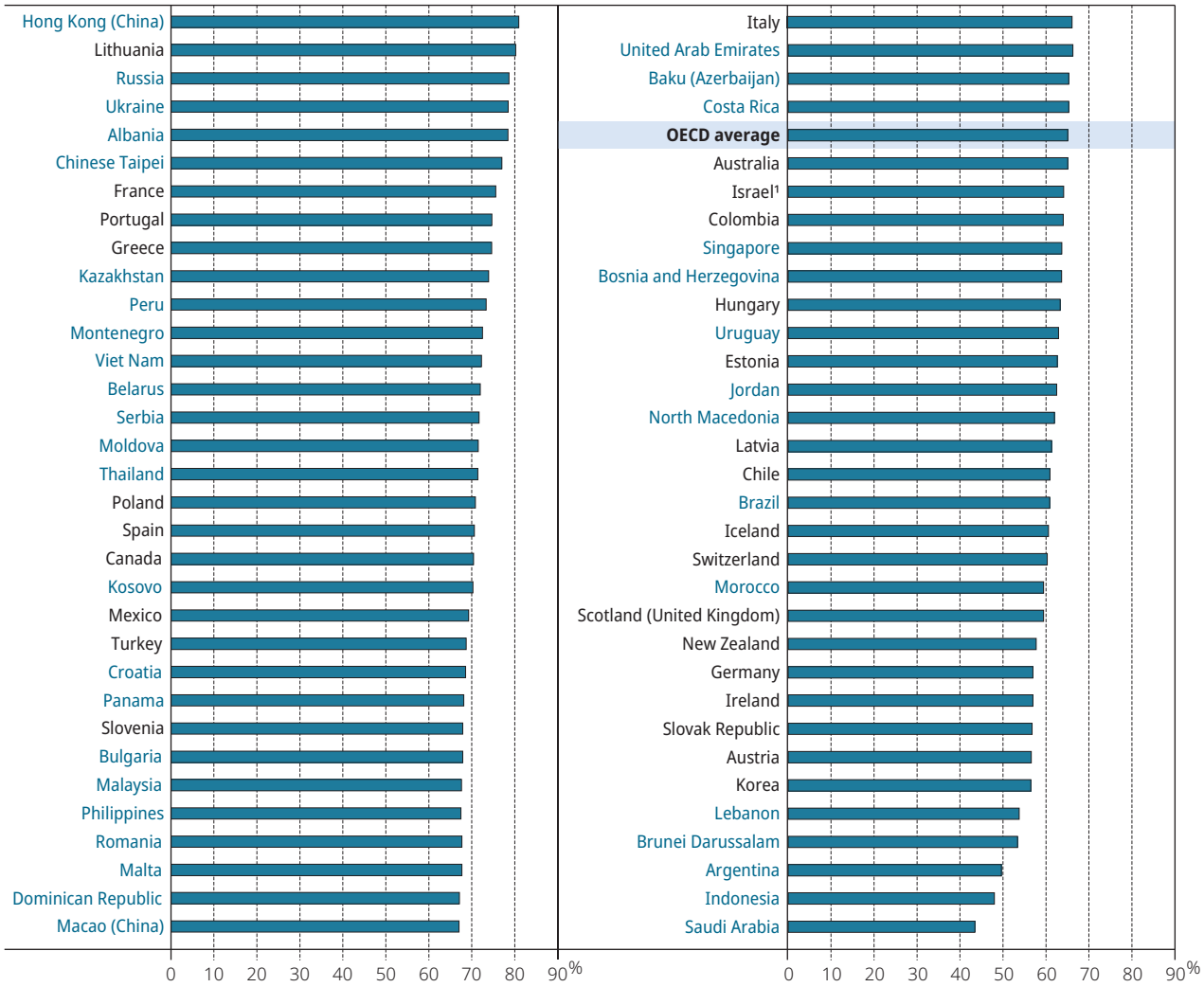
Figure VI.2.4 shows the average of the index of awareness of global issues by quarter of the index itself. Wider dispersions indicate greater polarisation of awareness among students. Polarisation could be identified in two scenarios:

- as large gaps between the second and third quarters, combined with smaller gaps between the first and second quarters and between the third and fourth quarters
- as small gaps between the second and third quarters, combined with large gaps between the first and second quarters and between the third and fourth quarters.

The findings show that, in most countries, there was a certain level of polarisation in line with the second scenario, where the average index for the top and bottom quarters was substantially distant from the average for the two middle quarters. In other words, students in the bottom quarter tended to be substantially less aware of global issues than those in the second quarter, and those in the top quarter were substantially more aware than those in the third quarter. In contrast, students in the second and third quarters tended to be more similar in their levels of awareness. In Baku (Azerbaijan), Bosnia and Herzegovina, Bulgaria, the Dominican Republic, Jordan, Kazakhstan, Montenegro, the Philippines, Russia and Serbia, differences were particularly large between students in the bottom and second quarters and between those in the third and top quarters.

Figure VI.2.3 **Students' awareness of public health issues such as pandemics**

Based on students' reports



1. The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

Source: OECD, PISA 2018 Database, Table VI.B1.2.1.

StatLink https://doi.org/10.1787/888934169348

Figure VI.2.4 **Polarisation of students' awareness of global issues**

Average of the index of students' awareness of global issues, by quarter of the index

1. The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

Countries and economies are ranked in descending order of difference between the top and bottom quarters on the index of students' awareness of global issues.

Source: OECD, PISA 2018 Database, Table VI.B1.2.3.

StatLink https://doi.org/10.1787/888934169367

Box VI.2.2. **Parents' awareness of global issues and how it is related to their children's awareness**

The transmission of attitudes and interests between parents and children works through two processes, socialisation and enculturation. Socialisation involves shaping individuals to become adapted to their social environment and includes practices such as parenting. Enculturation consists of an explicit and deliberate learning process that helps people adopt the identity, language, rituals and values that will enable them to become full members of a certain culture. Through both mechanisms, whether formal or informal, children are likely to be influenced by the attitudes and practices of their parents.

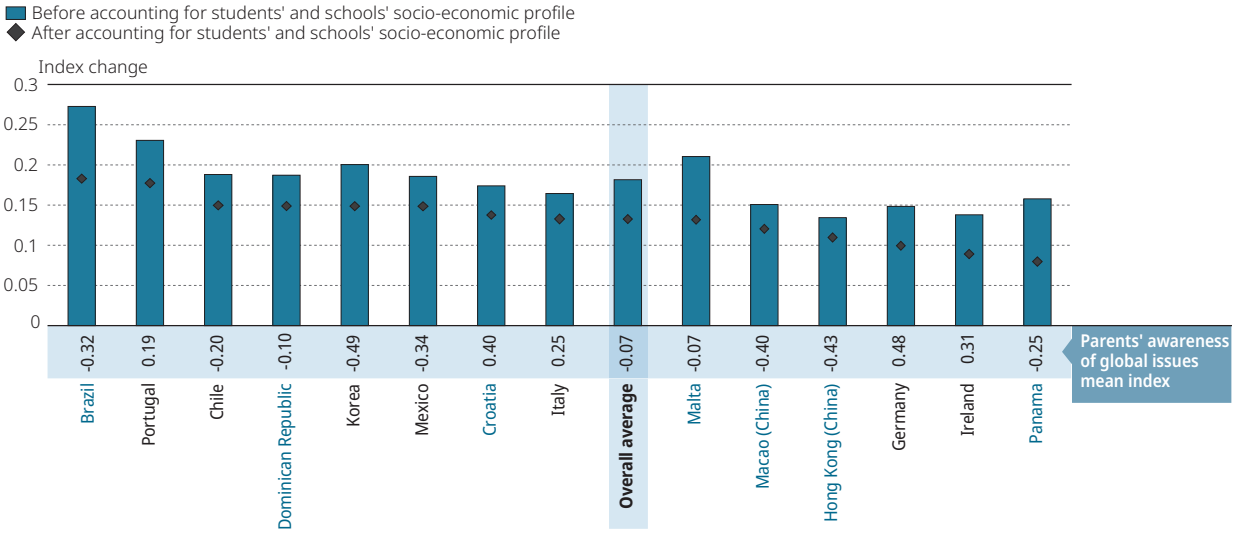
While there is abundant literature on social mobility focusing on the intergenerational transmission of social status, wealth and human capital (Black, Devereux and Salvanes, 2005[14]), there is a lack of evidence on the transmission of certain attitudes and behaviours, especially those related to global or intercultural issues. This box examines students' awareness of global issues in light of their parents' awareness of the same issues.

In 14 countries, parents were asked to fill out a questionnaire. One of the questions enquired about parents' awareness of global issues, using the same questions that were asked of their children. Parents had to respond to statements about seven issues: climate change and global warning; global health; migration; international conflicts; hunger or malnutrition in different parts of the world; causes of poverty; and gender equality. Answers were given on a four-point scale: "I have never heard of this"; "I have heard about this but I would not be able to explain what it is really about"; "I know something about this and I could explain the general issue"; and "I am familiar with this and I would be able to explain this well". Answers to these statements were combined to construct the index of parents' awareness of global issues. Positive values in the index indicate that parents expressed a greater sense of awareness of global issues than the average parent across OECD countries.

The findings show that the parents of students in Croatia, Germany, Ireland and Italy were more aware of global issues than the parents of students in Brazil, Chile, Hong Kong (China), Korea, Macao (China), Mexico and Panama (Table VI.B1.2.9). Students' awareness of global issues was also found to be positively associated with levels of awareness of global issues among parents across all participating countries and economies, even after accounting for students' and schools' socio-economic profile (Figure VI.2.5). These findings indicate some intergenerational transmission of attitudes that go beyond the direct effect of socio-economic status. In other words, regardless of their socio-economic background, parents may impart certain interests and knowledge to their children and, arguably, may reinforce attitudes that their children develop though their learning activities and experiences at school. The strongest associations were observed in Brazil, Chile, the Dominican Republic, Korea, Mexico and Portugal.

Figure VI.2.5 **Students' and parents' awareness of global issues**

Change in students' awareness of global issues associated with a one-unit increase in the index of parents' awareness of global issues.



Note: 1. The socio-demographic profile is measured by the PISA index of economic, social and cultural status (ESCS).

Countries and economies are ranked in descending order of the change in the index of students' awareness of global issues associated with a one-unit increase in the index of parents' awareness of global issues, after accounting for gender, immigrant background, and students' and schools' socio-economic profile.

Source: OECD, PISA 2018 Database, Table VI.B1.2.9.

StatLink https://doi.org/10.1787/888934169386

SELF-EFFICACY REGARDING GLOBAL ISSUES

Self-efficacy as defined in PISA describes students' confidence in their ability to achieve the desired results through their actions (Bandura, 1978[15]). PISA has traditionally asked students to judge their capabilities in specific content areas, such as mathematics or science. In 2018, PISA asked students about their general sense of efficacy regarding particular global competence tasks. Students are more likely to set challenging goals, exert effort and persist in the face of failure and adversity when they are confident they can succeed (Ozer and Bandura, 1990[16]). Conversely, students who lack self-efficacy are likely to believe that putting more effort into performing a task is a waste of time. This, in turn, undermines incentives to persevere and makes success less likely (Bandura, 1999[17]; Wigfield and Eccles, 2000[18]; Bandura et al., 2001[19]; OECD, 2013[20]).

Students in PISA 2018 were asked to report the extent to which they could do certain global competence-related tasks on their own. Answers were given on a four-point scale: "I could not do this"; "I would struggle to do this on my own"; "I could do this with a bit of effort"; and "I could do this easily". Students responded to the following prompts: "Explain how carbon-dioxide emissions affect global climate change"; "Establish a connection between prices of textiles and working conditions in the countries of production"; "Discuss the different reasons why people become refugees"; "Explain why some countries suffer from more global climate change than others"; "Explain how economic crises in single countries affect the global economy"; and "Discuss the consequences of economic development on the environment". Answers were combined to create the index of self-efficacy regarding global competence. Positive values in this index mean that the student expressed greater self-efficacy than the average student across OECD countries.

The students who sat the PISA 2018 test expressed confidence in their ability to deal with global competence tasks covering a wide range of issues, such as climate change, migration and working conditions in developing countries. Students in Albania, the Dominican Republic, Germany, Peru and the United Arab Emirates reported the highest level of self-efficacy regarding global issues, scoring substantially higher than the OECD average. By contrast, students in Indonesia, Kosovo, Morocco, North Macedonia, Romania, Saudi Arabia, the Slovak Republic and Viet Nam scored lower than the average (Figure VI.2.6). Large variations in students' self-efficacy regarding global issues were also observed within countries/economies. The largest variations between students were found in Baku (Azerbaijan), Bosnia and Herzegovina, the Dominican Republic, Jordan, Kazakhstan and Montenegro; the smallest were observed in Brunei Darussalam, Malaysia, Mexico, Peru and Viet Nam, indicating more homogeneity in the distribution of those attitudes among students (Table VI.B1.2.4).

As with the index of awareness of global issues, variations between schools largely exceed variations within schools on the index of students' self-efficacy regarding global issues (Table VI.B1.2.4). On average across OECD countries, 4.5% of the total variation was observed between schools. Brazil, Germany, Malaysia, North Macedonia, the Slovak Republic, Ukraine and Viet Nam showed the largest between-school variations, ranging between 7% and 9% of the total variation.[3]

In 22 of 65 countries and economies that distributed the global competence questionnaire, girls showed greater self-efficacy regarding global issues than boys; the reverse was true in 17 countries. The largest differences in favour of girls were observed in Albania, Jordan, Saudi Arabia and Turkey; the largest differences in favour of boys were observed in Hungary, Malta, New Zealand and Scotland (United Kingdom). When considering students' socio-economic status, the findings show that students in the top quarter of the PISA index of economic, social and cultural status showed greater self-efficacy regarding global issues than students in the bottom quarter of that index. The largest differences were observed in Austria, Germany, Iceland, Korea, New Zealand and Scotland (United Kingdom); the smallest were observed in Chile, Colombia, the Dominican Republic, Italy, Mexico, Thailand, Uruguay and Viet Nam (Table VI.B1.2.6).

Immigrant students in 15 of 34 countries and economies with more than 5% immigrant students enrolled in their schools exhibited greater self-efficacy regarding global issues than non-immigrant students, even after accounting for students' and schools' socio-economic profile. The reverse was observed only in Iceland. Countries and economies with the largest differences in reported self-efficacy regarding global issues in favour of immigrant students are Australia, Canada, France, Ireland, Malta, Scotland (United Kingdom) and the United Arab Emirates.

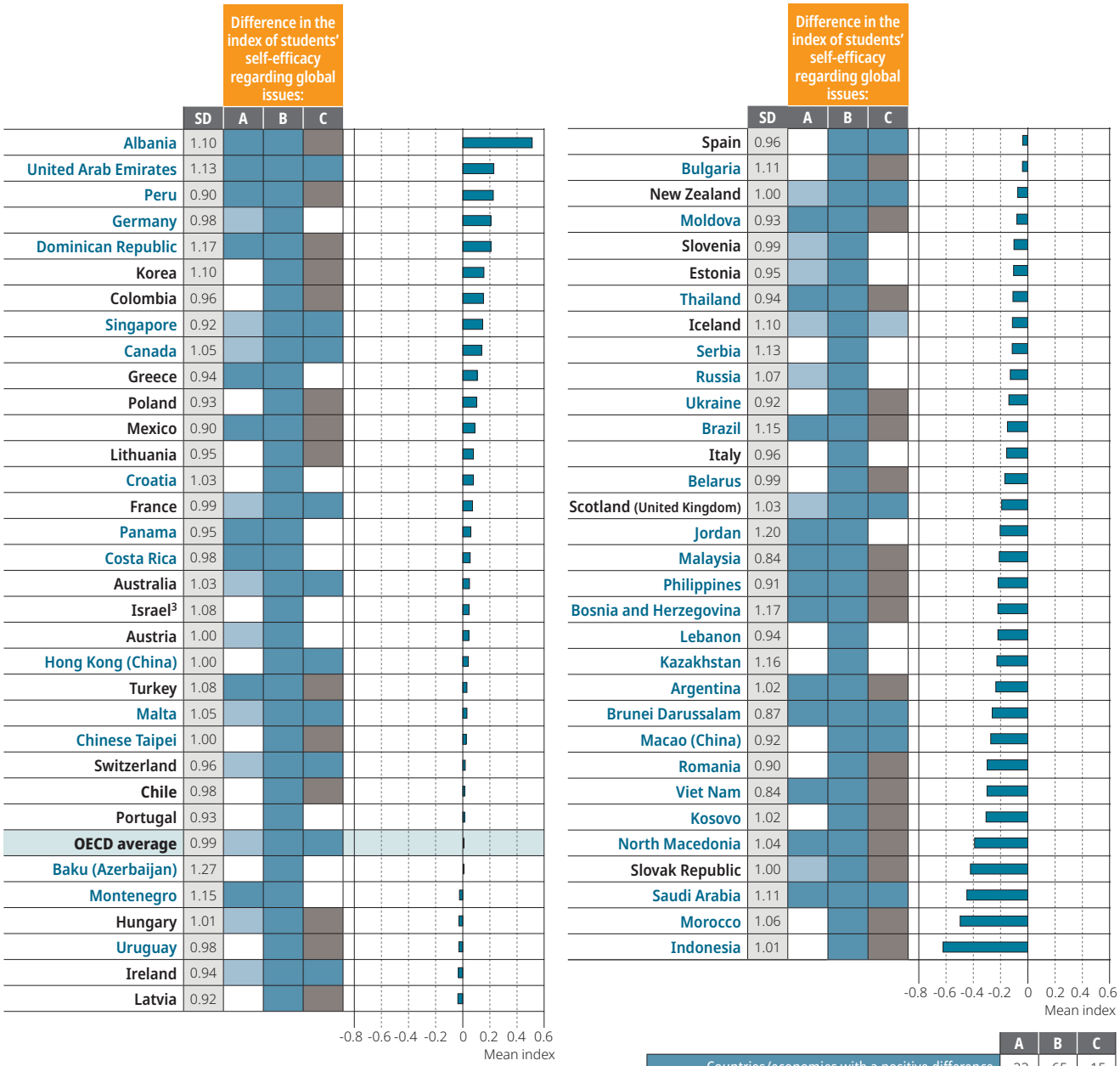
Of the six questions about self-efficacy regarding global issues, students responded that they are the most confident in discussing the different reasons why people become refugees. Some 77% of students across OECD countries reported that they can do this task easily or with some effort, as opposed to not being able or struggling to do it. Some 72% of students reported feeling confident when explaining why some countries suffer more from climate change than others. Some 63% of students reported feeling confident when explaining how carbon-dioxide emissions affect global climate change. Students were less confident when it came to explaining how economic crises in single countries affect the global economy (61% of students reported that they could do this easily or with some effort) and were less confident in establishing a connection between prices of textiles and working conditions in the countries of production (58% of students so reported). One possible reason for these differences is that students may be more familiar with topics covered extensively in the media, such as the refugee crisis and global warming, than with topics requiring more specific technical knowledge (Figure VI.2.7).

Figure VI.2.6 **Students' self-efficacy regarding global issues**

Average, dispersion and variations by students' socio-demographic profile

Positive difference | Negative difference | Difference is not significant | Missing values

A Girls – boys | B Top - Bottom quarter of ESCS | C Immigrant - non-immigrant students[1,2]



	A	B	C
Countries/economies with a positive difference	22	65	15
Countries/economies with no difference	26	0	18
Countries/economies with a negative difference	17	0	1

1. After accounting for students' and schools' socio-economic profile. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).

2. Differences between immigrant and non-immigrant students are only presented for countries and economies where more than 5% of students have an immigrant background. Values for countries/economies with smaller proportions of immigrant students are reported as missing.

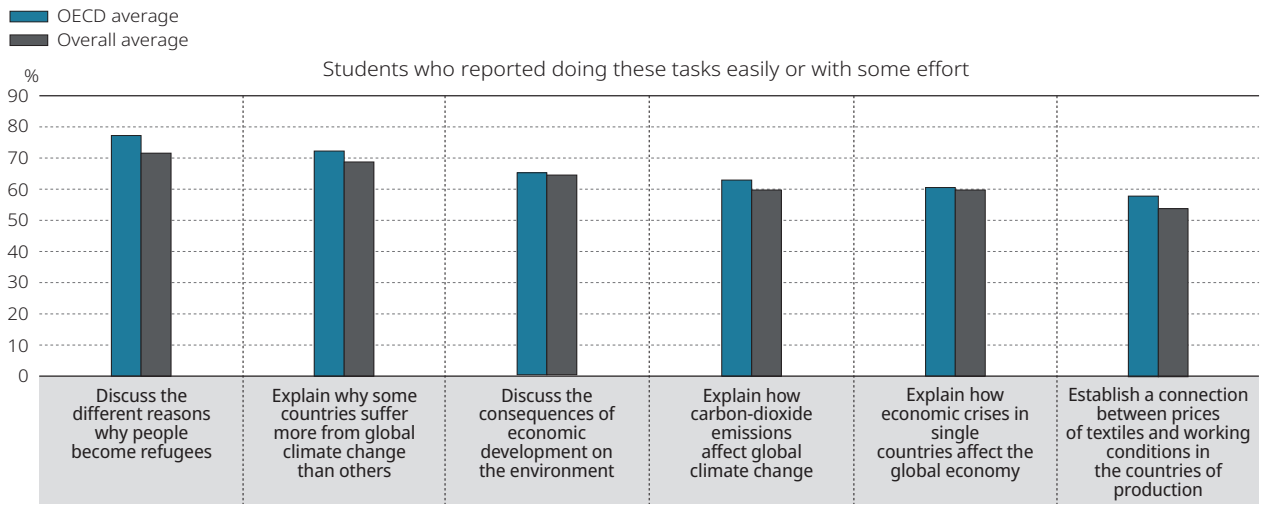
3. The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

Countries and economies are ranked in descending order of the index of students' awareness of global issues.

Source: OECD, PISA 2018 Database, Tables VI.B1.2.4 and VI.B1.2.6.

StatLink https://doi.org/10.1787/888934169405

Figure VI.2.7 **Students' self-efficacy regarding global issues, by task**



Source: OECD, PISA 2018 Database, Table VI.B1.2.4.

StatLink https://doi.org/10.1787/888934169424

Figure VI.2.8 **Polarisation of students' self-efficacy regarding global issues**

1. The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

Countries and economies are ranked in descending order of difference between top and bottom quarters on the index of students' self-efficacy regarding global issues.

Source: OECD, PISA 2018 Database, Table VI.B1.2.6.

StatLink https://doi.org/10.1787/888934169443

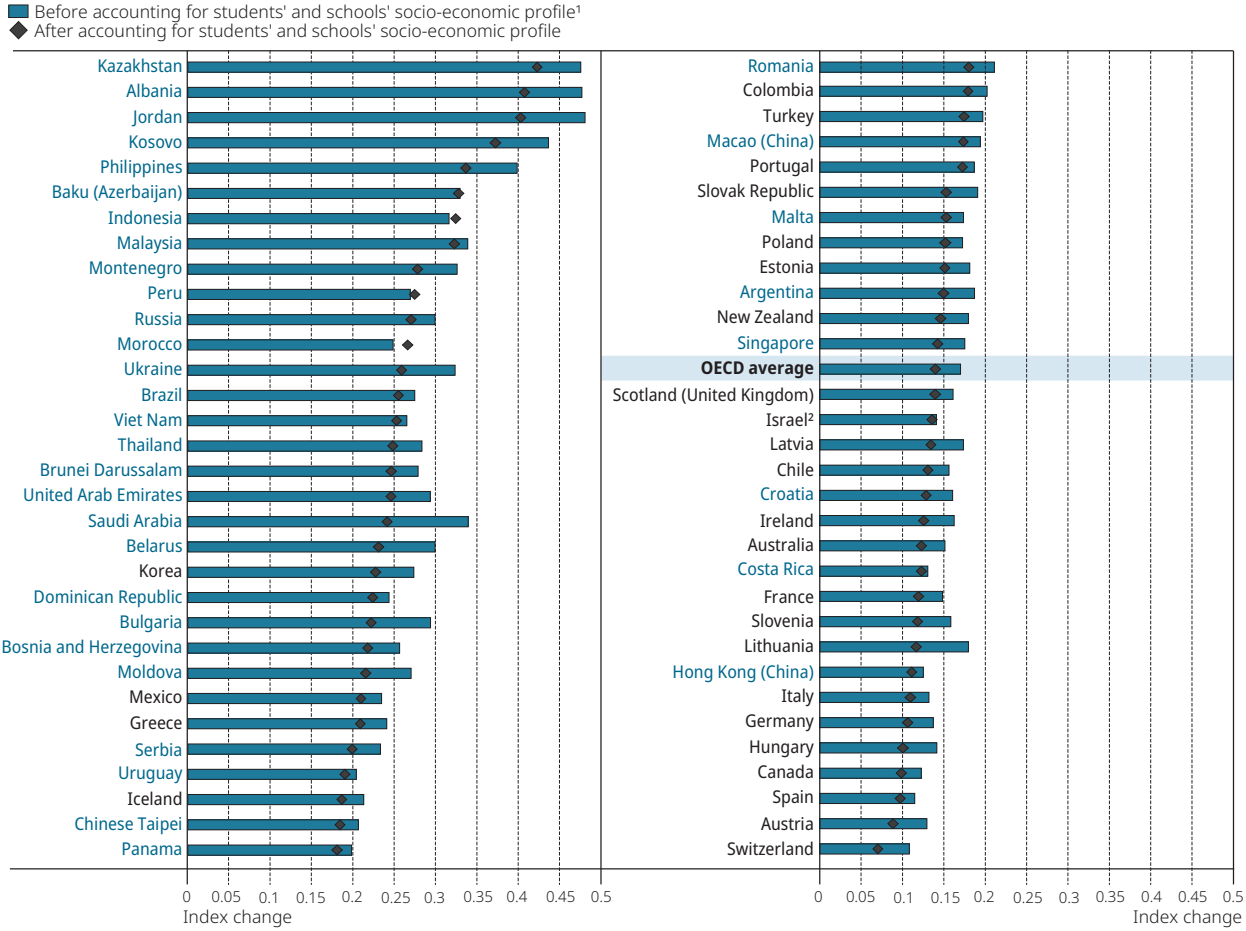
As with the index of awareness of global issues, some polarisation was observed among students when considering their self-efficacy regarding global issues (Figure VI.2.8). Results show that students in the bottom quarter of the index tended to report less self-efficacy regarding global issues than those in the second quarter, and those in the third quarter also tended to report substantially less self-efficacy than those in the top quarter. In other words, students in the top and bottom quarters of the index tended to report substantially different levels of awareness than those in the two middle quarters (Table VI.B1.2.6). In Baku (Azerbaijan), Bosnia and Herzegovina, Brazil, the Dominican Republic, Iceland, Korea, Montenegro and Saudi Arabia, differences were particularly large between the bottom and second quarters and between the third and top quarters.

HOW STUDENTS DEVELOP AWARENESS OF AND SELF-EFFICACY REGARDING GLOBAL ISSUES

One of a number of possible factors positively associated with awareness of global issues is interest in and enjoyment of reading (other factors, such as learning activities, are explored in detail in Chapter 7). Students who read are likely to acquire knowledge about topics of interest to them and be exposed to different sources of content.[4] Figure VI.2.9 shows the association between enjoyment of reading and awareness of global issues before and after accounting for students' and schools' socio-economic profile. The findings show a positive association between the two indices in all countries and economies. On average across OECD countries, a one-unit increase in the index of students' enjoyment of reading was associated with an increase of 0.14 of a unit in the index of students' awareness of global issues, after accounting for students' and schools' socio-economic profile. The strongest associations were observed in Albania, Baku (Azerbaijan), Indonesia, Jordan, Kazakhstan, Kosovo, Malaysia and the Philippines.

Figure VI.2.9 **Students' awareness of global issues and their enjoyment of reading**

Change in students' awareness of global issues associated with a one-unit increase in enjoyment of reading



1. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).

2. The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

Countries and economies are ranked in descending order of the change in the index of students' awareness of global issues associated with a one-unit increase in the index of enjoyment of reading, after accounting for gender, immigrant background, and students' and schools' socio-economic profile.

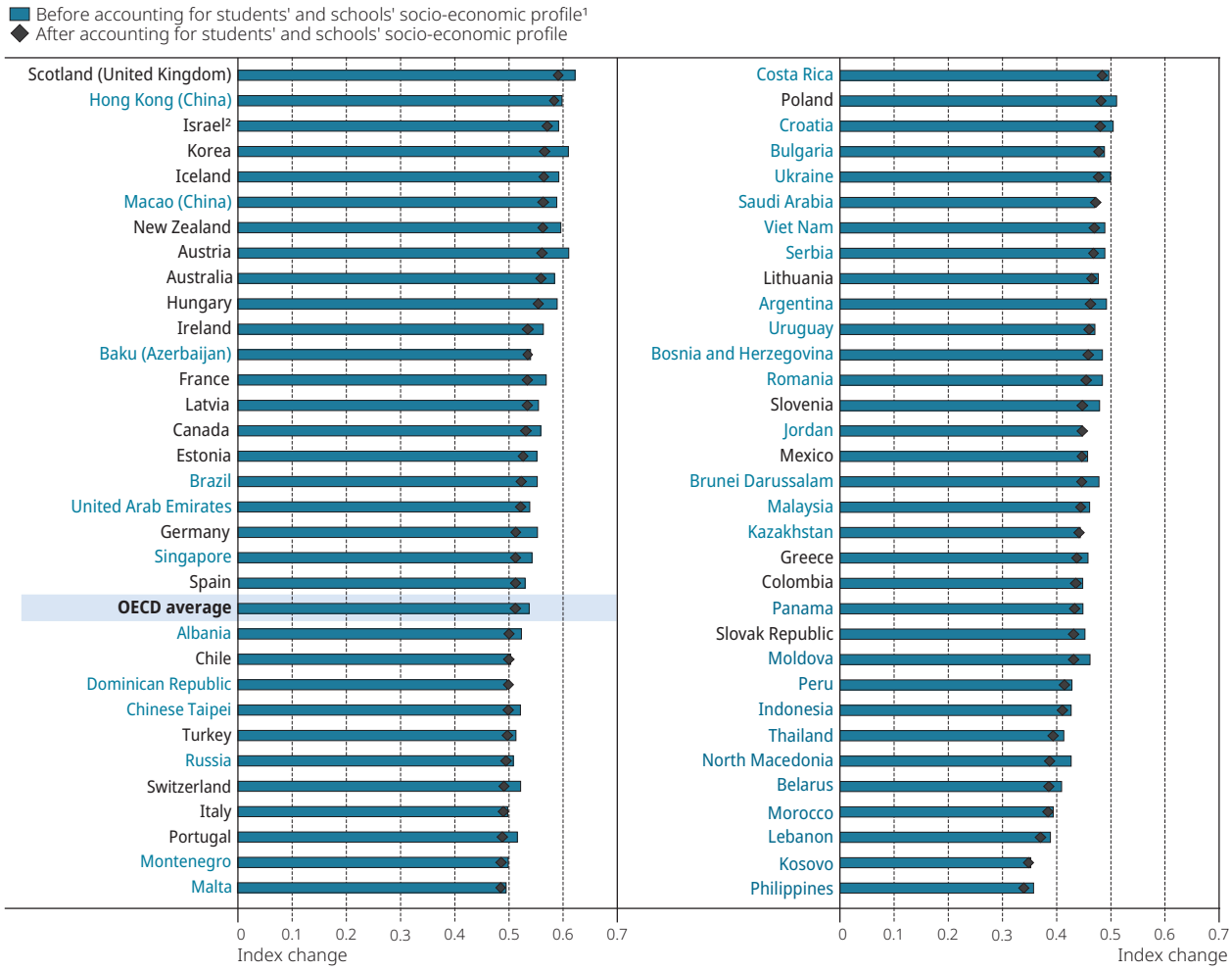
Source: OECD, PISA 2018 Database, Table VI.B1.2.8.

StatLink https://doi.org/10.1787/888934169462

How can students be confident when dealing with global issues if they have limited awareness of them? In this sense, awareness of global issues could be a prerequisite for a number of attitudes, including self-efficacy regarding those issues. Figure VI.2.10 examines the association between the two indices. The findings show a strong positive association between them in all participating countries and economies, even after accounting for students' and schools' socio-economic profile. On average across OECD countries, an increase of one unit in the index of awareness of global issues was associated with an increase of 0.51 of a unit in the index of self-efficacy regarding global issues. The association was strong in all countries, exceeding 0.3 of a unit.

Figure VI.2.10 **Students' self-efficacy regarding global issues and their awareness of global issues**

Change in students' self-efficacy regarding global issues associated with a one-unit increase in their awareness of global issues



1. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).

2. The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

Countries and economies are ranked in descending order of the change in the index of students' awareness of global issues associated with a one-unit increase in the index of enjoyment of reading, after accounting for gender, immigrant background, and students' and schools' socio-economic profile.

Source: OECD, PISA 2018 Database, Table VI.B1.2.8.

StatLink https://doi.org/10.1787/888934169481

Box VI.2.3. To what extent do teachers include global topics in their lessons?

Literature on school effectiveness highlights the importance of teachers in the learning process. However, the question of what makes a teacher successful in improving students' outcomes has not been settled yet (Aaronson, Barrow and Sander, 2007[21]). Existing evidence focuses on a range of teacher-related characteristics, such as teachers' qualifications (Kane, Rockoff and Staiger, 2008[22]). But these observable and easily measured variables are rarely found to be correlated with student achievement and, when they are, they explain a modest fraction of the variation in performance (Rivkin, Hanushek and Kain, 2005[23]). This has led to a growing interest in what teachers actually do in the classroom, as opposed to their background (Mostafa, Echazarra and Guillou, 2018[24]).

In 18 countries, teachers were asked to answer a number of questions on a questionnaire addressed specifically to them. Given that reading was the main subject assessed in 2018, teachers were sampled as part of one of two populations: language teachers and non-language teachers. Moreover, students and teachers in PISA 2018 were sampled randomly and independently within each school. In other words, it was not possible to determine whether an individual teacher was teaching a particular student. In order to analyse student and teacher data jointly, teacher-reported data were aggregated at the school level. Therefore, any teacher-level variable should be interpreted as a school average of what the teachers within each school reported. For a detailed description of the sampling procedures and the aggregation procedure, see (Mostafa and Pál, 2018[25]).

Non-language teachers answered a number of questions related to teaching in an interconnected world. One question enquired about whether teachers include certain global topics in their lessons. Those topics were the same as those covered in the student and parent questionnaires: climate change and global warming; global health; migration; international conflicts; hunger or malnutrition in different parts of the world; causes of poverty; and equality between men and women in different parts of the world.

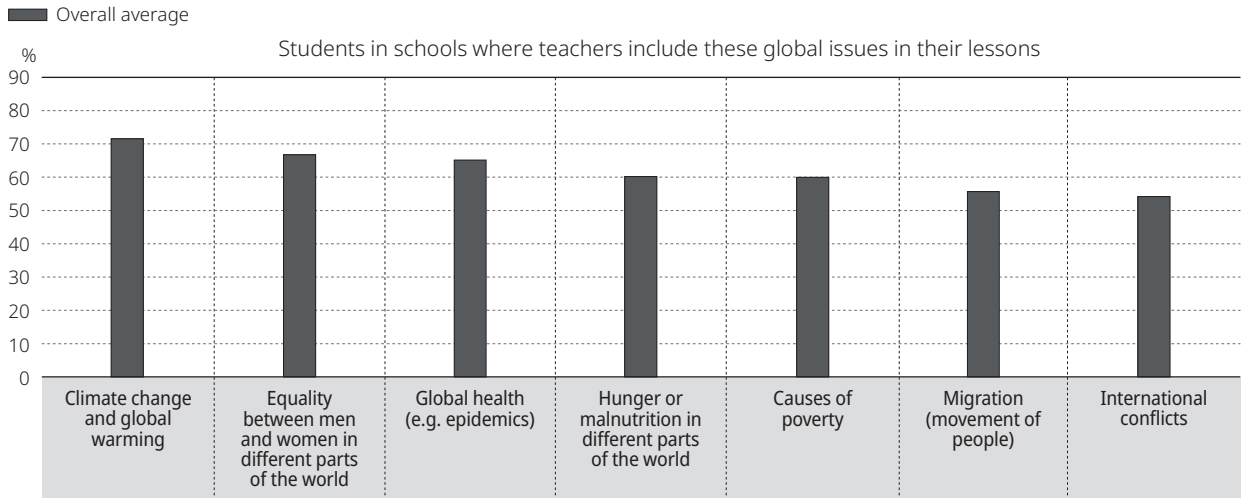
This box explores the extent to which teachers include such activities in their lessons and the associations between teaching global topics and students' awareness of those topics.

The results show that the most common global issues covered by teachers are climate change and global warming (72% of students have teachers who reported that this topic is included in their lessons Figure VI.2.11). Climate change is followed by equality between men and women (68%), global health (65%), hunger and malnutrition (60%), causes of poverty (60%), migration (56%) and international conflicts (54%). However, these averages mask considerable variations between countries, as shown in Table VI.B1.2.10.

The countries where climate change and global warming are commonly covered by teachers are Albania, the Dominican Republic, Peru and Malaysia, with more than 80% of students reporting that teachers do so (Table VI.B1.2.10). Global health issues are commonly covered by teachers in Albania, Brazil, the Dominican Republic, Malaysia and Peru (more than 75% of students report that teachers do so), while migration is commonly covered in the Dominican Republic (82%). Moreover, hunger and malnutrition are commonly covered by teachers in the Dominican Republic, Malaysia and Peru (more than 75%), and causes of poverty in the Dominican Republic, Malaysia, Panama and Peru (more than 75%). Gender equality is commonly covered in Albania, Brazil, Chile, the Dominican Republic, Panama, Peru and Spain (more than 75%) and international conflicts in the Dominican Republic (78%).

Figure VI.2.11 **Students exposed to global issues in their school lessons**

Based on teachers' reports, overall average



Source: OECD, PISA 2018 Database, Table VI.B1.2.10.

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The results also show that, in a few countries/economies, the proportion of students exposed to global issues in their school lessons was larger among those who reported that they know about those issues or are familiar with them (compared to those who reported that they never heard of or do not know much about the issues). This indicates that greater exposure to global issues is positively associated with awareness of those issues in some countries (Table VI.B1.2.11). Three countries stood out. In the United Arab Emirates, the association was positive and significant for all seven global issues. In Albania, the

association was positive for four issues (climate change, global health, international conflicts, and hunger and malnutrition) and, in Morocco, the association was also positive for four issues (global health, migration, international conflicts and gender equality).

For the remaining 15 countries, the associations were non-significant and in some cases negative. Possible explanations of these results include the following:

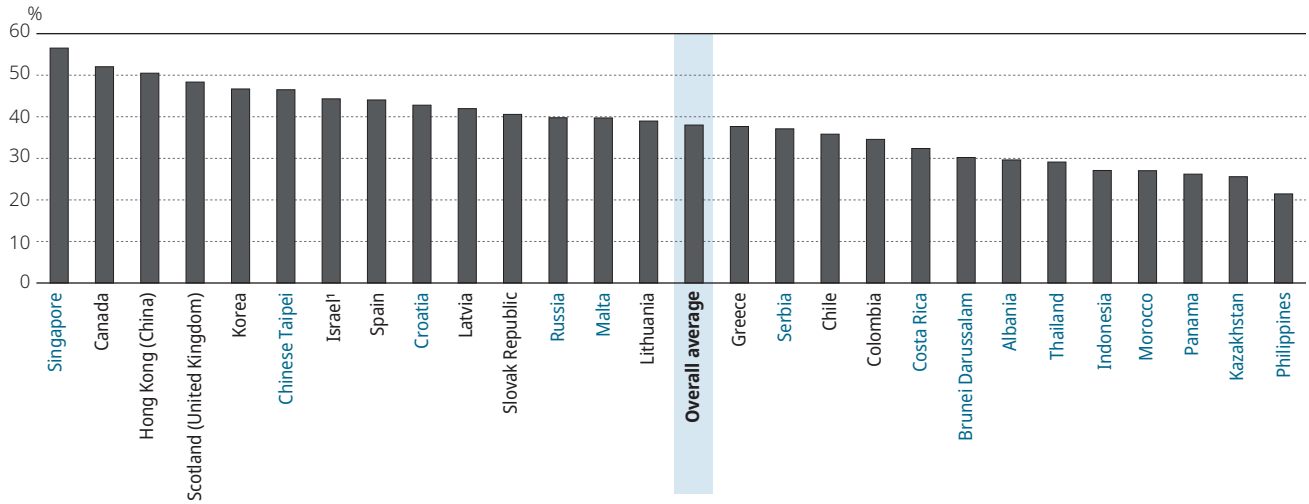
- Exposure to global issues in school lessons is not necessarily effective in improving awareness of those issues if exposure occurs sporadically and if teaching practices are not well adapted to such lessons. The positive results in the United Arab Emirates could be an indication that global issues are well integrated into lessons and teachers are well prepared to teach those topics.
- Students and teachers in PISA 2018 were sampled randomly and independently within each school. In other words, it is not possible to determine whether an individual teacher is teaching a particular student. As such, exposure to global issues reported by teachers could only be analysed at the school level without knowing whether every student in the school sample is exposed to global issues in his or her lessons.

EXAMINING ISSUES OF LOCAL, GLOBAL AND INTERCULTURAL SIGNIFICANCE: PERFORMANCE ON THE COGNITIVE TEST

Students who sat the global competence test in the 27 participating countries and economies answered 37 test items covering their experience in examining local and global issues. Figure VI.2.12 presents the average proportion of correct answers on those test items. As explained in Chapter 1, answers were scored as either full credit, partial credit or no credit. For the purpose of this analysis, partial credit was coded as no credit.

The findings show that the largest proportions of correct answers on these test items were found in Canada, Croatia, Hong Kong (China), Israel, Korea, Latvia, Scotland (United Kingdom), Singapore, the Slovak Republic, Spain and Chinese Taipei. In all of these countries and economies, the proportion of correct answers exceeded the overall average of 38%. Singapore showed the largest proportion of correct answers. By contrast, the smallest proportions were observed in Albania, Indonesia, Kazakhstan, Morocco, Panama, the Philippines and Thailand, where they did not exceed 30%.

Figure VI.2.12 **Percentage of correct answers: Examining issues of local and global significance**



1. The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

Notes: Examining issues of local and global significance was assessed using 37 items in the cognitive test.

Only the 27 countries and economies that conducted the cognitive test are shown.

Countries and economies are ranked in descending order of the percentage of correct answers on the cognitive test.

Source: OECD, PISA 2018 Database, Table VI.B1.2.7.

StatLink https://doi.org/10.1787/888934169519

Eight released test items covered students' capacity to examine global, local and intercultural issues originating from three test units: a single story, refugee Olympians and rising sea levels. Those test items ranged in difficulty from proficiency Level 1 (lowest) to proficiency Level 5 (highest).

A single story: Item 4

The test item with the highest proportion of students answering it correctly among the released test items for dimension 1 was item 4 in the "single story" unit. In this test item, a short text is presented about a woman, Alice, in a market who observes a young man in torn clothes who grabs a fruit from a stand in the market and calls to a friend in a language she does not understand. It then describes how Alice perceives him. Two independently coded open-ended items follow the text. In the first item, labelled number 4, students are asked to read the text and simply describe, in their own words, one assumption that Alice has about the young man. In the coding guide, five possible assumptions were identified that could be considered correct based on the information provided in the brief text. Full credit was given if students provided one of the assumptions about the young man listed below.

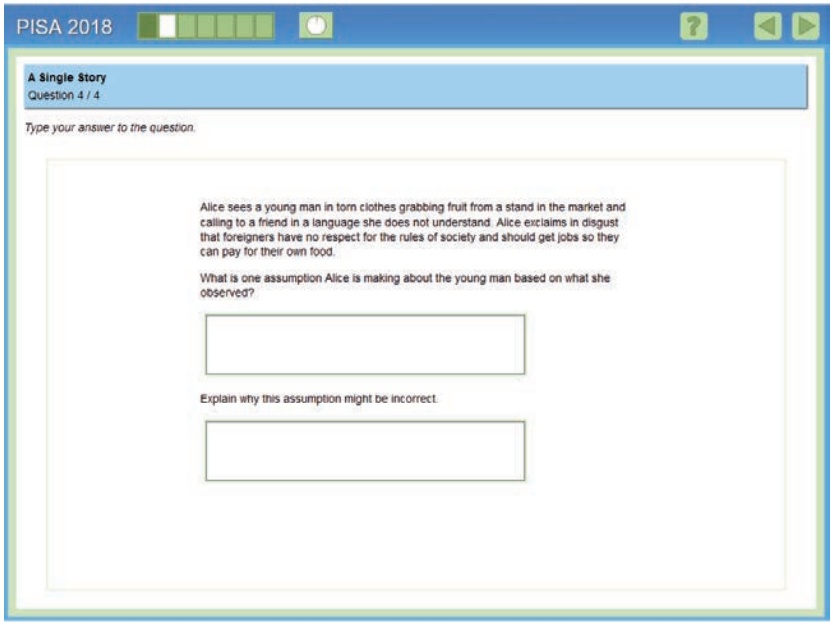
1. The young man is a foreigner.
2. The young man is poor or cannot pay for his food.
3. The young man has no job.
4. The young man is stealing.
5. The young man has (or foreigners have) no respect for the rules of society.

   Examples of answers given by students include

   - She thinks he's foreign. [1]
   - She thinks he's poor. [2]
   - He can't pay for his food. [2]
   - She thinks he doesn't have a job. [3]
   - He has not paid for the fruit. [4]
   - She thinks he has no respect for the rules.[5]
   - He wasn't raised well. [5]

This test item covered students' ability to evaluate information, formulate arguments, describe and explain complex issues and situations. It was classified as proficiency Level 1, which is the proficiency level needed to answer the easiest questions on the cognitive test. Proficiency levels are described in detail in Chapter 6.

On average across all 27 countries and economies taking the cognitive test, 62% of students provided a correct answer. The largest proportion of correct answers (exceeding 80%) was found in Canada, Scotland (United Kingdom) and Singapore (Table VI.B1.2.7).



A single story: Item 5

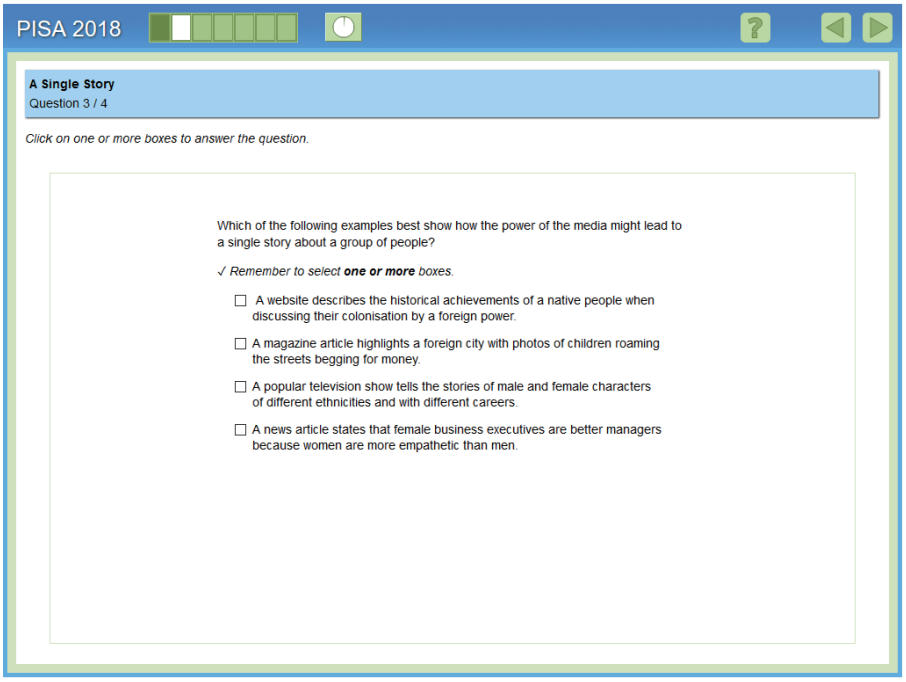
After identifying an assumption that Alice makes in the brief text, the student is then asked to explain why that assumption might be incorrect. To get full credit for this item, the student can provide a more narrow response that is a direct explanation for the assumption he/she provided in the previous item. For example, if "The young man is stealing" is identified as an assumption, the explanation could be "He might have already paid for the fruit." Alternatively, the student can get full credit by providing a broader, more general response that addresses the problem with making assumptions, such as "She is making a judgment without enough information". Both types of responses were given full credit. This test item covers the same cognitive process as the previous one (evaluate information, formulate arguments, describe and explain complex issues and situations), but it has a proficiency Level of 2, which makes it slightly more difficult to answer. For this item, students had to reflect on why an assumption about this man might be incorrect and were required to show an understanding of possible stereotypes and prejudice. On average across all countries and economies, 45% of students answered this item correctly, with the largest proportions (exceeding 70%) found in Canada, Hong Kong (China), Singapore and Chinese Taipei (Table VI.B1.2.7).

Full credit was given if students provided an explanation that is specific to the assumption provided in the previous question and were able to describe why that assumption might be incorrect. The explanation may provide another interpretation for the behaviour Alice observed or refute Alice's assumptions. Possible answers include:

1. Assumption: The young man is a foreigner. Explanation must focus on the language he was using.
2. Assumption: The young man is poor or cannot pay for his food. Explanation must focus on his torn clothes or that he was grabbing the fruit.
3. Assumption: The young man has no job. Explanation must focus on his torn clothes or that he was grabbing the fruit.
4. Assumption: The young man is stealing. Explanation must focus on the observation that he was grabbing the fruit.
5. Assumption: The young man has (or foreigners have) no respect for the rules of society. Explanation must focus on the observation that he was grabbing the fruit.
   - Just because he is speaking another language does not mean he is a foreigner. [1]
   - He might speak more than one language. [1]
   - He might have been born in this country but speaks a different language. [1]
   - Maybe it's the style for young people to wear torn clothes. [2]
   - He might work at the fruit stand. [2]
   - He might have permission to take the fruit from the owner of the fruit stand. [2]
   - He might be asking his friend to help him pay for the fruit. [2]
   - He could be wearing torn clothes because of the work he does. [3]
   - Just because he is grabbing the fruit doesn't mean he isn't working. [3]
   - He could have a very low-paying job and not be able to afford the food he needs. [4]
   - He might know the owner of the fruit stand and is allowed to take fruit. [4 or 5]
   - His family might own the fruit stand. [4 or 5]

A single story: Item 3

The test item with the lowest proportion of correct answers among released test items for dimension 1 was item 3 in the unit "single story". In this test item, students must think broadly about stereotypes or single stories and consider how the media may support the creation of this misinformation. Four examples of media forms and content are described, and the student had to evaluate how each one may or may not support the formation of stereotypes. To receive full credit, the student needed to select both B and D. Partial credit was assigned if only B or only D were selected. Both B and D could lead to the creation of stereotypes about particular countries or about gender differences. If any other options were selected, no credit was assigned. By selecting the correct answers, the student demonstrates the ability to identify examples that address the complex issue of stereotype formation. This test item was assigned the highest proficiency, Level 5, which reflects its difficulty. On average across all countries and economies taking the test, 13% of students answered this question correctly. The highest proportions (ranging between 20% and 30%) were in Canada, Korea, Singapore and Chinese Taipei (Table VI.B1.2.7).

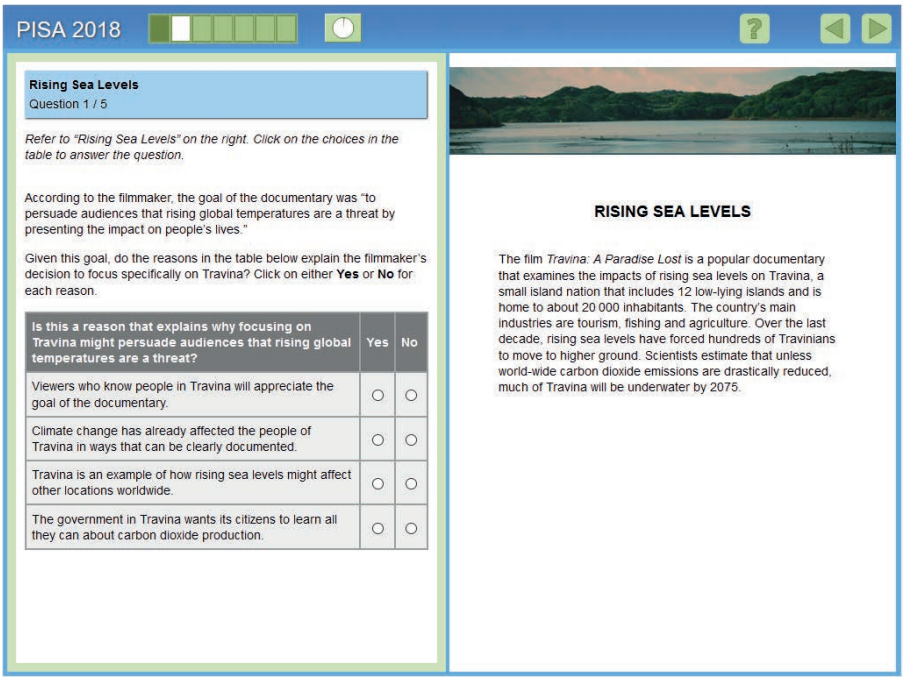


Rising sea levels: Item 1

Another test unit focusing on global rather than intercultural issues is "rising sea levels". This unit begins with a brief introduction that describes the effects of rising temperatures on sea levels. The introduction sets the stage for the items within the unit, which explores the effects of rising sea levels on individuals who live in areas of low elevation, such as islands and coastal areas. The unit focuses on a fictional place where sea levels have risen and displaced the inhabitants of the islands, making them climate refugees. The content domain of this unit was categorised as «Socio-economic development and interdependence" with a subdomain of «Economic interactions and interdependence".

The first test item of this unit presents a brief text about a fictional film, "Travina: A Paradise Lost". The documentary focuses on a fictional island nation, Travina, that has been affected by rising sea levels. Hundreds of Travinians have had to move to higher ground to escape the changes to the low-lying areas of the islands. The text also states that unless environmental conditions improve, most of Travina will be underwater by the year 2075. With this background, the item introduces the filmmaker's goal in creating the documentary: "to persuade audiences that rising global temperatures are a threat by presenting the impact on people's lives". The item then presents four reasons that might explain why the filmmaker focused on Travina. To answer each part of the item correctly, the student must consider the filmmaker's goal and evaluate whether each statement could be a reason why Travina would present a persuasive case. In the table, the second and third statements describe reasons that support the filmmaker's goal. In both cases, the statements describe why the situation on Travina could have a broader impact on viewers, even those who live far from Travina or who do not live near the ocean. By contrast, the first and last statements do not describe why the filmmaker would use Travina as an example. These statements describe a narrow viewership and one that is likely already persuaded about the effects of rising global temperatures. Thus, to receive full credit for this item, students had to respond No, Yes, Yes, No. This test item was assigned proficiency Level 4 which reflects its difficulty.

On average across all countries and economies taking the test, 23% of students answered this question correctly. The highest proportions (ranging between 30% and 41%) were in Canada, Greece, Israel, Hong Kong (China), Scotland (United Kingdom), Serbia and Singapore (Table VI.B1.2.7).


PISA 2018

Rising Sea Levels
Question 1 / 5

Refer to "Rising Sea Levels" on the right. Click on the choices in the table to answer the question.

According to the filmmaker, the goal of the documentary was "to persuade audiences that rising global temperatures are a threat by presenting the impact on people's lives."

Given this goal, do the reasons in the table below explain the filmmaker's decision to focus specifically on Travina? Click on either **Yes** or **No** for each reason.

Is this a reason that explains why focusing on Travina might persuade audiences that rising global temperatures are a threat?	Yes	No
Viewers who know people in Travina will appreciate the goal of the documentary.	○	○
Climate change has already affected the people of Travina in ways that can be clearly documented.	○	○
Travina is an example of how rising sea levels might affect other locations worldwide.	○	○
The government in Travina wants its citizens to learn all they can about carbon dioxide production.	○	○

RISING SEA LEVELS

The film *Travina: A Paradise Lost* is a popular documentary that examines the impacts of rising sea levels on Travina, a small island nation that includes 12 low-lying islands and is home to about 20 000 inhabitants. The country's main industries are tourism, fishing and agriculture. Over the last decade, rising sea levels have forced hundreds of Travinians to move to higher ground. Scientists estimate that unless world-wide carbon dioxide emissions are drastically reduced, much of Travina will be underwater by 2075.

Note

1. The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.
2. The comparability of scaled indices across countries and economies is examined in Annex A5. The annex presents the findings of in-depth measurement invariance analyses for every index used in PISA 2018, Volume VI.
3. The larger between-school variations in Germany and in other countries reflect the differentiated nature of school programmes and tracks that take into account students' prior academic performance.
4. A full description of students' index of enjoyment of reading is provided in Appendix A1.

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